



THE PLANNING ACT 2008
THE INFRASTRUCTURE PLANNING (EXAMINATION PROCEDURE)
RULES 2010

Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Project

Planning Inspectorate Reference: EN010109

Secretary of State Further Information Request
(22 November 2023)

Appendix 2 Schedule of Mitigation and Route Map

20 December 2023

Appendix 2 Schedule of Mitigation and Route Map

18. Schedule of Mitigation: Natural England is invited to comment on the final version of the Schedule of Mitigation and Mitigation Route Map [REP8-021], which was submitted at the close of Examination.

Natural England has reviewed the Schedule of Mitigation Route Map [REP8-21] submitted by the Applicant at Deadline 8. Our review of the mitigation measures within our statutory remit focusses on the applicable elements of the following Environmental Statement chapters:

- Chapter 6 Marine Geology, Oceanography and Physical Processes [APP-092]
- Chapter 7 Marine Water and Sediment Quality [APP-093]
- Chapter 8 Benthic Ecology [APP-094]
- Chapter 9 Fish Ecology [APP-095]
- Chapter 10 Marine Mammal Ecology [APP-096]
- Chapter 11 Offshore Ornithology [APP-097]
- Chapter 17 Ground Conditions and Contamination [APP-103]
- Chapter 18 Water Resources and Flood Risk [APP-104]
- Chapter 19 Land Use, Agriculture and Recreation (Revision B) [REP2-022]
- Chapter 20 Onshore Ecology and Ornithology (Revision C) [REP3-026]
- Chapter 22 Air Quality [APP-108]
- Chapter 25 Seascape Visual Impact Assessment [APP-111]
- Chapter 26 Landscape and Visual Impact Assessment [APP-112]

Our detailed comments to the Offshore Mitigation Measures are set out in Table 1 and to the Onshore mitigation Measures in Table 2 below.

In addition we wish to make the following overarching points.

1. While Natural England has provided comment where appropriate to the 'Mitigation Measure or Commitment' descriptions within this document, we wish to highlight it is the detail within the relevant document or plan, as secured by the DCO, which will be relied upon post consent.
2. For the Onshore mitigation measures, we note a considerable amount of cross referencing of mitigation measures between the Outline Code of Construction Practice (CoCP), Ecological Management Plan (EMP) and Landscape Management Plan (EMP) is required between the documents themselves. In several instances these plans were

not appropriately referenced within the Mitigation Measure or Commitment and/or 'Means of implementation' columns. We advise cross referencing is re-checked and the name plans listed and correctly secured to ensure the robustness of the Schedule of Mitigation and Route Map as a working document.

3. In relation to the above, Natural England re-emphasises the benefit of combining the EMP and LMP into a joint Outline Landscape and Ecological Management Strategy (OLEMS). This would ensure that all mitigation measures are readily available within one document rather than cross referencing between documents. Post consent we consider this most effective when discharging licence conditions through the Regulating Authorities to minimise risks around document control and cross-referencing between documents and plans.

4. The addition of mitigation measures for Chapter 20 in Table 2, from Ref 20.9 onwards makes the review of mitigation measures disjointed. These items were added based on updates during examination and would read better if updates or superseded mitigation was included within the relevant preceding item for this chapter, as undertaken for Offshore Ornithology in Chapter 11.

Table 1: Offshore Mitigation Measures

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
Chapter 6 Marine Geology, Oceanography and Physical Processes								
6.1	6.3.3	Embedded	Turbine spacing	Marine physical processes	A minimum separation distance of up to 1.05km has been defined between adjacent wind turbines within each row and between rows.	Minimises the potential for interaction between adjacent wind turbines with respect to marine physical processes.	Design Plan DCO Schedule 2, Part 1, Requirements 2-7, Detailed offshore design parameters; DCO Schedule 10, Part 2, conditions 1-3; DCO Schedule 11, Part 2, conditions 1-3; DCO Schedule 12, Part 2, conditions 1-2; DCO Schedule 13, Part 2, conditions 1-2.	In Chapter 4 Project Description [APP-090] the indicative separation distance between turbines (inter-row) and between turbines in rows (in-row) is 1.05km and 3.3km, respectively. We advise <u>the 3.3km within row</u> is included within the Mitigation Measure or Commitment column. We advise that the Effect of Mitigation or Commitment in Column 7, should refer to minimising wake-wake interaction and/or wave shadow effects. Additional reference to the DCO Schedule relating to In Principle Monitoring where impacts in relation to sandbanks and sandwave will be monitored should be included.
6.2	6.3.3	Embedded	Foundations	Sea bed disturbance	The selection of appropriate foundation designs and sizes at each wind turbine location will be made following pre-construction surveys within the wind farm sites.	Minimises the effect on sea bed level changes and identified receptor groups.	N/A	We advise the mitigation measure is expanded such that a commitment is made that larger foundation types such as GBS are avoided where possible. Where this is not possible, we advise GBS foundations are not located within areas of sandbank and sandwave fields in order to meet the mitigation measure requirements. The Effect of this Mitigation and Commitment should be expanded to state that this will minimise the effect on seabed level changes and in relation to marine processes minimise suspended sediment concentration (SSC; turbidity and light attenuation). Natural England notes that the means of implementation are not provided for this mitigation. However, we would note that Schedule 10 and 11 Part 2 Condition 13 (1) (a) (i) does require the provision of the foundation type and this document will require approval by the MMO.
6.3	6.3.3	Embedded	Foundations	Sea bed disturbance	For piled foundation types, such as monopiles and jackets with pin piles, pile-driving will be used in preference to drilling where it is practicable to do so (i.e. where ground conditions allow). This would minimise the quantity of	Minimises the quantity of sub-surface sediment released into the water column from the installation process.	Construction Method Statement DCO Schedule 10, Part 2, condition 13;	Natural England notes the focus here is reducing SSCs. We advise a balance will need be struck between minimising increased SSC and the

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					sub-surface sediment released into the water column from the installation process.		DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.	potential for resulting adverse impacts to other receptors.
6.4	6.3.3	Embedded	Foundations	Sea bed disturbance	Micro-siting will be used where possible to minimise the requirements for sea bed preparation prior to foundation installation.	Minimises the requirements for sea bed preparation prior to foundation installation.	Design Plan DCO Schedule 2, Part 1, Requirements 2-7 DCO Schedule 10, Part 2, conditions 1-3; DCO Schedule 11, Part 2, conditions 1-3; DCO Schedule 12, Part 2, conditions 1-2; DCO Schedule 13, Part 2, conditions 1-2.	Natural England welcomes this commitment. However, we would note that Schedules 10 and 11 Part 2 Condition 13 (1) (a) and Schedules 12 and 13 Part 2 Condition 12 (1) (a) also secure micro-siting.
6.5	6.3.3	Embedded	Cables	Sea bed disturbance / habitat loss	The Applicant will make reasonable endeavours to bury cables, minimising the requirement for cable protection measures and thus effects on sediment transport. Use of external cable protection would be minimised in all cases and in the nearshore is only included for potential use at the Horizontal Directional Drilling (HDD) exit point.	Minimises the requirement for cable protection measures and thus effects on sediment transport.	Cable Laying Plan Cromer Shoal Chalk Beds (CSCB) Marine Conservation Zone (MCZ) Cable Specification and Installation Monitoring Plan (CSIMP) Scour Protection and Cable Protection Plan DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.	Natural England queries whether the definition of 'nearshore' relates to the MCZ. If so, the description should instead refer to the MCZ and in addition to the HDD exit point outlining the maximum cable protection allowance.
6.6	6.3.3	Embedded	Cables	Sea bed disturbance	Route selection and micro-siting of the cables will be used to avoid areas of sea bed that pose a significant challenge to their installation, including for example areas of sand waves and megaripples. This will minimise the requirement for sea bed preparation (levelling) and the associated sea bed disturbance. This is reflected in the allowances that have been made for these works as described in ES Chapter 6 Marine Geology, Oceanography and Physical Processes [APP-092] , based on the	Minimises the requirement for sea bed preparation (levelling) and associated sea bed disturbance.	Design Plan Cable Laying Plan Scour Protection and Cable Protection Plan CSCB MCZ CSIMP DCO Schedule 2, Part 1, Requirements 2-7; DCO Schedule 10, Part 2, conditions 1-3 and 13; DCO Schedule 11, Part 2, conditions 1-3 and 13;	In our Relevant Representations [RR-063], Natural England acknowledged that no sandwave levelling is expected in the "SEP in isolation" scenario because there are no sandwaves present along the ECC. Natural England queries whether a DCO condition is included that secures this commitment. Natural England advises the first and second sentences regarding allowances (WCS) does not tie in with the commitment within the third sentence.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					information from the geophysical surveys conducted to date.		DCO Schedule 12, Part 2, conditions 1-2 and 12; DCO Schedule 13, Part 2, conditions 1-2 and 12.	We suggest the third sentence is a separate paragraph and rephrased <i>'Where this is not possible.....'</i> We advise the 'Effect of Mitigation or Commitment' column should include wording to minimise impacts to sandbank/sandwave systems, sediment transport processes, sensitive areas of seabed and MPAs.
6.7	6.3.3	Embedded	Landfall	Coastal erosion	HDD will be used to install the cables at the landfall, exiting approximately 1,000m offshore. Cables will be buried at sufficient depth to have no effect on coastal erosion. Erosion would continue as a natural phenomenon driven by waves and subaerial processes, which would not be affected by SEP and DEP. Natural coastal erosion throughout the lifetime of the project has been considered within the project design by ensuring appropriate set back distances from the coast for the onshore HDD entry point. Also see reference 8.15 below regarding commitment to locating the HDD Exit within the Weybourne Channel.	Cables will be buried at sufficient depth to have no effect on coastal erosion.	Embedded in Order Limit selection and project design Design Plan DCO Schedule 2, Part 1, Requirements 2-7 DCO Schedule 10, Part 2, conditions 1-3; DCO Schedule 11, Part 2, conditions 1-3; DCO Schedule 12, Part 2, conditions 1-2; DCO Schedule 13, Part 2, conditions 1-2.	Natural England has no further comment.
Chapter 7 Marine Water and Sediment Quality								
7.1	7.3.3	Embedded	Foundations	Deterioration in water quality	For piled foundation types, such as monopiles and jackets with pin piles, pile-driving would be used in preference to drilling where it is practicable to do so (i.e. where ground conditions allow). This would minimise the quantity of sub-surface sediment that is released into the water column from the installation process.	Minimises the quantity of sub-surface sediment released into the water column from the installation process.	Project Environment Management Plan (PEMP) DCO Schedule 10, Part 2, condition 11; DCO Schedule 11, Part 2, condition 11; DCO Schedule 12, Part 2, condition 10; DCO Schedule 13, Part 2, condition 10.	As Ref 6.3 above, Natural England notes the focus here is reducing SSCs. We advise a balance will need to be struck between minimising increased SSC and the potential for resulting adverse impacts to other receptors.
7.2	7.3.3	Embedded	Foundations	Deterioration in water quality	Micro-siting would be used where possible to minimise the requirements for sea bed preparation prior to foundation installation.	Minimises the requirements for seabed preparation prior to foundation installation.	Design Plan DCO Schedule 2, Part 1, Requirements 2-7 DCO Schedule 10, Part 2, conditions 1-3; DCO Schedule 11, Part 2, conditions 1-3; DCO Schedule 12, Part 2, conditions 1-2; DCO Schedule 13, Part 2, conditions 1-2.	Natural England suggests re-wording to ensure it is clear what the effect of mitigation/commitment is in regard to, i.e. to minimise any increase in suspended sediment concentration/contaminants and sediment plumes into the water column. We advise the wording is altered accordingly.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
7.3	7.3.3	Embedded	Foundations	Deterioration in water quality	Scour protection to be used where required	Minimises the quantity of sub-surface sediment released into the water column during operation.	Scour Protection and Cable Protection Plan DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.	Natural England advises the use of scour protection as a mitigation measure is only appropriate if it is found through monitoring that SSCs are seen to be significantly above background levels. We also advise that this Mitigation Effect should be included in the Marine Geology, Oceanography and Physical Processes section owing to potential impacts to the sediment transport processes and seabed morphology.
7.4	7.3.3	Embedded	Cables	Deterioration in water quality	The Applicant will make reasonable endeavours to bury cables, minimising the requirement for external cable protection measures and thus effects related to scour. Where burial is undertaken, jetting, ploughing or cutting will be used depending on the ground conditions. Where possible sediment removed from the trench will be used as infill. Use of external cable protection would be minimised in all cases and in the nearshore is only included for potential use at the HDD exit point.	Minimises the requirement for external cable protection measures and thus effects related to scour.	Cable Laying Plan Scour Protection and Cable Protection Plan CSCB MCZ CSIMP DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.	As Ref 6.5 above, Natural England queries whether the definition of 'nearshore' relates to the MCZ. If so, the description should instead refer to the MCZ and in addition to the HDD exit point the maximum cable protection allowance . We suggest the Effect of mitigation or Commitment is expanded adding to the effects relating to scour sentence: " <i>..... scour including SSC and contaminants within the water column</i> ".
7.5	7.3.3	Embedded	Cables	Deterioration in water quality	Route selection and micro-siting of the cables will be used to avoid areas of seabed that pose a significant challenge to their installation, including for example areas of sand waves and megaripples. This will minimise the requirement for sea bed preparation (levelling) and the associated sea bed disturbance. This is reflected in the allowances that have been made for these works as described in ES Chapter 6 Marine Geology, Oceanography and Physical Processes [APP-092] , based on the information from the geophysical surveys conducted to date.	Minimises the requirement for seabed preparation (levelling) and associated seabed disturbance.	Design Plan Cable Laying Plan Scour Protection and Cable Protection Plan CSCB MCZ CSIMP DCO Schedule 2, Part 1, Requirements 2-7; DCO Schedule 10, Part 2, conditions 1-3 and 13; DCO Schedule 11, Part 2, conditions 1-3 and 13; DCO Schedule 12, Part 2, conditions 1-2 and 12; DCO Schedule 13, Part 2, conditions 1-2 and 12.	See Natural England's response to Ref 6.6 above. As Ref 7.4 above, we advise the Effect of Mitigation or Commitment is expanded to " <i>.....disturbance resulting in SSC and contaminants released into the water column</i> ".
7.6	7.3.4	Embedded	Pollution prevention	Deterioration in water quality	The Applicant is committed to the use of best practice techniques and due diligence regarding the potential for pollution throughout all construction, operation and maintenance, and decommissioning activities. An Outline Project Environmental Management Plan (PEMP) (Revision C) [REP3-060]	Minimises the potential impacts any offshore maintenance activities will have on marine water and sediment quality.	PEMP DCO Schedule 10, Part 2, condition 11; DCO Schedule 11, Part 2, condition 11; DCO Schedule 12, Part 2, condition 10;	Natural England has no further Comment.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					sets out the details of the measures that will be taken in relation to accidental pollution events. The final PEMP would be agreed with the Marine Management Organisation (MMO) prior to construction.		DCO Schedule 13, Part 2, condition 10.	
7.7	Deadline 3 Submission - 12.11 Draft Statement of Common Ground with Marine Management Organisation (MMO) (Revision B)	Additional	Dredging	Deterioration in water quality	The Applicant is committed to undertaking additional contaminants sampling and analysis (by an accredited laboratory) at the post-consent stage for the purposes of licensing for dredge disposal material at sea.	Minimises the potential impacts associated with disposing of sediment at sea.	DCO Schedule 10, Part 2, Condition 23 DCO Schedule 11, Part 2, Condition 23 DCO Schedule 12, Part 2, condition 22 DCO Schedule 13, Part 2, condition 22	While we welcome these commitments, Natural England defers to the MMO for their comment. We also advise the DCO condition for the In-Principle Monitoring Plan is included here to secure this undertaking of contaminant monitoring and that reference to the Disposal Site Characterisation report and PEMP is included.
7.8	Deadline 3 Submission - 3.1.1 Draft Development Consent Order (Revision F)	Additional	Sediment sampling	Deterioration in water quality	The Applicant will submit a sample plan request in writing to the MMO for written approval.	Minimises the potential impacts associated with sampling activities.	DCO Schedule 10, Part 2, Condition 23 DCO Schedule 11, Part 2, Condition 23 DCO Schedule 12, Part 2, Condition 22 DCO Schedule 13, Part 2, Condition 22	
Chapter 8 Benthic Ecology								
8.1	8.3.3.1	Embedded	Site selection	Impacts on protected species and habitats	Careful site selection of the SEP and DEP wind farm sites and offshore cable corridors has been carried out to avoid designated sites as far as possible. It has not been possible to avoid the Cromer Shoal Chalk Beds Marine Conservation Zone (MCZ) (as detailed in ES Chapter 3 Site Selection and Assessment of Alternatives) [APP-089], however use of appropriate cable installation methodologies can help to ensure that impacts from cable installation are short term and reversible.	Reduces potential impacts to protected species and habitats.	N/A embedded in Order Limit selection	Natural England has no further comment.
8.2	8.3.3.1	Embedded	Site selection	Impacts on protected species and habitats	The offshore export cable corridor takes the shortest, most direct route possible from the SEP and DEP wind farm sites to landfall, whilst avoiding as many known sensitive benthic habitats as possible therefore reducing impacts to benthic ecology receptors. Additionally, the offshore cable corridors have been sited to avoid cable crossings where possible and	Avoids as many known sensitive benthic habitats as possible and minimises the requirement for cable protection, reducing impacts to benthic ecology.	N/A embedded in Order Limit selection and project design	Natural England has no further comment.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					there are no cable crossings in the MCZ.			
8.3	8.3.3.1	Embedded	Turbine size	Disturbance to benthic ecology	Larger turbines have been selected that will reduce the number of turbines (and foundations) required whilst maintaining generating capacity and therefore reduce impacts to benthic ecology.	Reduces impacts on benthic ecology receptors.	N/A embedded in project design	Natural England has no further comment.
8.4	8.3.3.1	Embedded	Landfall	Disturbance to intertidal ecology	HDD will be used to install the export cables at the landfall, with the HDD exit point located approximately 1,000m offshore. Therefore, there will be no direct impacts on the intertidal zone due to cable installation or the landfall, as they will not be within the intertidal zone. Also see reference 8.15 below regarding commitment to locating the HDD Exit within the Weybourne Channel.	Removes potential for direct impacts on the intertidal zone.	N/A embedded in project design	Natural England advises that rather than solely referring to the 'intertidal zone', we advise this is re-worded that there will be 'no direct impact on the intertidal zone or subtidal chalk feature of the MCZ.'
8.5	8.3.3.1	Embedded	Foundations	Disturbance to benthic ecology	The selection of appropriate foundation designs and sizes at each wind turbine location will be made following pre-construction surveys within the offshore sites.	Reduces impacts on benthic ecology receptors.	N/A	As our advice to Ref 6.2 above, Natural England advises the mitigation measure is expanded such that a commitment is made that larger foundation types such as GBS are avoided where possible.
8.6	8.3.3.1	Embedded	Foundations	Disturbance to benthic ecology	For piled foundation types, such as monopiles and jackets with pin piles, pile-driving will be used in preference to drilling where it is practicable to do so (i.e. where ground conditions allow). This would minimise the quantity of sub-surface sediment released into the water column from the installation process.	Minimises the quantity of sub-surface sediment released into the water column from the installation process.	Construction Method Statement DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.	Please Natural England's advice above to Ref 6.3. The effect of mitigation or commitment must reflect sediment deposition and smothering to the seabed benthic community.
8.7	8.3.3.1	Embedded	Foundations	Disturbance to benthic ecology	Micro-siting will be used where possible to minimise the requirements for sea bed preparation prior to foundation installation.	Minimises the requirements for sea bed preparation prior to foundation installation and thus minimises habitat loss and disturbance impacts on benthic ecology receptors.	Design Plan DCO Schedule 2, Part 1, Requirements 2-7, Detailed offshore design parameters DCO Schedule 10, Part 2, conditions 1-3; DCO Schedule 11, Part 2, conditions 1-3; DCO Schedule 12, Part 2, conditions 1-2; DCO Schedule 13, Part 2, conditions 1-2.	Natural England has no further comment

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
8.8	8.3.3.1	Embedded	Cable protection	Disturbance to benthic ecology	The Applicant will make reasonable endeavours to bury offshore cables, minimising the requirement for external cable protection measures and thus minimising habitat loss impacts on benthic ecology receptors. The minimum amount of pre-sweeping (sand wave levelling) that is required to assist with the cable installation process will be undertaken and only in relation to the interlink cables and wind farm sites.	Minimises the requirement for external cable protection measures and thus minimises habitat loss impacts on benthic ecology receptors.	Cable Laying Plan Scour Protection and Cable Protection Plan CSCB MCZ CSIMP DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.	We suggest the second paragraph in the mitigation measure column is removed as it is repeated in Ref 8.9. We also suggest the maximum cable protection allowance commitment within CSCB MCZ is added in to the mitigation measure or commitment column DCO Schedule 12 and 13 Condition 12 (1) (e).
8.9	8.3.3.1	Embedded	Pre-sweeping (sand wave levelling)	Disturbance to benthic ecology	The minimum amount of pre-sweeping (sand wave levelling) that is required to assist with the cable installation process will be undertaken and only in relation to the interlink cables and wind farm sites.	Minimises the requirements for sea bed preparation prior to foundation and cable installation and thus minimises habitat loss and disturbance impacts on benthic ecology receptors.	Design Plan Construction Method Statement DCO Schedule 2, Part 1, Requirements 2-7, Detailed offshore design parameters; DCO Schedule 10, Part 2, conditions 1-3 and 13; DCO Schedule 11, Part 2, conditions 1-3 and 13; DCO Schedule 12, Part 2, conditions 1-2 and 12; DCO Schedule 13, Part 2, conditions 1-2 and 12.	Please refer to Natural England's response to Ref 6.6 above. We advise the mitigation measure is worded such that.. " <i>"The minimum amount of pre-sweeping (sand wave levelling) that is required to assist with the cable installation process will be undertaken and only for the interlink cables and the DEP wind farm array."</i> Suggest adding in the commitment this will not be undertaken in the SEP in isolation scenario or within SEP.
8.10	8.3.3.1	Embedded	MCZ sediment disposal	Disturbance to benthic ecology	All seabed material arising from the Cromer Shoal Chalk Beds MCZ during cable installation (namely at the HDD exit point) would be placed back within the MCZ at or close to the source, using an approach to be agreed with the MMO in consultation with the relevant Statutory Nature Conservation Bodies (SNCB). Sediment would not be disposed of in or nearby known sensitive benthic habitats and where possible will be redeposited within areas of similar sediment type.	Minimises potential impacts to sensitive species and habitats.	CSCB MCZ CSIMP Disposal Site Characterisation Report DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.	As stated in our Relevant Reps [RR-063]. Natural England welcomes the intention for sediment disposal to return material within the CSCB MCZ at or close to the source, to ensure that it remains within the site. Further, we welcomed the intention that sediment will be deposited within an area of similar sediment type to ensure any sensitive habitats are avoided. We advise that mitigation measures for sediment disposal outside the MCZ should be added as a separate entry: where possible sediment should be redeposited within an area of similar sediment type, particularly within areas of sandwaves and sandbanks and avoid sensitive habitats. This should be captured within the Chapter 6 Marine Process section.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
8.11	8.3.3.1	Embedded	Invasive Non-Native species (INNS)	Spread of marine INNS	Use of best practice measures including appropriate vessel maintenance following International Convention for the Prevention of Pollution from Ships (MARPOL) guidance.	Reduces the risk (and impact) of spreading marine INNS	PEMP DCO Schedule 10, Part 2, condition 11; DCO Schedule 11, Part 2, condition 11; DCO Schedule 12, Part 2, condition 10; DCO Schedule 13, Part 2, condition 10.	Natural England has no further comment.
8.12	8.3.3.1	Embedded	Cable protection (MCZ)	Disturbance to benthic ecology	The allowance for external cable protection within the Cromer Shoal Chalk Beds MCZ boundary has been minimised as far as possible.	Minimises habitat loss impacts on benthic ecology receptors.	N/A	Natural England has no further comment.
8.13	8.3.3.2	Additional	Cable protection (MCZ)	Disturbance to benthic ecology	All external cable protection systems used within the CSCB MCZ will be designed to be removable (i.e. no loose rock) with a commitment to remove it at decommissioning, if it is deemed to be required at that time.	Minimises potential impacts to protected species and habitats.	CSCB MCZ CSIMP Disposal Site Characterisation Report DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.	Natural England welcomes this commitment. We are unsure of the relevance of including the Disposal Site Characterisation Report here. We advise the Cable Protection Decommissioning Plan [App-294] within CSCB MCZ is also referenced and secured within the DCO.
8.14	8.3.3.2	Additional	Pre-construction surveys and micro-siting	Impacts to protected species and habitats	Pre-construction surveys will be undertaken to determine if potential Annex I / UK BAP Priority Habitat <i>S. spinulosa</i> reef ¹ and UK BAP priority habitat 'peat and clay exposures with piddocks' are present within the proposed wind turbine locations or offshore cable routes. The pre-construction survey methodology would be agreed with the MMO in consultation with Natural England. The survey design would be based on best practice at the time and is anticipated to consist of a mixture of geophysical, drop-down video (DDV) and grab surveys (as applicable) to ensure a comprehensive ground-truthing of the proposed final wind turbine locations and cable route design. If potential Annex I / UK BAP priority habitat <i>S. spinulosa</i> reef or UK BAP priority habitat 'peat and clay exposures	Minimises potential impacts to protected species and habitats.	DCO Schedule 10, Part 2, Condition 18 DCO Schedule 11, Part 2, Condition 18 DCO Schedule 12, Part 2, Condition 17 DCO Schedule 13, Part 2, Condition 17	Natural England welcomes the commitment to microsite around sensitive benthic features and habitats if identified by pre-construction surveys, such as those protected under UK priority habitats identified under Section 41 of the NERC, 2006 Act. However, Natural England notes that this mitigation is also secured by conditions 13 in schedules 10 and 11 and 12 in schedules 12 and 13. This should be reflected here.

¹ Note any Annex I *S. spinulosa* reef identified would not be associated with an SAC for which *S. spinulosa* reef is a qualifying feature since the SEP and DEP offshore sites do not overlap with any SACs.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					with piddocks' are identified, the results of the survey will be discussed at that time with the MMO and Natural England to agree whether the features constitute Annex I / UK BAP priority habitat features and whether they are required to be avoided through micro-siting.			
8.15	Deadline 7 Submission - 9.7.1 Outline CSCB MCZ CSIMP (Revision B) (Tracked) [document reference 9.7.1]	Additional	HDD Exit Pit Location	Impacts on Cromer Shoal Chalk Beds Marine Conservation Zone	The HDD exit pit will be located within the deep infilled channel cut through the chalk to 17m below the seabed, filled with Weybourne Channel deposits (also see Appendix 6.3 Sedimentary Processes in the Cromer Shoal Chalk Beds MCZ [APP-182] - visible on Figure 3.4), located across the export cable corridor from approximately 750m to 1.5km offshore.	Minimise impacts on Cromer Shoal Chalk Beds Marine Conservation Zone	DCO Schedules 12 and 13, Condition 12(e)	While we welcome and agree with this commitment, Natural England advises the Effect of Mitigation or Commitment is worded such that: <i>"Minimises impacts on Cromer Shoal Chalk Beds Marine Conservation Zone subtidal chalk feature."</i>
8.16	Draft DCO (Revision K) [document reference 3.1]	Embedded	General	Impacts on benthic species and habitats	The licensed activities or any phase of those activities must not commence until the following (insofar as relevant to that activity or phase of activity) have been submitted to and approved in writing by the MMO: ...a mitigation scheme for any benthic habitats of conservation, ecological and/or economic importance constituting Annex I reef habitats identified by the survey referred to in condition 17(4)(a) and in accordance with the offshore in principle monitoring plan.	Mitigate potential impacts on sensitive benthic habitats and species	DCO Schedules 10 and 11 Condition 13(1)(i)	Natural England wishes to be consulted on such a mitigation scheme.
8.17	Draft DCO (Revision K) [document reference 3.1]	Embedded	General	Impacts on benthic species and habitats	The licensed activities or any phase of those activities must not commence until the following (insofar as relevant to that activity or phase of activity) have been submitted to and approved in writing by the MMO: ...a mitigation scheme for any benthic habitats of conservation, ecological and/or economic importance constituting Annex I reef habitats and including the designated features of the MCZ identified by the survey referred to in condition 17(4)(a) and in accordance with the offshore in principle monitoring plan.	Mitigate potential impacts on sensitive benthic habitats and species	DCO Schedules 12 and 13 condition 12(1)(j)	As above, Natural England wishes to be consulted on such a mitigation scheme.
Chapter 9 Fish and Shellfish Ecology								
9.1	9.3.3	Embedded	Cable burial	Impacts on fish and shellfish ecology	The Applicant will make reasonable endeavours to bury offshore export cables, reducing the effects of EMF and also reducing the need for surface cable protection which reduces the	Reduces the effects of electromagnetic fields (EMF) and also reduces the need for surface cable protection (reduces the introduction of	Cable Laying Plan Scour Protection and Cable Protection Plan	Natural England defers to the MMO and their advisers CEFAS on this matter.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<p>introduction of hard substrate and modification of habitat. Typical burial depth for SEP and DEP cables, excluding in areas of sand waves, is expected to be between 0.5m to 1.5m (or up to 1m for the export cables). The use of single 3-core cables, compacting the circuit phases also reduces and localises the EMF significantly</p> <p>Cable burial requirements for the purpose of the environmental assessment have been informed through the completion of an export cable burial risk assessment (Pace Geotechnics, 2020) which has been produced by the Applicant at an early stage to inform the design and environmental assessment processes on advice from relevant stakeholders. The burial requirements for all cables will be finalised based on an assessment of the risks posed to the Projects in specific areas, following the completion of detailed pre-construction geotechnical and geophysical investigations and the subsequent finalisation of the cable burial risk assessment, prior to the start of construction.</p>	hard substrate and modification of habitat).	<p>CSCB MCZ CSIMP</p> <p>DCO Schedule 10, Part 2, condition 13;</p> <p>DCO Schedule 11, Part 2, condition 13;</p> <p>DCO Schedule 12, Part 2, condition 12;</p> <p>DCO Schedule 13, Part 2, condition 12.</p>	
9.2	9.3.3	Embedded	Construction	Impacts on fish and shellfish ecology	During construction, overnight working practices would be employed offshore so that construction activities could be 24 hours	Reduces the overall duration of potential impacts on fish communities in proximity to the wind farm sites.	<p>Construction Method Statement</p> <p>DCO Schedule 10, Part 2, condition 13;</p> <p>DCO Schedule 11, Part 2, condition 13;</p> <p>DCO Schedule 12, Part 2, condition 12;</p> <p>DCO Schedule 13, Part 2, condition 12.</p>	As advised above, Natural England advises the balance of impacts to other receptors must be considered.
9.3	9.3.3	Embedded	Soft-start and ramp-up during piling activities	Impacts on fish and shellfish ecology	Each piling event would commence with a soft-start at a lower hammer energy, followed by a gradual ramp-up for at least 20 minutes to the maximum hammer energy required (the maximum hammer energy is only likely to be required at a few of the piling installation locations) to allow mobile species to move away from the area of highest noise impact. This commitment is presented in the Draft Marine Mammal Mitigation Protocol (MMMP) (Revision B) [REP1-013] and is	Minimises impact of noise on fish and shellfish.	<p>Marine Mammal Mitigation Protocol (MMMP)</p> <p>DCO Schedule 10, Part 2, condition 13;</p> <p>DCO Schedule 11, Part 2, condition 13;</p> <p>DCO Schedule 12, Part 2, condition 12;</p> <p>DCO Schedule 13, Part 2, condition 12.</p>	Please see Natural England's advice to Marine Mammals in Ref 10.1.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					secured under the conditions of the draft DCO.			
Chapter 10 Marine Mammals								
10.1	10.3.4.1	Embedded	Soft-start and ramp-up	Underwater noise impacts to marine mammals	Each piling event would commence with a soft-start at a lower hammer energy followed, by a gradual ramp-up for at least 20 minutes to the maximum hammer energy required (the maximum hammer energy is only likely to be required at a few of the piling installation locations). The soft-start and ramp-up allows mobile species to move away from the area before the maximum hammer energy with the greatest noise impact area is reached. This commitment to soft-start and ramp-up is presented in the Draft MMMP (Revision B) [REP1-013] .	Minimises the impact of underwater noise on marine mammals.	MMMP DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.	The Draft MMMP (Version B) states that the soft start and ramp up procedure for piling is conducted for a minimum of 30 minutes. The measure here should be revised to 30 minutes, to align with the MMMP. The terminology of this measure should be revised to ensure it's consistent with the JNCC Guidelines for piling mitigation. The guidelines state that the soft start should be a minimum of 20 minutes. To be clear, this measure will minimise the risk of injury to marine mammals. It will not reduce the disturbance effect from underwater noise. This should be clearly stated in the "Effect of Mitigation or Commitment" column.
10.2 Superseded by 10.8	10.3.4.1	Embedded	Best practice to reduce vessel collision risk	Collision risk to marine mammals	Vessel movements, where possible, will follow set vessel routes and hence areas where marine mammals are accustomed to vessels, in order to reduce any increased collision risk. All vessel movements will be kept to the minimum number that is required to reduce any potential collision risk. Additionally, vessel operators will use good practice to reduce any risk of collisions with marine mammals.	Reduces potential collision risk.	Construction Method Statement DCO Schedule 10, Part 2, condition 13; DCO Schedule 11, Part 2, condition 13; DCO Schedule 12, Part 2, condition 12; DCO Schedule 13, Part 2, condition 12.	N/A Strike through by Applicant as superseded by Applicant in new 10.8
10.3	10.3.4.1	Embedded	Pollution prevention	Deterioration in water quality	As outlined in ES Chapter 7 Marine Sediment and Water Quality [APP-093] , the Applicant is committed to the use of best practice techniques and due diligence regarding the potential for pollution throughout all construction, operation and maintenance, and decommissioning activities. An Outline PEMP (Revision C) [REP3-060] has been submitted alongside the DCO application to set out the details of the measures that will be taken in relation to accidental pollution events. The final PEMP would be agreed with the MMO prior to construction.	Minimises the potential impacts any offshore maintenance activities will have on marine water and sediment quality.	PEMP DCO Schedule 10, Part 2, condition 11; DCO Schedule 11, Part 2, condition 11; DCO Schedule 12, Part 2, condition 10; DCO Schedule 13, Part 2, condition 10.	Natural England has no further comment
10.4	10.3.4.2	Additional	MMMP for piling activities	Underwater noise impacts	The MMMP for piling will be developed in the pre-construction period and based upon best available information, methodologies, industry best practice,	Minimises the impact of underwater noise on marine mammals.	MMMP DCO Schedule 10, Part 2, condition 13;	Reference to a 10 minute ADD duration should be removed as the final duration has not been agreed.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
				to marine mammals	<p>latest scientific understanding, current guidance and detailed project design. The MMMP for piling will be developed in consultation with the relevant SNCBs and the MMO, detailing the proposed mitigation measures to reduce the risk of any physical or permanent auditory injury (PTS) to marine mammals during all piling operations.</p> <p>This will include details of the embedded mitigation, for the soft-start and ramp-up, as well as details of the mitigation zone and any additional mitigation measures required in order to minimise potential impacts of any physical or permanent auditory injury (PTS), for example, the activation of acoustic deterrent devices (ADD) (e.g. for 10 minutes) prior to the soft-start.</p> <p>A Draft MMMP (Revision B) [REP1-013] has been submitted with the DCO application.</p>		<p>DCO Schedule 11, Part 2, condition 13;</p> <p>DCO Schedule 12, Part 2, condition 12;</p> <p>DCO Schedule 13, Part 2, condition 12.</p>	<p>We strongly advise the inclusion of noise abatement systems as an example of additional mitigation to minimise potential impacts in the text here.</p> <p>To be clear, the MMMP will minimise the risk of injury to marine mammals. It will not reduce the disturbance effect from underwater noise. This should be clearly stated in the "Effect of Mitigation or Commitment" column.</p> <p>We note that the draft MMMP also covers the draft protocol for UXO clearance. Reference to the MMMP for UXO Clearance is also in Chapter 10 Section 10.3.4.2. We query whether there should be a commitment in this document (Schedule of Mitigation and Mitigation Routemap) regarding mitigation/MMMP for UXO clearance.</p> <p>Natural England notes the document does not refer to the commitment to a maximum hammer pile energy within the DCOs (schedules 10, 11, 12 and 13 Part 2 Condition 2). This puts a firm upper limit on the energy used for piling and as such is a key limitation on the impact. It should therefore be referenced.</p>
10.5	Draft MMMP	Additional	MMMP for piling – mitigation zone	Underwater noise impacts to marine mammals	Establishment of a Mitigation Zone around the pile location before each pile driving activity, based on the maximum predicted distance for PTS	Minimises the impact of underwater noise on marine mammals.	<p>MMMP</p> <p>DCO Schedule 10, Part 2, condition 13;</p> <p>DCO Schedule 11, Part 2, condition 13;</p> <p>DCO Schedule 12, Part 2, condition 12;</p> <p>DCO Schedule 13, Part 2, condition 12.</p>	<p>This measure needs to be more detailed for it to meet the intended effect of minimising the impact of underwater noise. Creating a mitigation zone in itself does not reduce impact; it is what measures are applied within that mitigation zone which reduces the impact.</p> <p>To be clear, the establishment of a mitigation zone has the potential to minimise the risk of injury to marine mammals, subject to appropriate measures being delivered within it. It will not reduce the disturbance effect from underwater noise. This should be clearly stated in the "Effect of Mitigation or Commitment" column.</p>
10.7	Draft MMMP (Annex 1)	Embedded	Vessel movements	Vessel collision risk	Embedded mitigation to reduce vessel collision risk with marine mammals includes that vessel movements, where possible, will follow set vessel routes and hence areas where marine mammals are accustomed to vessels,	Minimises the risk of vessel collisions with marine mammals	<p>MMMP</p> <p>DCO Schedule 10, Part 2, condition 13;</p> <p>DCO Schedule 11, Part 2, condition 13;</p>	<p>Annex 1 was removed from the draft MMMP in version B. It is therefore not appropriate to cross-reference this document for this measure.</p> <p>This measure is repeated in measure 10.8, which correctly cross-references</p>

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<p>in order to reduce any increased collision risk. All vessel movements will be kept to the minimum number that is required to reduce any potential collision risk.</p> <p>Operators of all vessels will be made aware of the risk and measures to avoid marine mammal collisions during mobilisation briefings. In order to reduce the risk of collisions, meetings will be undertaken with all vessel operators to promote collision awareness and avoidance, including code of conduct.</p> <p>Code of conduct for vessel operators will be produced and issued to reduce the risk of collision with marine mammals across all phases of the Projects.</p> <p>The code of conduct for good practice will be developed prior to construction based on the latest information and guidance.</p> <p>The code of conduct for good practice to avoid marine mammal collisions with vessels will include, but not be limited to:</p> <ul style="list-style-type: none"> • Avoid deliberately approaching marine mammals when sighted. • Avoid abrupt changes to course or speed should marine mammals approach the vessel or bow-ride. • Where possible, vessels will maintain a steady speed, and direction, to allow any marine mammal to predict where the vessel may be headed, and to move out of the way or avoid surfacing in the path of the vessel. • An agreed minimum distance from seal haul-out sites, particularly during sensitive periods such as pupping and moulting. • Protocol to report any collisions. 		<p>DCO Schedule 12, Part 2, condition 12;</p> <p>DCO Schedule 13, Part 2, condition 12.</p>	<p>the PEMP. Therefore, this row can be removed. This would also avoid duplication of the reference number (10.7).</p> <p>We have provided detailed comment on the vessel-related measure on 10.8 below.</p>
10.6	10.3.4.2	Additional	Southern North Sea SAC SIP	Underwater noise impacts to marine mammals	In addition to the MMMPs for piling and UXO clearance, a SIP for the SNS Special Area of Conservation (SAC) will be developed. The SIP will set out the approach to deliver any project mitigation or management measures to reduce the potential for any significant	Minimises the impact of underwater noise on marine mammals.	<p>Site Integrity Plan (SIP) for the Southern North Sea Special Area of Conservation (SAC)</p> <p>DCO Schedule 10, Part 2, conditions 14 and 15;</p>	Natural England has significant concerns about the SIP process that we raised during examination, e.g. Appendix D of our Relevant Representations. Our experience of the SIP process since those representations indicates that the

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<p>disturbance of harbour porpoise in relation to the SNS SAC conservation objectives.</p> <p>The SIP is an adaptive management tool, which can be used to ensure that the most adequate, effective and appropriate measures, if required, are put in place to reduce the significant disturbance of harbour porpoise in the SNS SAC.</p> <p>The SIP will be developed in the pre-construction period and will be based upon best available information and methodologies at that time, in consultation with the relevant SNCBs and the MMO.</p> <p>An In Principle SIP for the SNS SAC [APP-290] has been submitted with the DCO application.</p>		<p>DCO Schedule 11, Part 2, conditions 14 and 15;</p> <p>DCO Schedule 12, Part 2, conditions 13 and 14;</p> <p>DCO Schedule 13, Part 2, conditions 13 and 14.</p>	<p>timescales involved are hindering the appropriate application of the mitigation hierarchy. For example, finalising the SIP so close to construction, after significant financial decisions have been made, may limit the use of noise abatement systems because of associated cost. Similarly the timeframe of piling is usually fixed long in advance of the SIP, meaning there is no scope to shift piling timeframes to reduce in-combination disturbance (if needed). There are also logistical constraints with respect to securing appropriate technology.</p> <p>The above issues could be addressed by the Applicant committing to mitigation at consent rather than relying on the SIP process, as advised in our Relevant Representations, However the Applicant has not taken this approach.</p> <p>Due to these concerns, we consider that the second paragraph written under "Mitigation Measure or Commitment" is removed or revised. Natural England does not agree with the text in this paragraph given our recent experience of SIPs.</p>
10.7	10.3.4.2	Embedded	Disturbance at seal haul-out sites	Disturbance at seal haul-out sites	No mitigation is required for the disturbance of seals at haul-out sites. However, where possible and safe to do so, transiting vessels would maintain distances of 600m or more off the coast, particularly in areas near known seal haul-out sites during sensitive periods.	Minimises disturbance at seal haul-out sites	N/A embedded in existing vessel transit routes	Section 10.3.4.2 of the ES does not appear to reference this measure so that cross-reference should be checked.
10.8	Deadline 8 Submission – 9.10 Outline Project Environmental Management Plan (Revision D) [document reference 9.10]	Embedded	Best practice to reduce vessel collision risk	Collision risk to marine mammals	<p>Embedded mitigation to reduce vessel collision risk with marine mammals includes that vessel movements, where possible, will follow set vessel routes and hence areas where marine mammals are accustomed to vessels, in order to reduce any increased collision risk. All vessel movements will be kept to the minimum number that is required to reduce any potential collision risk.</p> <p>Operators of all vessels will be made aware of the risk and measures to</p>	Reduces potential collision risk	<p>PEMP</p> <p>DCO Schedule 10, Part 2, condition 11;</p> <p>DCO Schedule 11, Part 2, condition 11;</p> <p>DCO Schedule 12, Part 2, condition 10;</p> <p>DCO Schedule 13, Part 2, condition 10.</p>	<p>No comment on the text of the measure.</p> <p>Natural England requests to be consulted on the code of conduct for good practice to avoid marine mammal collisions with vessels.</p>

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<p>avoid marine mammal collisions during mobilisation briefings. In order to reduce the risk of collisions, meetings will be undertaken with all vessel operators to promote collision awareness and avoidance, including code of conduct.</p> <p>Code of conduct for vessel operators will be produced and issued to reduce the risk of collision with marine mammals across all phases of the Projects.</p> <p>The code of conduct for good practice will be developed prior to construction based on the latest information and guidance.</p> <p>The code of conduct for good practice to avoid marine mammal collisions with vessels will include, but not be limited to:</p> <ul style="list-style-type: none"> • Avoid deliberately approaching marine mammals when sighted. • Avoid abrupt changes to course or speed should marine mammals approach the vessel or bow-ride. • Where possible, vessels will maintain a steady speed, and direction, to allow any marine mammal to predict where the vessel may be headed, and to move out of the way or avoid surfacing in the path of the vessel. • Additionally, where possible and safe to do so, transiting vessels will maintain distances of 600m or more off the coast, particularly in areas near known seal haul-out sites during sensitive periods. Protocol to report any collisions. 			
Chapter 11 Offshore Ornithology								
11.1	11.3.3	Embedded	Site selection	Disturbance to birds offshore	Wind farm boundary site selection process: the shallow area to the northwest of the existing Dudgeon OWF was excluded from the DEP North array area boundary for technical reasons due to the shallow water depth and bathymetry, which were considered unsuitable for foundation and cable installation. In addition, Natural England advised (meeting held 29 th January 2018) that this shallow area was	Minimises disturbance to birds offshore	N/A embedded in Order Limit selection	Natural England agrees that reducing the footprint of the project will reduce displacement and disturbance – however, the level of disturbance/displacement across the shallow area has not been quantified, and so it is not possible to comment on whether it ‘minimises’ this impact.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					believed to be important for feeding birds and that it would therefore be of benefit to exclude the area from development. Following the advice from Natural England and the bathymetry analysis, this area was removed from the southern boundary of the DEP North array area.			
11.2	11.3.3	Embedded	Air gap	Collision risk	The project designs of SEP and DEP assessed in the Preliminary Environmental Information Report (PEIR) had an air gap of 26m at Highest Astronomical Tide (HAT). This was set at a value greater than the minimum of 22m to reduce the potential collision risk for offshore ornithology receptors. Between PEIR and the production of the ES, air gap has been further increased to 30m above HAT in response to consultation feedback, providing further reduction of potential collision risk for offshore ornithology receptors.	Reduces collision risk	Design Plan DCO Schedule 2, Part 1, Requirements 2-7, Detailed offshore design parameters; DCO Schedule 10, Part 2, conditions 1-3; DCO Schedule 11, Part 2, conditions 1-3; DCO Schedule 12, Part 2, conditions 1-2; DCO Schedule 13, Part 2, conditions 1-2.	Assuming the means of implementation is satisfactory. Natural England agrees that this reduces collision risk. All collision risk modelling and hence impact assessment within the application has been based on an airgap of 30m above HAT.
11.3 Superseded by 11.3	11.3.3	Embedded	Vessel movements	Best practice protocol for minimising disturbance to red-throated diver	<p>Potential impacts on red-throated diver during operation and maintenance works will be mitigated through:</p> <ul style="list-style-type: none"> • Avoiding and minimising maintenance vessel traffic, where possible, during the most sensitive time period in October to March (inclusive); • Restricting vessel movements where possible to existing navigation routes (where the densities of red-throated divers are typically relatively low); • As far as possible maintaining direct transit routes (to minimise transit distances through areas used by red-throated diver); • Where it is necessary to go outside of established navigational routes, avoid rafting birds either on-route to the wind farm sites from port and/or within the wind farm sites (dependent on location) and where possible avoid disturbance to areas with consistently high diver density; • Avoidance of over-revving of engines (to minimise noise disturbance); and 	Reduces red-throated diver (and other loafing bird) disturbance.	<p>Construction Method Statement PEMP</p> <p>DCO Schedule 10, Part 2, conditions 11 and 13; DCO Schedule 11, Part 2, conditions 11 and 13; DCO Schedule 12, Part 2, conditions 10 and 12; DCO Schedule 13, Part 2, conditions 10 and 12.</p>	N/A Strike through by Applicant as superseded by Applicant in new Ref 11.3.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<ul style="list-style-type: none"> Briefing of vessel crew on the purpose and implications of these vessel management practices (through, for example, tool-box talks). <p>The Project Team would make maintenance vessel operators aware of the importance of the species and the associated mitigation measures through tool box talks.</p>			
11.3	Deadline 8 submission – 9.10 Outline Project Environmental Management Plan (Revision D)	Embedded	Vessel movements	Disturbance and displacement	<p>Potential impacts on red-throated diver during construction, operation and maintenance works will be mitigated through:</p> <ul style="list-style-type: none"> Where possible avoid works during the over winter period 1st November to 31st March (inclusive); Selecting routes that avoid known aggregations of birds; Restricting vessel movements to existing navigation routes (where the densities of red-throated divers are typically relatively low); Maintaining direct transit routes (to minimise transit distances through areas used by red-throated diver); Considering the potential for crew transfer vessels (CTV) to travel in convoy en route to the wind farm sites and seeking to do so where it is considered practicable; Avoidance of over-revving of engines (to minimise noise disturbance); and Briefing of vessel crew on the purpose and implications of these vessel management practices (through, for example, tool-box talks). <p>The Project Team would make maintenance vessel operators aware of the importance of the species and the associated mitigation measures through tool box talks.</p>	Reduces red-throated diver (and other loafing bird) disturbance.	<p>PEMP</p> <p>DCO Schedule 10, Part 2, condition 11;</p> <p>DCO Schedule 11, Part 2, condition 11;</p> <p>DCO Schedule 12, Part 2, condition 10;</p> <p>DCO Schedule 13, Part 2, condition 10.</p>	Natural England agrees that the mitigation measures (as advocated within the NE Best Practice Protocol) will reduce disturbance to red-throated diver and other loafing birds, as will the additional measure proposed by the Applicant of CTV travelling in convoy where possible.
11.4	Deadline 7 Submission - 13.3.1 Apportioning and Habitats Regulations Assessment Updates	Additional	Export cable laying vessel	Disturbance and displacement Greater Wash	Seasonal restriction between 1 st November and 31 st March on export cable laying activity within the SPA	Minimise Impacts on Greater Wash SPA red-throated divers	DCO Schedules 12 and 13, Part 2, Condition 24	Natural England agrees that a seasonal restriction between 1 st November and 31 st March on export cable laying activity within the Greater Wash SPA will minimise the impacts on red-throated diver by

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
	Technical Note (Revision D) (Tracked)			SPA red-throated divers				minimising the disturbance to this species from this activity.
11.5	Deadline 8 Submission - 13.3.1 Apportioning and Habitats Regulations Assessment Updates Technical Note (Revision E) (Tracked)	Embedded	Physical presence of turbines within the SEP wind farm site	Disturbance and displacement of Greater Wash SPA red-throated divers	Turbine restriction zones within the southeast and southwest corners of the SEP wind farm site as shown in the top right hand pane of Figure 3 of the Apportioning and Habitats Regulations Assessment Updates Technical Note (Revision E) (document reference 13.3).	Minimise Impacts on Greater Wash SPA red-throated divers	Works Plans (Offshore) (Revision D)	Natural England agrees this will minimise impacts on red-throated diver within the Greater Wash SPA. This is the scenario that Natural England's end of examination position for red-throated diver at the Greater Wash SPA is based on.
Chapter 25 Seascape and Visual Impact Assessment								
25.1		Embedded	Site selection	Impact to sensitive land-based receptors, and to ensure sufficient gap between SEP and Race Bank OWF.	It was decided not to include the SEP AfL between the southern edge of the existing Sheringham Shoal wind farm and the Norfolk coast due to the proximity of sensitive land-based receptors. In addition, as a result of the embedded mitigation measure concerning red-throated divers and the commitment to "...turbine restriction zones within the southeast and southern west corners of the SEP wind farm site..." to minimise potential disturbance and displacement of this sea bird (see 11.5 above), the final locations of the operational turbines will be further from the coast and the nearest onshore receptors. As a consequence of this commitment, the operational turbines would appear marginally smaller on the horizon (and on the visualisations submitted in support of ES Chapter 25 SVIA).	Minimise impact to land-based receptors and ensure sufficient gap between SEP and Race Bank OWF.	N/A	Natural England agrees that through the embedded RTD mitigation, moving the turbines further offshore would make the turbines appear marginally smaller. Our advice as provided with in our Relevant Representations [RR-063] still remains regarding the sufficiency of the gap between SEP and Race Bank OWF.

Table 2: Onshore Mitigation Measures

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
Chapter 17 Ground Conditions and Contamination								
17.1	17.3.3	Embedded	Horizontal Directional Drilling (HDD)	Impact on surface water quality	Trenchless crossing techniques (e.g. HDD) have been committed to where the cable corridor crosses Main Rivers and some smaller watercourses. This will minimise the potential for contamination (if present) from excavation works by limiting the potential for contaminated material to enter surface waters via surface run off.	Minimise impact of contamination from excavation works	N/A	Natural England agrees that HDD provides appropriate mitigation for crossing rivers and watercourses, but advises the 'Effect to Mitigation' is amended to reflect this minimises the release of contaminants within the fluvial system. Please see our advice at Refs 20.4 and 20.6 where we advise mitigation in the event of an HDD bentonite breakout is agreed and secured in the form of an agreed Bentonite Breakout Management Plan.
17.2	17.3.3	Embedded	Site selection	Impacts on groundwater and abstractions for public water supply	The DCO Order Limits have been developed to avoid interaction with Groundwater Source Protection Zone 1, and therefore minimise the potential for impact on abstractions for public water supply.	Minimise impact on abstractions for public water supply	N/A	Not Applicable to Natural England's remit.
17.3	17.3.3	Embedded	Pollution control measures	Impacts on groundwater quality	The use of an oil water sump within the onshore substation to reduce the potential for leaks and spills impacting groundwater quality.	Minimise impact of pollution	N/A	Not Applicable to Natural England's remit.
17.4	17.6.1.1.5	Additional	Ground investigations	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	Where areas of potential contamination cannot be avoided, such as the areas that cross the entire width of the onshore cable corridor (e.g. the disused airfield at Brandiston and railway lines (both historical and active)), targeted ground investigations may be required. This would characterise the site conditions, identify unacceptable risks and determine whether remediation is required. If areas of potential concern are identified, then a remediation strategy would be developed and agreed with the relevant bodies prior to the commencement of remedial works and construction activity. The ground investigation, risk assessment and remediation would follow guidance provided within the 2021 Environment Agency Land Contamination Risk Management Framework.	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
17.5	17.6.1.1.5	Additional	Ground contamination	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	<p>The Code of Construction practice (CoCP) will be informed by the findings of pre-construction site investigation and include an assessment of the potential risks to human health and controlled waters receptors from SEP and / or DEP. Based on that risk assessment appropriate working methods would be developed to avoid, minimise or mitigate impacts relating to construction.</p> <p>The risk mitigation strategies incorporated into the CoCP would also include appropriate Personal Protective Equipment (PPE), provision of welfare facilities, monitoring of works including air quality and odour and implementation of relevant good working practices applied including stockpile management and dust suppression activities to reduce the risk relating to the creation and inhalation of wind-blown dusts.</p>	Minimise impact to human health from exposure to contaminated soils and ground water	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.6	17.6.1.1.5	Additional	Ground contamination and human health	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	The CoCP would incorporate legislation requirements including the Construction Design Management (CDM) Regulations (2015), Health and Safety at Work Act (1974), CoCP and Control of Substances Hazardous to Health (COSHH) Regulations.	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement, 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.7	17.6.1.1.5	Additional	Pollution prevention	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	<p>The CoCP would incorporate the Environment Agency best practice guidelines for pollution prevention which have been withdrawn from use but still provide a useful best practice guide and include:</p> <ul style="list-style-type: none"> • Environment Agency Pollution Prevention Guidance (PPG) 01 – Understanding your environmental responsibilities; • Environment Agency PPG 05 – Works and maintenance near water; • Environment Agency PPG 06 – Working at construction and demolition sites: preventing pollution guidance; 	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<ul style="list-style-type: none"> Environment Agency PPG 08 – Safe storage and disposal of used oils, and Environment Agency PPG 21 – Pollution incident response planning. 			
17.8	17.6.1.1.5	Additional	Excavated soils	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	Adoption of a CL:AIRE Industry Code of Practice to manage the re-use and disposal of excavated soils on site would also be incorporated as an additional mitigation measure to protect human health, this would aid in maximising sustainability and providing an audit trail to demonstrate the appropriate use of materials.	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.9	17.6.1.1.5	Additional	Excavated soils	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	A Materials Management Plan (MMP) would be drafted in advance of any construction works, this would include chemical screening criteria in order to ensure that imported and/or reused materials are chemically suitable for use. If materials identified as containing asbestos are identified, then a specialist contractor should be employed to aid in its removal from site, in line with current legislation.	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.10	17.6.1.1.5	Additional	Excavated soils	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	The CoCP and MMP would be submitted for approval with the relevant statutory bodies in advance of implementation.	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.11	17.6.1.1.5	Additional	Ground Gas and Vapours	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	Risks associated with the creation of a preferential pathway for ground gas and vapours via the onshore cable corridor can be mitigated via re-instating excavated materials following the installation of the onshore cables, however if this is to change or a significant source of gas / vapour generating material is encountered during construction further consideration will be required.	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
17.12	17.6.1.1.5	Additional	Ground Gas and Vapours	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	Risks to construction workers in relation to ground gas and vapours would be mitigated by the use of appropriate working methods incorporated in the CoCP and use of PPE.	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.13	17.6.1.2.5	Additional	Pollution prevention	Direct impacts on groundwater quality and groundwater resources	<p>A CoCP will be developed which would include specific measures relevant to the storage of fuels, oils, lubricants, waste water and other chemicals during the works. This will include:</p> <ul style="list-style-type: none"> Storing all fuels, oils, lubricants, wastewater and other chemicals in impermeable bunds with at least 10% of the stored capacity, with any damaged containers being removed from site. Refuelling would take place in a dedicated impermeable area, using a bunded bowser. Biodegradable oils to be used where possible. Ensuring that spill kits are available on site at all times as well as sand bags and stop logs for deployment in case of emergency spillages. 	Minimise impact to ground water quality and resources through the appropriate storage of fuels, oils, lubricants, waste water and other chemicals during the works	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England welcomes this commitment in order to ensure there will be no indirect impacts to designated site features.
17.14	17.6.1.2.5	Additional	Hydrogeological risk assessment	Direct impacts on groundwater quality and groundwater resources	A hydrogeological risk assessment where earthworks/ excavations are within 50m (or 250m dependent upon volume abstracted) of private potable groundwater abstractions. The risk assessment would meet the requirements of Environment Agency's Approach to Groundwater Protection 2018 Framework.	Minimise impact to ground water quality and resources	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.15	17.6.1.2.5	Additional	Piling	Direct impacts on groundwater quality and groundwater resources	A piling risk assessment would be undertaken if piles are to be used in areas of potential contamination, in line with the Environment Agency's Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention (Environment Agency, 2001).	Minimise impact to ground water quality and resources	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.16	17.6.1.3.4	Additional	Dewatering activities	Impacts on surface water quality and the	In areas that have been identified as potential areas of contamination within the Preliminary Risk Assessment (PRA)	Minimise impact surface water and ecological habitats	DCO Schedule 2, Part 1, Requirement 19, Code of	Natural England defers to the EA to ensure this measure is fit for purpose.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
				ecological habitats they support from contamination	or encountered during construction works, perched waters within Made Ground or groundwater from dewatering activities would be collected within a tank or lagoon prior to any treatment or discharge. This waste water shall either be: <ul style="list-style-type: none"> Discharged to foul sewer under a trade effluent consent agreed with the local water company/supplier; and/or Discharged to surface water under an environmental permit issued from the Environment Agency. 		Construction Practice (CoCP)	
17.17	17.6.1.3.4	Additional	Dewatering activities	Impacts on surface water quality and the ecological habitats they support from contamination	On site treatment plant may be required to treat the waste water prior to disposal in order to meet discharge limits set by either the Environment Agency or local water company.	Minimise impact surface water and ecological habitats	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	
17.18	17.6.1.4.5	Additional	Mineral Sterilisation	Sterilisation of future mineral resources	Mitigation would include consultation with the Norfolk County Council (NCC) Mineral Planning Authority with regards to the feasibility of mineral extraction prior to development. This would be supported by ground investigations prior to construction to help better determine the depth, accessibility and quality of the mineral resource and enable a quantification of the amount of the mineral that may be sterilised. A Mineral Resource Assessment would be undertaken if required, to provide an indication of the likely quality and extent of the mineral resource, the commercial viability of extraction and environmental impact.	Minimise impacts to future mineral resources	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.19	17.6.4.5.5	Additional	Commercial, residential properties and the school	Built Environment	Mitigation includes the reduction of construction activities in proximity to commercial, residential properties and the school where possible. However, where this isn't possible pre-construction site characterisation works in areas identified as potential sources of contamination may be required.	Minimise impacts to the built environment	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.20	17.6.2.1.4	Additional	Contamination	Exposure of workforce, land owners, land	Remedial works would be undertaken if areas of contamination are identified during the site characterisation works	Minimise impacts to human health	DCO Schedule 2, Part 1, Requirement 9, Code of	Not Applicable to Natural England's remit.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
				users and neighbouring land users to contaminated soils and groundwater and associated health impacts	prior to construction and if unexpected contamination is identified during construction. This would mean than contaminated soils would not be permanently left at surface during the operational phases of SEP and DEP. The remedial works would be undertaken prior to the operation of SEP and/or DEP would reduce the potential for impact to human health.		Construction Practice (CoCP)	
17.21	17.6.2.1.4	Additional	Contamination	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	Re-instating the materials excavation during the installation of the onshore cable corridor the potential impact to human health would be reduced.	Minimise impacts to human health	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.22	17.6.2.1.4	Additional	Contamination	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	Maintenance workers that are required to undertake ground excavations during the operation of SEP and DEP will be provided with information regarding the nature of ground conditions within each area so that they can develop site and task specific risk assessment and method statements and implement their recommendations.	Minimise impacts to human health	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.23	17.6.2.2.4	Additional	Contamination	Impact on controlled waters (groundwater and surface waters)	Maintenance workers that are required to undertake ground excavations or maintenance works during the operation of SEP and DEP would be provided with information regarding the nature of ground conditions within each area so that they can develop site and task specific risk assessment and method statements and implement their recommendations to protect controlled waters.	Minimise impacts to human health	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.24	17.6.2.2.4	Additional	Contamination	Impact on controlled waters (groundwater and surface waters)	During cable repair / maintenance works and at the onshore substation, all fuels, oils lubricants and other chemicals would be stored in an impermeable bund with at least 110% of stored capacity. Spill kits would be available on site at all times and an Emergency Response Plan (ERP) (or similar) would be developed which outlines mitigation measures to be undertaken in the event	Minimise impacts to controlled waters	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England welcomes this commitment in order to ensure there will be no indirect impacts to designated site features.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					of an uncontrolled release of hazardous materials.			
17.25	17.6.2.3.5	Additional	Future Mineral Resource	Sterilisation of future mineral resources	Consultation with NCC Mineral Planning Authority will be undertaken to determine the feasibility of mineral extraction within the area that would be sterilised. It may be necessary for a minerals resource assessment to be undertaken to determine the amount of mineral at risk from sterilisation and the viability of extraction. Where viable, consideration will be given to the extraction of the mineral resource during construction	Minimise impacts to future minerals resources	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.26	17.6.2.4.3	Additional	Ground gases	Built environment	Should unexpected sources of ground gas be identified prior to or during construction works, a ground investigation will be undertaken to characterise ground conditions and assessment of potential risks. Depending on the outcome of the assessment, mitigation measures such as the use of gas protection measures within the substation design will be implemented.	Minimise risk to the built environment	DCO Schedule 2, Part 1, Requirement 19, Contaminated Land and Groundwater Scheme	Not Applicable to Natural England's remit.
17.27	17.6.2.4.3	Additional	Contamination	Built environment	If utilities corridors are within land affected by contamination, construction of clean or lined service corridors will be installed to protect land users and utilities.	Minimise risk to the built environment	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.28	17.6.2.4.3	Additional	Contamination	Built environment	In line with the British Research Establishment (BRE) Special Digest 1, materials suitable for the identified ground conditions would be used to ensure that the correct concrete type for the environment has been selected.	Minimise risk to the built environment	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.29	17.11	Additional	Monitoring	Human health, groundwater and surface water receptors	Groundwater and ground gas monitoring may be required as part of any targeted ground investigations that may be required in order to determine the site characteristics and if they pose a potential risk to human health, groundwater and surface water receptors.	Minimise risk to human health, groundwater and surface water receptors	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England queries the additionality this provides in relation to Refs 17.13 and 17.24 above.
17.30	Chapter 17 - Ground Conditions and Contamination - Appendix 17.2 - Waste Assessment	Additional	Waste materials	Impacts to human health, groundwater, and surface water receptors	A Site Waste Management Plan (SWMP) will be prepared to record any decisions given to materials resource efficiency when designing and planning the works. Any assumptions on the nature of the project; its design; the construction method or materials employed, in order to minimise the	Ensure that waste materials are handled and reused/disposed of appropriately	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					quantity of waste produced on site; or maximise the amount of waste reused, recycled or recovered, will be captured within the SWMP.			
17.31	Deadline 4 Submission - 9.17 Outline Code of Construction Practice (Revision D)	Additional	Contamination	Impact on controlled waters (groundwater and surface waters)	There is a very small area where construction access for the substation site overlaps with SPZ 2. This small overlap covers an area of the proposed onshore substation temporary construction access road where it leaves the A140 Ipswich Road (illustrated on ES Figure 18.4 Groundwater Receptors, Sheet 6 of 6 [APP-219]). Works here will be limited to a maximum depth of 600mm below the ground surface.	Minimise impacts to controlled waters	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
17.32	Deadline 3 Submission - 3.1.1 Draft Development Consent Order (Revision F)	Additional	Remediation	Exposure of workforce, land owners, land users and neighbouring land users to contaminated soils and groundwater and associated health impacts	<p>Pre-commencement remedial work in respect of any ground contamination or other adverse ground conditions will be undertaken in accordance with a scheme to deal with the contamination of any land (including groundwater) that is likely to cause significant harm to persons or pollution of controlled waters or the environment which has been submitted to, and approved by, the relevant planning authority in consultation with the Environment Agency.</p> <p>Each scheme will include an investigation and assessment report, prepared by a specialist consultant to identify the extent of any contamination and the remedial measures to be taken for that stage to render the land fit for its intended purpose, together with a management plan which sets out long-term measures with respect to any contaminants remaining on the site.</p> <p>Such remediation as may be identified in each approved scheme must be carried out in accordance with that approved scheme.</p>	Minimise impact to human health from exposure to contaminated soils, ground gas and vapours during construction	DCO Schedule 2, Part 1, Requirement 32, Contaminated land and groundwater scheme	Natural England defers to the EA on this matter. We would expect the EA in undertaking their duties to take into account the Natural Environment.
Chapter 18 Water Resources and Flood Risk								
18.1	18.3.3	Embedded	Water Crossings	Impact on watercourses	All Main Rivers will be crossed using trenchless techniques such as HDD to avoid direct interaction with these watercourses. The cable entry and exit pits will be at least 9m from the banks of	Avoid any impacts arising from trenching on watercourses	N/A	Natural England welcomes this commitment and has no further comment.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					the watercourse, and the cable will be at least 2m below the channel bed.			
18.2	18.3.3	Embedded	Groundwater Quality	Impact on abstractions for public water supply	The cable corridor has been developed to avoid interaction with Groundwater Source Protection Zone 1, and therefore minimise the potential for impact on abstractions for public water supply.	Minimise potential impact groundwater quality	N/A	Not Applicable to Natural England's remit.
18.3	18.6.1.1.5	Additional	Trenched crossings	Direct Disturbance of Surface Water Bodies	Where temporary dams are required during the trenched crossing process the amount of time that these are in place will be kept to a minimum. Prior to dewatering the area between the temporary dams, a fish rescue would be undertaken. Flumes or pumps would be adequately sized to ensure that flows downstream are maintained whilst minimising upstream impoundment. Scour protection would also be used to protect the river bed downstream of the dam from high energy flow at the outlets of flumes and pumps.	Minimise potential impacts on watercourses from temporary crossings	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England defers to the EA on this matter. We would expect the EA in undertaking their duties to take into account the Natural Environment.
18.4	18.6.1.1.5	Additional	Cable ducts	Direct Disturbance of Surface Water Bodies	The cable ducts would typically be installed two metres below the bed of the water body (dependent on local geology and geomorphological risks) to avoid exposure during periods of higher energy flow when the bed could be mobilised. This depth takes into consideration anticipated climate-change related changes in fluvial flows and erosion that will occur over time.	Minimise potential impacts on the riverbed from exposure	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
18.5	18.6.1.1.5	Additional	Cable ducts	Direct Disturbance of Surface Water Bodies	In some sensitive locations where a culvert or temporary bridge would not be appropriate to maintain access over watercourses, the haul road would effectively stop and would re-start on the opposite side of the river. Access to the opposite side of the river would need to be taken from the existing road network.	Minimise potential impacts on the riverbed from exposure	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
18.6	18.6.1.1.5	Additional	Cable ducts	Direct Disturbance of Surface Water Bodies	Any culverts installed to maintain access across watercourses would be adequately sized to avoid impounding flows (including an allowance for potential increases in winter flows as a result of projected climate change). Culverts would be installed below the active bed of the channel, so that sediment continuity and movement of fish and aquatic invertebrates can be maintained.	Minimise potential impacts on the riverbed from exposure	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England defers to the EA on this matter. We would expect the EA in undertaking their duties to take into account the Natural Environment.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
18.7	18.6.1.2.5	Additional	Trench excavations	Increased Sediment Supply	Limiting extent of open excavations along the onshore cable corridor to short sections at any one time (work fronts). Topsoil would be stripped from the entire width of the onshore cable corridor for the length of the work front, then stored and capped to minimise erosion from wind and rain.	Minimise sediment deposition into water bodies from erosion	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
18.8	18.6.1.2.5	Additional	Trench excavations	Increased Sediment Supply	Temporary works areas (e.g. construction compounds and trenchless crossing areas) within the onshore development area may comprise hardstanding of permeable material, such as gravel aggregate or alternatively matting/timber or similar, underlain by geotextile or another suitable material to a minimum of 50% of the exposed area. This would minimise the area of open ground.	Minimise sediment deposition into water bodies from erosion	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
18.9	18.6.1.2.5	Additional	Trench excavations	Increased Sediment Supply	<p>Construction activities will adhere to industry good practice measures as detailed in the Environment Agency's Pollution Prevention Guidance (PPG) notes (including PPG1, PPG5, PPG8 and PPG21) (although these have been revoked, they provide a useful guide for best practice measures) and Construction Industry Research and Information Association (CIRIA)'s 'Control of water pollution from construction sites: Guidance for consultants and contractors (C532)' (2001). Specific measures within the CMS will include:</p> <ul style="list-style-type: none"> • Minimising of subsoil exposure and retention of strips of undisturbed vegetation on the edge of the working area where possible; • On-site retention of sediment to be maximised by routing all drainage through the site drainage system; • Including measures to intercept sediment runoff at source in the drainage system using suitable filters to remove sediment from water discharged to the surface drainage network; • Cleaning of the wheels of vehicles leaving site to prevent the accumulation of soil and sediment on road surfaces. Traffic movements 	Minimise sediment deposition into water bodies from erosion	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	<p>In our Relevant Representations [RR-063], Natural England advised that the potential impact of an HDD breakout is not included in the assessment for Increased Sediment Supply. We advise the potential impact of an HDD breakout on features of interest and their supporting habitats should be assessed.</p> <p>Please see our advice at Refs 20.4 and 20.6 where we advise mitigation in relation to the impact of increased sediment supply in the event of an HDD bentonite breakout in the form of an agreed Bentonite Breakout Management Plan is also included within this section</p>

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					would be restricted to minimise surface disturbance; and <ul style="list-style-type: none"> Routing the cable to avoid water resources and flood risk receptors where possible. In locations where large areas of exposed ground lie adjacent to watercourses, buffer strips of vegetation will be retained where possible to prevent runoff. 			
18.10	18.6.1.3.7	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwaters	Situating concrete and cement mixing and washing areas at least 10m away from the nearest water body. These areas will incorporate settlement and recirculation systems to allow water to be re-used. All washing out of equipment would take place in a contained area and the water collected for disposal off-site.	Minimise potential impacts on water purity via pollution prevention measures	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England welcomes this commitment in order to ensure there will be no indirect impacts to designated site features. Natural England defers to the EA on these matters. We would expect the EA in undertaking their duties to take into account the Natural Environment.
18.11	18.6.1.3.7	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwaters	Storing all fuels, oils, lubricants and other chemicals in impermeable bunds with at least 110% of the stored capacity, with any damaged containers being removed from site. Refuelling would take place in a dedicated impermeable area, using a bunded bowser, located at least 10m away from the nearest water body.	Minimise potential impacts on water purity via pollution prevention measures	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England welcomes this commitment in order to ensure there will be no indirect impacts to designated site features. Natural England defers to the EA on this matter. We would expect the EA in undertaking their duties to take into account the Natural Environment.
18.12	18.6.1.3.7	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwaters	Ensuring that spill kits are available on site at all times as well as sand bags and stop logs for deployment on the outlets from the site drainage system in case of emergency spillages.	Minimises potential contaminated runoff and to protect groundwater bodies	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	
18.13	18.6.1.3.7	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwaters	Foul drainage (e.g. from construction welfare facilities) will be collected through mains connection to an existing mains sewer (if such a connection is available) or collected in a septic tank located within the DCO order limits and transported off site for disposal at a licensed facility with appropriate treatment capacity within its existing permit.	Minimises potential contaminated runoff and to protect groundwater bodies	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	
18.14	18.6.1.3.7	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwaters	During construction, the onshore cable installation will be designed with drainage channels to intercept drainage within the working width. Additional drainage channels will be installed to intercept water from the cable trench. This will be discharged at a controlled rate into local ditches or drains via	Minimises potential contaminated runoff and to protect groundwater bodies	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England defers to the EA on this matter. However, it is not clear how mitigation will minimise contaminated water discharges into water courses, some of which may be into designated sites.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					temporary interceptor drains. Depending upon the precise location, water from the channels will be infiltrated or discharged into the existing drainage network			
18.15	18.6.1.3.7	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwaters	Construction drainage will be developed and implemented to minimise water within the cable trench and ensure ongoing drainage of surrounding land. If water enters the trenches during installation from surface runoff of groundwater seepage, this will be pumped via settling tanks, sediment basins, sediment filtration socks or mobile treatment facilities to remove sediment, before being discharged into local ditches or drains via temporary interceptor drains. Existing land drains will be reinstated following construction	Minimises potential contaminated runoff and to protect groundwater bodies	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England defers to the EA on this matter. While this ensures contaminants bound within the sediment are captured, it is not clear how contaminants dissolved into the water column will be treated.
18.16	18.6.1.3.7	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwaters	Buffer strips of vegetation will be retained adjacent to water bodies where possible, to intercept any contaminated runoff. To protect groundwater bodies, excavation will be shallow, limited to approximately 1.6m below the surface, except where it passes below road and rail infrastructure or water bodies where it may be deeper.	Minimises potential contaminated runoff and to protect groundwater bodies	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England advises a balance needs to be struck between containing contaminants within vegetated buffer strips and the implication of potential impacts to designated site features.
18.17	18.6.1.4.5	Additional	Pollution prevention	Changes to Surface and Groundwater Flows and Flood Risk	Changes in surface water runoff resulting from the increase in impermeable area from the construction of the onshore cable corridor and particularly the onshore substation would be attenuated and discharged at a controlled rate, in consultation with the Lead Local Flood Authority (LLFA) and the Environment Agency. This controlled runoff rate would be equivalent to the greenfield runoff rate.	Minimise potential impacts on water purity via pollution prevention measures and flood risk	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
18.18	18.6.1.4.5	Additional	Pollution prevention	Changes to Surface and Groundwater Flows and Flood Risk	During construction, the onshore cable installation would be designed with drainage channels to intercept drainage within the working width. Additional drainage channels would be installed to intercept water from the cable trench. This would be discharged at a controlled rate into local ditches or drains via temporary interceptor drains. Depending upon the precise location, water from the channels would be infiltrated or discharged into the existing drainage network.	Minimise potential impacts on water purity via pollution prevention measures and flood risk	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Please refer to our advice in Ref 18.16 above.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
18.19	18.6.1.4.5	Additional	Pollution prevention	Changes to Surface and Groundwater Flows and Flood Risk	Construction drainage would be developed and implemented to minimise water within the cable trench and ensure ongoing drainage of surrounding land. If water enters the trenches during installation from surface runoff of groundwater seepage, this would be pumped via settling tanks, sediment basins, sediment filtration socks or mobile treatment facilities to remove sediment, before being discharged into local ditches or drains via temporary interceptor drains. Existing land drains would be reinstated following construction.	Minimise potential impacts on water purity via pollution prevention measures and flood risk	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Please refer to our advice in Ref 18.15 above.
18.20	18.6.1.4.5	Additional	Pollution prevention	Changes to Surface and Groundwater Flows and Flood Risk	Along the cable corridor, temporary culverts will be adequately sized to avoid impounding flows (including allowing for increased winter flows as a result of climate change).	Minimise potential impacts on water purity via pollution prevention measures and flood risk	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
18.21	18.6.2.1.5	Additional	Drainage	Supply of Contaminants to Surface and Groundwater	Operational drainage at the onshore substation would be developed according to the principles of the Sustainable Drainage System (SuDS) discharge hierarchy. Generally, the aim will be to discharge surface water runoff as high up the following hierarchy of drainage options as reasonably practicable: i) into the ground (infiltration); ii) to a surface water body; iii) to a surface water sewer, highway drain or another drainage system; or iv) to a combined sewer. This will include attenuation and hydrocarbon interceptors to prevent the supply of contaminants (including oils and fine sediment).	Minimise water contamination arising from operation	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England welcomes this commitment in order to ensure there will be no indirect impacts to designated site features.
18.22	18.6.2.1.5	Additional	Foul Water	Supply of Contaminants to Surface and Groundwater	Foul waters from welfare facilities will either be discharged through a mains connection to an existing mains sewer (if such a connection is available) or collected in a septic tank located within the DCO order limits and transported off site for disposal at a licensed facility with appropriate treatment capacity within its existing permit.	Minimise water contamination arising from foul water	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
18.23	18.6.2.1.5	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwater	All fuels, oils, lubricants and other chemicals used at the onshore substation would be stored in an impermeable bund with at least 110% of the stored capacity. Damaged	Minimise potential impacts on water purity via pollution prevention measures	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England welcomes this commitment in order to ensure there will be no indirect impacts to designated site features.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					containers will be removed from site and all refuelling would take place in a dedicated impermeable area, using a bunded bowser. Biodegradable oils will be used where possible.			
18.24	18.6.2.1.5	Additional	Pollution prevention	Supply of Contaminants to Surface and Groundwater	Spill kits would be available on site at all times. Sand bags or stop logs will also be available for deployment on the outlets from the site drainage system in case of emergency.	Minimise potential impacts on water purity via pollution prevention measures	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England welcomes this commitment in order to ensure there will be no indirect impacts to designated site features.
18.25	18.6.2.2.5	Additional	Drainage	Changes to Surface and Groundwater Flows and Flood Risk	Surface water drainage at the onshore substation would be designed to meet the requirements of the National Planning Policy Framework (NPPF) and National Policy Statement (NPS) EN-5, with runoff limited, where feasible, through the use of infiltration techniques which can be accommodated within the DCO order limits. The drainage will be developed according to the principles of the SuDS discharge hierarchy. Generally, the aim will be to discharge surface water runoff as high up the following hierarchy of drainage options as reasonably practicable: i) into the ground (infiltration); ii) to a surface water body; iii) to a surface water sewer, highway drain or another drainage system; or iv) to a combined sewer. This will include attenuation and hydrocarbon interceptors to prevent the supply of contaminants (including oils and fine sediment). No mitigation is proposed specifically along the onshore cable corridor.	Minimise potential impacts on water flows and prevent flood risk	DCO Schedule 2, Part 1, Requirement 11 and 12, Outline Landscape Management Plan (OLMP)	Not Applicable to Natural England's remit.
18.26	9.17 Outline Code of Construction Practice	Additional	Flood Risk	Changes to Surface and Groundwater Flows and Flood Risk	Specific flood warning and evacuation plans should be produced for the construction phase of the onshore cable corridor, specifically related to construction works at watercourse crossing locations where personnel or materials may be located, albeit temporarily, within Flood Zones 2 and 3.	Minimise potential impacts on site personnel and users from flood risk	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
18.27	Deadline 2 Submission - 14.4 The Applicant's Comments on Responses to the Examining Authority's First Written Questions	Additional	Water Crossings	Impact on watercourses	The Applicant has committed to securing approval for all Main River watercourse crossings prior to commencement of construction.	Avoid any impacts arising from trenching on watercourses	DCO Schedule 14, Parts 4 (For the protection of the Environment Agency) and 5 (For the protection of the drainage authorities) DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England welcomes this commitment in relation to water courses located within (including those that that feed into) designated sites.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
18.28	Deadline 5 submission – 9.17 Outline Code of Construction Practice (Revision E)	Embedded	Water Crossings	Impact on watercourses	<p>The Applicant has committed to develop a scheme and programme for each watercourse crossing, diversion and reinstatement, which will include site-specific details regarding sediment management and pollution prevention measures. The Watercourse Crossing Scheme will be submitted, as part of the CoCP, to the relevant planning authority.</p> <p>A full walkover of the onshore cable corridor will be carried out to identify all ordinary watercourses which will help to confirm the number, location and design of watercourse crossings. This will be undertaken during detailed design stage in support of the Watercourse Crossing Scheme and to inform any applications that seek Lead Local Flood Authority (LLFA) or Internal Drainage Board (IDB) approval for the crossing of ordinary watercourses.</p>	Avoid any impacts arising from trenching on watercourses	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England welcomes this scheme and programme. We wish to be consulted for water course crossings within a designated site or if there is an impact pathway to a designated site.
18.29	Deadline 7 Submission - 3.1.1 Draft Development Consent Order (Revision J) (Tracked Revisions I/J)	Additional	Drainage	Impacts to drainage networks	Maintain in good repair and condition and free from obstruction any drainage work which is situated within the Order limits and on land held by the undertaker for the purposes of or in connection with the specified work, whether or not the drainage work is constructed under the powers conferred by this Order or is already in existence.	Minimise impacts on drainage networks	DCO Schedule 14, Part 5 (For the protection of the drainage authorities) Requirement 7	Not Applicable to Natural England's remit.
Chapter 19 Land Use, Agriculture and Recreation								
19.1	19.3.3	Embedded	Site Selection	Impact on residential properties, historic and nature designations and infrastructure	<p>SEP and DEP have undergone an extensive site selection process which has involved incorporating environmental considerations (avoiding residential properties, historic and nature designations and infrastructure e.g. buried cables, railways, roads,) in collaboration with the engineering design requirements.</p> <p>Land take has been minimised where possible, reducing sterile land parcels, aligning with field boundaries and avoiding the best and most versatile land.</p>	Minimise impact on existing infrastructure	N/A	As this mitigation measure is in relation to land take and not nature conservation sites, Natural England has no further comment.
19.2	19.3.3	Embedded	Long HDD at Landfall	Impact on Weybourne beach	The Applicant has committed to installing the cables at landfall using HDD, thereby avoiding physical	Minimise impact on Weybourne beach	N/A	Natural England welcomes the commitment to reduced disturbance to Weybourne Beach.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					disturbance or prolonged access restrictions to Weybourne beach.			
19.3	19.3.3	Embedded	Haul road	Impact on areas from physical disturbance	The Applicant has included to a haul road to deliver equipment to the installation site from construction compounds. This will limit physical disturbance to a specific area. Following an initial topsoil strip, the haul road would be installed in stages as each work front progresses. It would be formed of protective matting, temporary metalled road or permeable gravel aggregate dependent on the ground conditions, vehicle requirements and any necessary protection for underground services.	Minimise physical disturbance on areas	N/A	Not Applicable to Natural England's remit.
19.4	19.3.3	Embedded	Construction Corridor	Impact on soils and drainage	As well as a working easement, the construction corridor will have sufficient space allowed to ensure appropriate soil management and pre-construction drainage.	Minimise impact on soil or drainage from construction	N/A	Natural England welcomes this commitment.
19.5	19.7.1.1.5	Additional	Field drainage	Agricultural Drainage	Agricultural Liaison Officer (ALO) and land drainage consultant will be appointed to develop pre-and post-construction drainage plans.	Minimise impact on existing field drainage	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
19.6	19.7.1.1.5	Additional	Field drainage	Impact on Agricultural Drainage	Pre-construction drainage will be installed to manage water coming from existing underground land drainage pipes which will be affected by the installation of the new cables. Following installation of the cables, the post construction drainage program will commence to ensure that soils affected by the cable corridor are left in a condition that enables a return within the affected fields to full agricultural production. Where necessary post construction drains may be installed, typically parallel to the cable corridor.	Minimise impact on existing field drainage	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
19.7	19.7.1.1.5	Additional	Field drainage	Impact on natural and artificial field drainage systems	Agricultural drainage systems elsewhere within the study area would be maintained during construction. Minor watercourses/ditches located within the study area would be subject to temporary damming and diversion during the construction phase to mitigate potential impacts. Installation of ducts 2m below the channel bed would be undertaken as part of the diversion process.	Minimise impact on existing field drainage	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
19.8	19.7.1.2.5	Additional	Agricultural activities	Impact on agricultural land through temporary loss	An Agricultural Liaison Officer (ALO) will be appointed to assist with the appropriate planning and timings of works to minimise disruption to agricultural activities.	Minimise the amount of isolated agricultural land	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
19.9	19.7.1.2.5	Additional	Agricultural activities	Impact on agricultural productivity through heavy machinery	Private agreements (or compensation in line with the compulsory purchase compensation code) will be sought with relevant landowners/occupiers and the land will be reinstated to preconstruction condition.	Minimise the impact on agricultural productivity	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
19.10	19.7.1.3.5	Additional	Soil management	Impact on soil quality through erosion and contamination	Measures set out in the Ministry of Agriculture, Fisheries and Food (MAFF) (2000) Good Practice Guide for Handling Soils and Defra (2009) Construction code of practice for the Sustainable Use of Soils on Construction Sites would be adopted. Additionally, guidance from the IES (2020) Sustainable, healthy, and resilient: Practice-based approaches to land and soil management would be used. Producing a Soil Management Plan (SMP) outlining the mitigation measures and best practise techniques, which contractors would be obliged to comply with. Measures would include: <ul style="list-style-type: none"> • Consideration of weather conditions where it is appropriate to work for each soil type e.g. not working in an area of poorly draining soils following a period of heavy rain; • Storing soil appropriately; • Ensuring effective drainage systems are used during construction; and • Employing reinstatement and plant vegetation following completion of the construction works. 	Minimise the impact on soil quality through effective management	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England welcomes the commitment to a soil management plan outlining the mitigation measures and best practice techniques prior to construction.
19.11	19.7.1.3.5	Additional	Soil management	Impact on soil quality through erosion and contamination	The SMP will set out procedures for the appropriate handling of soils during the works, including: <ul style="list-style-type: none"> • Using a competent contractor for soil handling, storage and reinstatement under Defra (2009) Construction code of practice for the Sustainable Use of Soils on Construction Sites; • Storing topsoil adjacent to where it is stripped, wherever practicable; 	Minimise the impact on soil quality through effective management	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<ul style="list-style-type: none"> Storing excavated subsoil separately from the topsoil, with sufficient separation to ensure segregation; Restricting movements of heavy plant and vehicles to specified routes; and Minimising the footprint of excavation works as much as reasonably possible. Mitigation measures that will limit and/or prevent loss of soil to erosion would be included within the SMP. 			
19.12	19.7.1.4	Additional	Agri-environment schemes	Impact on land managers' income via Agri-environment schemes	The primary mitigation relating to Agri-environment schemes would be the avoidance of land parcels that are subject to agreements. This, however, has not been possible in some areas of the study area (e.g. area of the onshore substation). Where impacts to an agreement cannot be avoided, the affected landowners and /or occupier will be consulted to enable them to liaise with the Rural Payments Agency. This will include compensation provisions to reimburse a landowner and/or occupiers financial losses, where appropriate.	Minimise the losses associated with a deterioration of land management due to construction	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England welcomes this mitigation commitment.
19.13	19.7.1.4	Additional	Recreational assets	Disruption to onshore coastal recreational assets	Any areas subject to short-term restricted access would be agreed in advance with the Countryside Access Officer at Norfolk County Council prior to construction.	Minimises impacts to recreational assets	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
19.14	19.7.1.8.4	Additional	Disruption to users of inland recreational assets	Impact on recreational inland users during construction	Appropriate mitigation related to air quality, noise, traffic and visual impacts has been identified in Chapter 22 Air Quality [APP108] , Chapter 23 Noise and Vibration [APP-109] , Chapter 24 Traffic and Transport [APP-110] , Chapter 25 Seascape and Landscape Visual Impact [APP-111] and Chapter 26 Landscape and Visual Impact [APP-112] , to reduce potential impacts down to non-significant. These measures are secured within the OCoCP (Revision G) (document reference 9.17), outline Construction Traffic Management Plan (Revision E) [REP5-029] and Outline Landscape Management Plan (Revision D) [REP5-031] and Outline Ecological Management Plan (Revision E)	Minimise the impacts on inland recreational users by CoCP adherence	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					(document reference 9.19) submitted with the DCO application.			
19.15	19.7.1.9.5	Additional	Public Rights of Way (PRoW)	Impact on any PRoW across the planned work area	<p>Disruption to any recreational routes would be managed to ensure continued safe access for members of the public, and all efforts would be made to minimise any closure durations. The exact management method would be agreed in advance with the relevant local authority for that stage of the works. Methods available include:</p> <ul style="list-style-type: none"> • Appropriately fenced (unmanned) crossing points; • Manned crossing points; and • Temporary alternative routes (assumed be required for approximately 1 week). 	Minimise any impacts on PRoW to ensure safety for members of the public	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	<p>Natural England queries whether this includes mitigation of the King Charles III England Coastal Path.</p> <p>The Applicant's intention as advised in the Final Onshore SoCG is to secure any PRoW diversions to avoid sensitive habitats within the Public Rights of Way Strategy secured under Requirement 24 of the draft DCO. Natural England advises this mitigation commitment is outlined and secured within this document.</p>
19.15	19.7.1.9.5	Additional	PRoW	Impact on any PRoW across the planned work area	Soft management techniques would be employed where cycle routes intersect the onshore cable corridor. These methods would include (but not be limited to) the use of pilot vehicles and stop and go signs.	Minimise any impacts on PRoW to ensure safety for members of the public	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	
19.15	19.7.1.9.5	Additional	PRoW	Impact on any PRoW across the planned work area	Safety measures would be implemented where the haul road crosses a footpath or cycle way, including raising awareness of the footpath or cycle way to construction workers and informing footpath and cycleway users of the hazards associated with the haul road. Where a recreational route is used as part of a construction access, an alternative route for the PRoW would be provided.	Minimise any impacts on PRoW to ensure safety for members of the public	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	
19.17	19.7.1.9.5	Additional	PRoW	Impact on any PRoW across the planned work area	<p>After the completion of construction works, all recreational routes would be reinstated to their original condition or otherwise as agreed with the relevant local authority.</p> <p>For all temporary alternative routes required, the following measures will be followed:</p> <ul style="list-style-type: none"> • A pre- and post-construction survey (including identification of surface condition and street furniture) of the route affected will be undertaken. Surveys will be undertaken by an experienced surveyor with scope of coverage and methodology to be 	Minimise any impacts on PRoW to ensure safety for members of the public	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<p>agreed with the relevant local authority.</p> <ul style="list-style-type: none"> A qualified ALO will be employed to ensure that information on existing land conditions is obtained, recorded and verified during these surveys; Where impacted by the works, the surveyed recreational route would be restored to its original condition or otherwise as agreed with the relevant local authority; All alternative routes would be advertised following the local authority's standards for advertising temporary closures of route. 			
19.18	19.7.2.2.5	Additional	Agricultural lands	Loss of agricultural land	Private agreements would be sought between the Applicant and relevant landowners / occupiers regarding any permanent loss of land incurred as a direct consequence of the operation of SEP and DEP.	Private agreements with landholders.	NA	Not Applicable to Natural England's remit.
19.19	Deadline 3 Submission - 9.17.1 Outline Code of Construction Practice	Additional	Agricultural land	Soil heating	Thermal analyses will be carried out during detailed design that will model the impact of the cables on soil heating. Final cable design and burial cross section design will ensure compliance with all applicable standards with respect to soil heating.	Minimising soil heating impacts	DCO Schedule 2, Part 1, Requirement 19, Outline Code of Construction Practice	Not Applicable to Natural England's remit.
19.21	Deadline 2 Submission - 14.3 The Applicant's Comments on the Local Impact Reports	Additional	County Wildlife Sites	Impact on any CWS across the planned work area	The Applicant has committed to completing an updated desk study including data search with the Norfolk Biodiversity Information Service (NBIS) to obtain up-to-date information on any CWSs within the Order Limits and surrounding 2km area.	Minimise any impacts on CWS	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	<p>Natural England advises it is not clear from the wording included in the Effect of Mitigation or Commitment Column how the Applicant will use NBIS data to minimise impacts to County Wildlife Sites.</p> <p>In our Relevant Reps [RR-063] we advised a 2-5km data search would provide a better understanding of the use of the wider landscape by foraging bats.</p>
19.22	Deadline 7 Submission - 21.5 The Applicant's Responses to the Examining Authority's Fourth Written Questions	Additional	Landowners/occupiers	Impact to landowners/occupiers during the proposed works	The Construction Practice Addendum will form part of legally binding landowner agreements with the final wording included within the final Code of Construction Practice.	Reduce uncertainty of landowners/occupiers	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
Chapter 20 Onshore Ecology and Ornithology								

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
20.1	20.3.3	Embedded	Designated nature conservation sites	Impact on designated nature conservation sites	SEP and DEP has undergone an extensive site selection process which has involved incorporating environmental considerations in collaboration with the engineering design requirements. The onshore cable corridor has been routed to avoid designated nature conservation sites (e.g. Special Protection Areas (SPAs), Sites of Special Scientific Interest (SSSIs) etc.) where possible. Trenchless installation methods for the export cables have been proposed to avoid direct impacts to any designated sites that currently fall within the DCO order limits.	Avoid any overlap with designated nature conservation sites	N/A	As not all nature conservation sites are avoided, Natural England advises re-wording the Effect of Mitigation or Commitment column such that "overlap with designated conservation sites is reduced or minimised" Even where trenchless installation methods are used, there is still the risk of impact to designated sites.
20.2	20.3.3	Embedded	Woodland	Impact on woodland / hedgerow plants and biodiversity	Where the onshore cable corridor crosses through woodland and hedgerows, the working corridor width would be reduced to a typical working width of 20m. This is on the basis that a large part of the 45m (for a single Project) or 60m (for both Projects) corridor is for soil storage/management, and trees and hedgerows would not be removed for this purpose, and would be retained outside the 20m working corridor. The reduced 20m working width at woodland and hedgerow crossing applies to all scenarios; in reality, it is likely to be less for a single Project but not for the purposes of the assessment. Hedgerows would be replanted. Trees and woodland would be replanted within the construction corridor but outside the final cable easement of 20m width if both SEP and DEP are constructed and 12m if only SEP or DEP is constructed, where tree planting would be prohibited. Planting would be implemented during the first planting season following completion of construction of either SEP or DEP (subject to landowner agreements), whether constructed concurrently or sequentially. Further details on hedgerow and tree removal, retention, replacement and management are presented in the Outline Landscape Management Plan (Revision D) [REP5-031]. The DCO order limits have been routed to avoid woodland habitat wherever possible, as demonstrated by the DCO	Minimise any loss of biodiversity and environmental conditions in woodland from the cable corridor	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP) DCO Schedule 2, Part 1, Requirement 11 and 12, Outline Landscape Management Plan (OLMP)	Woodlands and Hedgerow losses have a wider functionality, Natural England refers the SoS to our Deadline 3 [REP3-144] response where our concerns are set out in relation to the mitigation measures set out in the EMP, particularly regarding impacts to bats.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<p>order limit alignment around woodlands such as Mossymere Wood (in the Civil Parishes of Itteringham and Corpusty and Saxthorpe), Colton Wood (in the Civil Parish of Marlingford and Colton) and Smeeth Wood (in the Civil Parish of Ketteringham). Colton Wood and Smeeth Wood are the only Ancient Woodlands in close proximity to the DCO order limits.</p> <p>Minimising habitat loss by narrowing the working corridor as much as is practicable where the DCO order limit passes through hedgerows.</p>			
20.3	20.3.3	Embedded	Cable crossings over watercourses	Impact on existing watercourses	All Main Rivers and IDB maintained Ordinary Watercourses will be crossed using trenchless techniques such as HDD to avoid direct interaction with these watercourses. The cable entry and exit pits will be at least 9m from the banks of the watercourse, and the cable will be at least 2m below the channel bed.	Minimise any impacts on existing watercourses from construction	N/A	Natural England welcomes this commitment and has no further comment.
20.4	20.6.1.1.3	Additional	Statutory designated nature conservation sites	Impact on statutory designated nature sites	<p>In relation to the risk of drilling fluid breakout, SEP and DEP have committed to a minimum depth of 2m below the bed level of watercourses at trenchless crossings, and a deeper installation may be suggested during detailed design to minimise the risk further by locating the drills within more consolidated geology, i.e. clays. In addition, a bentonite breakout mitigation plan would be developed adhering to industry best practice during construction, which will help to minimise the likelihood of a breakout. This will include ensuring effective removal of the cuttings from the borehole which is a key component of avoiding breakouts.</p> <p>There would be other mitigation measures that can be adopted to mitigate specific impacts once such impacts are discernible following finalisation of the onshore cable corridor and working practices. For the River Wensum SSSI/SAC and Weybourne Cliffs SSSI this will include minimising any artificial lighting requirements of the nearby parts of the construction site, and/or careful design of any essential lighting nearby. Appropriate hydrological</p>	Minimise any direct impacts from construction on statutory sites	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	<p>Natural England welcomes the commitment to minimise impacts to designated sites.</p> <p>However the mitigation measure or commitments listed here in Ref 20.4 must not be taken as read to being the only requirements to meet this commitment. It would be our preference the wording is removed and instead signposting to the further detailed mitigation commitments within this document is included.</p> <p>We expect the Applicant to implement conditions within the named plans including the EMP, LMP and CoCP. These should be included within the Means of Implementation column.</p> <p>Natural England advises that while the requirement to produce a bentonite mitigation management plan is secured within the DCO and through the Ecological Management Plan and Outline Code of Construction Plan (CoCP), the detail of the mitigation measures are yet to be agreed with the Applicant.</p> <p>We advise the appropriate DCO Schedule (Part 1, Requirement 19,</p>

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					pollution prevention measures will also be adopted (as outlined in Chapter 18 Water Resources and Flood Risk [APP-104]).			Code of Construction Practice (CoCP)) which secures the Bentonite Breakout Management Plan within the CoCP is added to the Means of Implementation column. Along with the Environment Agency, Natural England wishes to be a named consultee to the outline bentonite mitigation plan. Please also cross reference to Ref 20.41 in relation to impacts to the Reiver Wensum SAC.
20.5	20.6.1.1.3	Additional	Statutory designated nature conservation sites	Impact on statutory designated nature sites	Other mitigation measures (set out in the Outline Code of Construction Practice) will be adhered to minimise air emissions, such as the development of a Dust Management Plan, with measures including, but not limited to: <ul style="list-style-type: none"> Undertake daily on-site and off-site dust inspection, where dust sensitive receptors are nearby; Plan the site layout so that machinery and dust causing activities are located away from sensitive receptors, as far as is practicable and Ensuring all vehicles switch off engines when stationary, i.e. no idling vehicles. 	Minimise any direct impacts from construction on statutory sites	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England advises the effect of mitigation should refer specifically to air emissions for this item. In addition the DCO schedule reference the Outline CoCP should be referred to in the Means of Implementation column.
20.6	20.6.1.2.3	Additional	Habitat Destruction or Damage, or Construction Disturbance to Non-Statutory Designated Nature Conservation Sites	Impact on existing habitats	The principal mitigation measure for addressing potential indirect impacts to non-statutory designated sites is secured through the embedded mitigation measures of avoiding these sites through the adoption of HDD. In addition to the embedded mitigation measures of avoiding these sites through the adoption of HDD, artificial lighting requirements associated with the onshore construction works will only be used where it is required and designed in accordance with BCT guidance for artificial lighting (Outline Code of Construction Practice (Revision G) document reference: 9.17). Appropriate hydrological pollution prevention measures will also be adopted (as outlined in Chapter 18 Water Resources and Flood Risk [APP-104]).	Minimise any impacts on habitats from construction	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England advises the Effect of Mitigation Column should be expanded as or reflect our advice within examination repeated here: Natural England welcomes the mitigation measures within the Outline CoCP to manage emissions from artificial light during construction in accordance with Bats and Lighting in the UK guidance (Bat Conservation Trust and Institute of Lighting Engineers, 2018). At the close of examination we advised the measure to ensure lighting is directed away from habitats/linear features is clearly set out within the Outline CoCP. This is included in the BCT guidance, but not stipulated within the Outline CoCP. We note the EMP cross references to the CoCP for details of measures to manage pollution risk and therefore a

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
								cross reference to the DCO securing this through the COCP should be included here. In addition, the appropriate hydrological pollution prevention measures to be adopted from Chapter 18 should be outlined here or cross referenced within this Schedule of Mitigation Measures document to the relevant Chapter 18 ID(s) above. This must include measures in relation to impacts in relation not increased sediment supply following bentonite breakout.
20.7	20.6.1.3.3	Additional	Habitat loss or damage	Impact on arable habitats	Arable field margins would be reinstated, either by retaining stripped turfs and reinstating them after construction, or by re-sowing with a suitable grassland and/or wildflower mix. Further details of proposals to reinstate and, where possible, enhance habitats such as arable field margins impacted by SEP and DEP are presented in the Outline Ecological Management Plan (Revision E) (document reference 9.19). No other mitigation for impacts to arable habitats are considered necessary.	Minimise any loss or damage to arable habitats from construction	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England advises that while this commitment is secured within the DCO via reference to the EMP, there is no reference to arable field margin re-instatement within the EMP submitted at the close of examination at Deadline 8 [REP8-026]. The Outline CoCP includes measures to reinstate turf under Surface Water, Groundwater and Drainage Management and we advise this should be included and referenced under the Means of Implementation column.
20.8	20.6.1.4.5	Additional	Habitat loss or damage	Impact on grassland habitats	As with all other valued habitats, the footprint of works within grasslands, particularly those which are not improved grasslands, would be minimised and the duration of works within these habitats kept as short as possible. In areas comprising well-established and ecologically valued grassland swards that cannot be avoided by the footprint of the works, seeds or green hay from the existing and surrounding vegetation would be collected and spread once the works are complete. This is expected to be the best solution to reinstate affected areas of grassland, particularly at the landfall area where the coastal grassland generally consists of open, short turf. Further details relating to reinstatement of such habitats is provided in the Outline Landscape Management Plan (Revision D) [REP5-031] .	Minimise any loss or damage to grassland habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	The mitigation column refers to the LMP and the effect of mitigation column refers to the EMP. Natural England advises these are both referenced from the DCO to secure this mitigation commitment.
20.9	20.6.1.5.5	Additional	Habitat loss or damage	Impact on woodland	As described above, the primary (embedded) mitigation measure for avoiding direct impacts to woodland	Minimise any loss or damage to woodland habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England welcomes the mitigation measures to minimise loss or damage to woodland habitats.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
				habitats and biodiversity	<p>habitats has been the avoidance of this habitat wherever possible. This has included reducing the width of the working corridor as far as practical where woodland areas cannot be avoided. Where woodland habitat cannot be avoided, trenchless techniques (i.e. HDD) have been selected to avoid the loss of woodland habitat, which has resulted in 20.05ha of the 28.16ha of woodland (all types) being avoided. An Outline Landscape Management Plan (Revision D) [REP5-031] and an Outline Ecological Management Plan (Revision E) (document reference 9.19), which both form part of the DCO application, outlines the preferred approach to clearance of each section of woodland and proposed appropriate measures for reinstatement of woodland habitat. There would be options for enhancement of woodlands, especially plantations which can often have limited structural and species diversity that could be ecologically enhanced after the works.</p> <p>A pre-construction walkover survey would be undertaken by an appropriately qualified arboriculturist. This survey will define specific mitigation measures that would be implemented to protect trees that are located adjacent to the working areas. This will include the identification of root protection areas. The arboricultural report would be submitted to and agreed with the Local Planning Authority prior to the commencement of any construction works. In addition, the following mitigation measures will also be undertaken:</p> <ul style="list-style-type: none"> • The roots of retained trees along the edge of the working width would be protected from soil compaction by the enforcement of Root Protection Areas that would be fenced off from the construction (the extent of which would be calculated using guidance from BS5837:2012); and • Facilitation pruning may be recommended where tree crowns 		DCO Schedule 2, Part 1, Requirement 11, Arboricultural Survey Report	<p>Natural England's concerns were addressed through examination, however, it must be ensured the management plans documents adequately cross reference the mitigation measures.</p> <p>Please also refer to the DCO schedule for the Landscape Management Plan and Outline CoCP for these mitigation measures and commitments as set out.</p>

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					are at risk from impact by machinery or high sided vehicles.			
20.10	20.6.1.6.3	Additional	Habitat loss or damage	Impact on scrub habitats	Where areas of scrub have been removed, these will be reinstated with like-for-like species. Ecological enhancements and opportunities for BNG associated with SEP and DEP will also include replanting areas of scrub. Further details on scrub removal, retention, replacement and management are presented in the Outline Landscape Management Plan (Revision D) [REP5-031] and the Outline Ecological Management Plan (Revision E) (document reference 9.19) that are being submitted with the DCO.	Minimise any loss or damage to scrub habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England has no further comment. <u>However, please be advised that in January 2024, BNG for terrestrial NSIPS becomes mandatory and may become a requirement for this project.</u> <u>Therefore BNG may need to be revisited prior to determination in relation to hedgerow habitats.</u>
20.11	20.6.1.7.3	Additional	Habitat loss or damage	Impact on hedgerow habitats	Replacement planting of removed hedgerows would be implemented during the first planting season following completion of the construction works, except for tree / woodland removal which would not be re-planted within the 20m (SEP and DEP concurrently or sequentially) or 10m (SEP or DEP in isolation) operational easement. Gaps in hedges with new planting would be visible for a number of years following completion of construction (medium-term duration) until planting matures. Where hedgerow trees have been removed the approach would be to replant them within the hedgerow adjacent to the operational easement but still within the DCO order limits, subject to agreement with the landowners.	Minimise any loss or damage to hedgerow habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Please refer to our advice above in Ref 20.2.
20.12	20.6.1.7.3	Additional	Habitat loss or damage	Impact on hedgerow habitats	A suitable list for planting will be provided for each section of hedgerow or hedgerow tree to be reinstated, to ensure continuity and suitability. In general, hedgerow replanting will use native hedgerow species such as hawthorn <i>Crataegus monogyna</i> , blackthorn <i>Prunus spinosa</i> , field maple <i>Acer campestre</i> , dog-rose <i>Rosa canina</i> , hazel <i>Corylus avellana</i> , dogwood <i>Cornus sanguinea</i> , crab apple <i>Malus sylvestris</i> and holly <i>Ilex aquifolium</i> . It is likely that most replanting of hedgerow trees will use pedunculate oak <i>Quercus robur</i> , although the selection will depend in part on the species of tree being	Minimise any loss or damage to hedgerow habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England advises that hedgerows are locally sourced with a like for like replacement. Replacement should be planted with heavy standard.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					removed, with like-for-like replacement considered where ecologically suitable.			
20.13	20.6.1.7.3	Additional	Habitat loss or damage	Impact on hedgerow habitats	Ecological enhancements and opportunities for BNG associated with SEP and DEP will focus in part on hedgerow habitat. Where landowners are agreeable, existing gaps in hedgerows would be in-filled and new hedgerows would be planted along currently un-hedged boundaries. This planting would use a range of suitable native species, such as those listed above. Further details on hedgerow and tree removal, retention, replacement and management are presented in the Outline Landscape Management Plan (Revision D) [REP5-031] and the Outline Ecological Management Plan (Revision E) (document reference 9.19) that are being submitted with the DCO	Minimise any loss or damage to hedgerow habitats and enhance conditions	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Please refer to our advice to Ref 20.12 above. <u>As set out in 2.10, please be advised that in January 2024 BNG for terrestrial NSIPS becomes mandatory and may become a requirement for this project.</u> <u>Therefore BNG may need to be revisited prior to determination in relation to hedgerow habitats.</u>
20.14	20.6.1.8.3	Additional	Habitat loss or damage	Impact on water course habitats	Where temporary dams are required during the trenched crossing works, the length of time that these would be in place would be kept to a minimum. Furthermore and prior to dewatering the area between the temporary dams, a fish rescue would be undertaken. Flumes or pumps would be adequately sized to ensure that flows downstream are maintained whilst minimising upstream impoundment. Scour protection will also be used to protect the riverbed (and its associated habitats) downstream of the dam from high energy flow at the outlets of flumes and pumps.	Minimise any loss or damage to water course habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England welcomes this mitigation measure.
20.15	20.6.1.9.3	Additional	Potential Spread of Invasive, Non-Native Species (INNS)	Impacts arising from the spread of non-native species	Prior to the commencement of construction works, an INNS Management Plan would be developed for approval by the relevant stakeholders. This plan will likely include the following measures: <ul style="list-style-type: none"> • A plan of all INNS locations and extents; • A protocol for removing INNS and for managing the waste generated; • Good site practice measures for managing the spread of INNS during works at watercourses; and 	Minimise any spread of non-native species	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP) DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England wishes to be a named consultee for the INNS Management Plan.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<ul style="list-style-type: none"> A requirement for an Ecological Clerk of Works (ECoW) and details of their responsibilities with respect to INNS. 			
20.16	20.6.1.10.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on badgers or badger habitat	<p>Pre-construction badger surveys would be undertaken to confirm the location and status of badger setts within and up to 30m from the DCO order limits. These surveys would be completed within no more than one year of the proposed construction start dates, and ideally during the appropriate survey season (October and/or February to April, inclusive, according to NatureScot (formerly SNH) best practice badger survey guidance note, or during "winter months" according to the Mammal Society guidance) although surveys are possible throughout the year). The findings from the pre-construction surveys will inform precise mitigation requirements, including any necessary badger licences to close any active setts which could be damaged or disturbed by proposed works. Disused setts which have shown no signs of activity for at least 12 months can be closed without a badger Development Licence. Alternatively, if a sett shows no signs of current use and it can be thoroughly monitored for 21 consecutive days during which no badger activity is recorded, it can then also be considered disused. Monitoring in this scenario would involve 'soft-blocking' all entrance holes (such as with sticks, which will be dislodged by badgers if entering/exiting the holes) and use of automated trail cameras to monitor the entrance holes</p>	Minimise harm to badgers and badger habitat from construction	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England welcomes the mitigation measures and commitments for badger and that a draft Letter of No Impediment has been obtained.
20.17	20.6.1.11.3	Additional	Potential mortality, harm or disturbance of protected species	Impacts on bats or bat roosts	<p>As detailed in the draft European Protected Species (EPS) Mitigation Licence, the mitigation measures that would be undertaken comprise:</p> <p>(a) inspection of bat roost features through a climbing inspection by a licenced ecologist either the day before or the day of felling. Employing exclusion devices and blocking unoccupied roosts prior to the commencement of works;</p> <p>(b) provision of appropriate replacement roosts (i.e. one bat box per confirmed bat roost, i.e. two bat boxes in total) installed on nearby trees prior to felling.</p>	Minimise any impacts from construction on bats or bat roosts	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Providing the mitigation measures are compliant with the draft EPS mitigation, Natural England has no further comment.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<p>These will provide a roost for any bats translocated following soft felling and will also provide short/medium term compensation for the lost roosts. Longer term compensation will be achieved by planting a new oak tree near to each felled tree;</p> <p>(c) an ecologist providing the tree surgeon(s) with an induction on bat presence, legal protection and the Method Statement protocol prior to felling;</p> <p>(d) carrying out tree removal under the supervision of a licensed bat worker when the temperature is suitable (i.e. not in freezing conditions);</p> <p>(e) soft felling the relevant bat roost feature (if they cannot be confirmed to be vacant), by carefully rigging the feature and lowering it to the ground whereby the relevant features will be inspected by an ecologist; and</p> <p>(f) capture and release of any bats encountered during works by a Level 2/3/4 licensed bat worker into replacement roosts positioned away from the proposed works on nearby suitable trees.</p>			
20.18	20.6.1.12.3	Additional	Potential mortality, harm or disturbance of protected species	Impacts on bats or bat roosts	<p>Lighting required during the construction phase will only operate where necessary and will be directional to avoid unnecessary illumination.</p> <p>Within areas where high or very high foraging/commuting bat activity has been recorded, works within these areas will be restricted to daylight hours only where possible between April to October inclusive.</p>	Minimise any impacts from construction on bats or bat roosts	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	<p>Natural England welcomes the mitigation measures within the Outline CoCP [REP8-024] to manage emissions from artificial light during construction in accordance with Bats and Lighting in the UK guidance (Bat Conservation Trust and Institute of Lighting Engineers, 2018). We advise an additional measures are included to ensure lighting is directed away from habitats/linear features. This is included in the guidance, but not stipulated within the Outline CoCP.</p> <p>We advise the OCoCP Schedule and requirement for the OCoCP is included within the means of Implementation column.</p>
20.19	20.6.1.13.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on breeding birds or the nests and habitats of breeding birds	The key measure to avoid impacts to nesting will involve the removal of vegetation such as hedgerows and scrub outside of the main bird nesting season which runs from 1st March to 31st August. In locations where this measure cannot be accommodated,	Avoid impacts to breeding birds, nests and associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England has no further comment

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					certain habitats (such as hedgerows and small amounts of scrub) would be checked by an ecologist for the presence of active birds' nests. Where this check confirms the absence of active nests, clearance works can proceed shortly after, within no more than a few days of the check. If active birds' nests are found, these would be retained in-situ and allowed to reach their natural conclusion without being disturbed or damaged.			
20.20	20.6.1.13.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on breeding birds or the nests and habitats of breeding birds	<p>The following mitigation measures would be employed:</p> <ul style="list-style-type: none"> • Pre-construction bird surveys would be undertaken to establish the presence of breeding birds; • Measures would be adopted to minimise noise, light and disturbance on identified breeding birds, such as visual screening (e.g. opaque fencing) where necessary; • Construction activities would be monitored by an ECoW or suitably qualified ornithologist, who would seek to ensure compliance with the Wildlife and Countryside Act 1981 by avoiding destruction of nests, eggs or young, and affording increased protection from disturbance to Schedule 1 species breeding birds; and • Where breeding bird activity is recorded, such construction works (excluding vehicle and personnel movements) may be halted immediately until a disturbance risk assessment is undertaken by a suitably qualified ecologist. The risk assessment would consider the nature of construction activity, likelihood of disturbance, and possible implications of the construction activities on the breeding attempt and set out measures to ensure that no disturbance occurs. Where it is determined that breeding birds are not likely to be affected, construction works will continue. Where it is 	Avoid impacts to breeding birds, nests and associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England has no further comment

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					determined that breeding birds may be affected, additional mitigation works would be implemented to prevent disturbance. Where, in the opinion of the suitably qualified ecologist, disturbance cannot be avoided by mitigation, construction works within the area of disturbance would be suspended until chicks have fledged.			
20.21	20.6.1.14.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on over-wintering birds and associated habitats	Where construction works are undertaken within sugar beet fields or functionally linked habitat between November and January, a pre-construction survey will be undertaken to record the distribution and abundance of pink-footed geese and the distribution of harvested sugar beet likely to be affected during the winter season within which construction works will be undertaken. The findings of these pre-construction surveys will determine whether mitigation measures to reduce disturbance will be required; however, such mitigation measures may comprise pre-work habitat manipulation works to actively discourage bird species from using the fields where works are required and subsequently installing exclusion fencing to deter birds from the area as well as ensuring all lighting (if required) is only directed onto the construction works area.	Avoid impacts to over-wintering birds and associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England does not agree with the mitigation proposed. Please refer to Appendix 3 of this letter for Natural England's response to the Applicant's proposed without prejudice PFG mitigation condition. Natural England is not supportive of the current mitigation measures included within the Ecological Management Plan (EMP) and/or proposed draft condition as written. The details of the mitigation should be updated in line with our latest guidance and agreed as a condition of consent within an agreed timescale in order to avoid any risk AEoI to the PFG feature of the North Norfolk Coast SPA. As our updated PFG mitigation guidance sets out, this would minimise the potential risk of delay with real-time mitigation.
20.22	20.6.1.14.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on over-wintering birds and associated habitats	During the construction works and should pink-footed geese be present, the ECoW will be responsible for advising on the appropriate levels of mitigation, e.g. watching briefs, tool box talks to the construction personnel etc, as presented in the Outline Ecological Management Plan.	Avoid impacts to over-wintering birds and associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	
20.23	20.6.1.15.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on great crested newts or associated habitat	SEP and DEP will adopt a District Level License (DLL) approach prior to construction to ensure compliance with the legal status of GCN and mitigate for potential impacts on this species. DLL involves providing a Conservation Payment to fund a net increase in habitat for GCN at a county level, rather than mitigate for impacts specifically within and around the DCO order limits. Further GCN surveys are not necessarily required to inform a DLL	Minimise the impacts from construction on great crested newts or associated habitat	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England welcomes the use of the DLL to address impacts to GCN and has no further comment.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					application prior to the commencement of construction works associated with onshore elements of SEP and DEP. However, updated survey data could be used (if available) to refine the DLL Conversation Payment calculation. A provisional DLL certificate was provided by NE on 15 th August 2022 and is included as an appendix to the Planning Statement (Revision B) [AS-031] ; full procurement of the DLL would be undertaken within no more than 12 months prior to the commencement of onshore construction works.			
20.24	20.6.1.16.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on rare fish/invertebrates or associated habitats	<p>The following mitigation measures will be employed at those locations which are identified as being suitable for invertebrates and/or fish:</p> <ul style="list-style-type: none"> In order to ensure that there are no adverse impacts resulting from the installation of temporary dams, the amount of time that temporary dams are in place would be restricted to a reduced programme where possible, and flumes or pumps would be adequately sized to maintain flows downstream of the obstruction whilst minimising upstream impoundment. Furthermore, a fish rescue (as presented in the Outline Code of Construction Practice (Revision G) (document reference 9.17) would be undertaken in the area between the temporary dams prior to dewatering; and Bed and bank habitats will be reinstated and where possible improved following the completion of the works. 	Minimise the impacts from construction on rare fish/invertebrates or associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England advises adding a reference to the Outline CoCP DCO Schedule and Requirement.
20.25	20.6.1.17.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on reptiles or associated habitat	The potential risks to reptile populations would be addressed by the adherence of best-practice, and industry accepted, measures at the small number of localised areas known to support reptiles. Further details are presented in the Outline Ecological Management Plan (Revision E) (document reference 9.19) These measures would include; the implementation of habitat manipulation works to temporarily displace reptiles from the proposed construction footprint. Alternatively,	Minimise the impacts from construction on reptiles or associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England has no further comment. Our concerns were addressed through updates to the Outline EMP during examination. We would therefore expect any mitigation to be in line with that document.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					where this would not sufficiently mitigate risks, a reptile translocation exercise would be undertaken. Reptile exclusion fencing may need to be installed around areas of suitable habitat to ensure reptiles do not re-enter these areas during and after the translocation effort. This would involve capture of reptiles from within the area of works and translocation of any captured animals would be moved by a suitably qualified ecologist to a pre-identified area of suitable habitat (i.e. receptor site) that is located outwith the working area. On completion of the works, the reptile exclusion fencing would be removed, and reptiles allowed to naturally return to the area.			
20.26	20.6.1.18.3	Additional	Potential mortality, harm or disturbance of protected species	Impact on riparian mammals or associated habitat	The potential risks to reptile populations would be addressed by the adherence of best-practice, and industry accepted, measures at the small number of localised areas known to support reptiles. Further details are presented in the Outline Ecological Management Plan (Revision E) (document reference 9.19) These measures would include; the implementation of habitat manipulation works to temporarily displace reptiles from the proposed construction footprint. Alternatively, where this would not sufficiently mitigate risks, a reptile translocation exercise would be undertaken. Reptile exclusion fencing may need to be installed around areas of suitable habitat to ensure reptiles do not re-enter these areas during and after the translocation effort. This would involve capture of reptiles from within the area of works and translocation of any captured animals would be moved by a suitably qualified ecologist to a pre-identified area of suitable habitat (i.e. receptor site) that is located outwith the working area. On completion of the works, the reptile exclusion fencing would be removed, and reptiles allowed to naturally return to the area.	Minimise the impacts from construction on riparian mammals or associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England advises Ref 20.25 is in relation to impacts to riparian mammals, therefore we query why the reptile mitigation measure text has been repeated here. We would expect the specific mitigation measures for riparian mammals to be included within this reference instead.
20.27	20.6.1.18	Additional	Potential mortality, harm or disturbance of protected species	Impact on other priority species	In general, likely risks to these species can be addressed, at least in part, by adopting industry accepted best-practice measures.	Minimise the impacts from construction on other priority species.	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England has no further comment. We refer the Applicant to standard mitigation advice at GOV.UK

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
20.28	Deadline 1 Submission - 9.19.3 Outline Ecological Management Plan	Additional	Consultation	N/A	Recognition of the need for consultation with the National Trust in their position as a conservation organisation (Section 2.2)	N/A	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Not Applicable to Natural England's remit.
20.29	Deadline 1 Submission - 9.19.3 Outline Ecological Management Plan	Additional	Breeding birds	Impact on breeding birds	If active birds' nests are found, a suitable buffer will be put in place to protect the nest until the young have fledged. The buffer area will be based on species type and sensitivity (advice on this being provided by the ECoW or a suitably experienced ornithologist) but will be at least 5m and marked out to prevent accidental disturbance (advice on the most appropriate technique for the species and location being provided by the ECoW or a suitably experienced ornithologist). One nesting bird species, crossbill (specially protected when breeding under the provisions of Schedule 1 of the Wildlife & Countryside Act), breeds much earlier than most other bird species with nests active from January until April. Crossbills occur in Weybourne Woods and the tree clearance here will be carried out in the autumn (September to November inclusive) to avoid both its breeding season and that of most other birds.	Minimise the impacts from construction on breeding birds	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England has no further comment. Our concerns were addressed through updates to the Outline EMP during examination.
20.30	Deadline 1 Submission - 9.19.3 Outline Ecological Management Plan	Additional	Breeding birds	Impact on breeding birds	The ECoW would advise on retention of an appropriate exclusion zone around the nest until this time. This advice will be based on species type and sensitivity but will be at least 5m and marked out to prevent accidental disturbance (advice on the most appropriate technique for the species and location being provided by the ECoW).	Minimise the impacts from construction on breeding birds	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England welcomes this commitment and has no further comment.
20.31	Deadline 1 Submission - 9.19.3 Outline Ecological Management Plan	Additional	Bats	Impact on roosting bats	All trees with High, Moderate or Low bat roost potential in accordance with Bat Conservation Trust guidelines would be soft-felled. Trees with Negligible roost potential will not need to be soft-felled. All tree surgeons would be briefed on this approach prior to commencing works on relevant trees.	Minimise the impacts from construction on roosting bats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England welcomes this commitment and has no further comment. Please include/merge or cross reference to Ref 20.17 above.
20.32	Deadline 1 Submission - 9.19.3 Outline Ecological	Additional	Great crested newts	Impact on Great crested newts	'Reasonable Avoidance Measures' (RAMs). These are: • Phased vegetation clearance as described for reptiles above. • Rubble or log piles	Minimise the impacts from construction on great crested newts	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England queries how this aligns with the DLL for GCN as REF 20.23 above, as there aren't normally both implemented.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
	Management Plan				present within the construction footprint to be disassembled and moved during the newt active season (March to October inclusive). • Storage of materials that might act as a refuge for newts on hard standing or previously cleared ground. • Excavations and working areas to be managed so as not to create temporary waterbodies which may attract newts.			
20.33	Deadline 1 Submission - 9.19.3 Outline Ecological Management Plan	Additional	Reptiles	Impact on roosting bats	At Hickling Lane (at the Onshore Substation Site) an additional procedure will be included in the reptile mitigation actions due to the presence of a population of slow worm. This reptile species is known to be less receptive to the habitat manipulation method described above (i.e. individuals are more likely to remain in-situ despite short-term habitat changes) compared to grass snake and common lizard. In addition to habitat manipulation, artificial refuges (as used for population monitoring) will be deployed in areas of suitable habitat which are within the proposed works footprint. When the artificial refuges are checked, any slow worms found will be caught by hand and moved to other adjacent and suitable habitat that borders Hickling Lane but at an appropriate distance from construction activities (but still inside the Order Limits). Such habitat is present and available for use within the same landholding as the substation. There is no movement of slow worms to distant/separate site(s) and for that reason this is no more than a 'micro-scale' translocation to known suitable, adjacent habitat. In the unlikely event that the ongoing monitoring finds slow worms returning to the proposed works footprints, the installation of reptile proof fencing will become necessary to prevent slow worms from moving back into the works areas from the nearby areas to which they have been moved.	Minimise the impacts from construction on reptiles	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Please be advised the impact is to reptiles rather than roosting bats. Natural England's concerns regarding Hickling Lane were addressed during examination and we have no further comment.
20.34	Deadline 3 Submission - 9.19.3 Outline Ecological Management Plan	Additional	Potential mortality, harm or disturbance of priority species	Impact on otters / water voles or associated habitat	The first part of the pre-construction check will be that all watercourses within the DCO boundary will be re-appraised for the suitability of the habitat for otter and water vole as part of the updated Extended Phase 1 Habitat survey. Any watercourses which are found to provide	Minimise the impacts from construction on otters / water voles or associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	While undertaking surveys is welcomed, we note there is no obvious link between how undertaking a survey actually acts as a mitigation measure to minimise impacts to otters/water voles.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					optimal habitat to support otter and/or water vole will be the subject of more detailed field survey as part of the pre-construction surveys.			As advised during examination, if surveys at identify use of water vole, it should be assessed whether a water vole mitigation licence is required and suitable mitigation must be employed to ensure no water vole are harmed/shelters are impacted. This should be secured in the required documents. Please refer to Natural England's standing advice: https://www.gov.uk/guidance/water-voles-advice-for-making-planning-decisions . We note this commitment by the Applicant in para 98 of the EMP [REP8-026] and advise this is reflected here.
20.35	Deadline 3 Submission - 9.19.3 Outline Ecological Management Plan	Additional	Potential mortality, harm or disturbance of priority species	Impact on white-clawed crayfish or associated habitat	All watercourses within the DCO boundary will be re-appraised for their suitability for white-clawed crayfish as part of the updated Extended Phase 1 Habitat survey. Any watercourses which are found to provide suitable habitat for this protected species and which have not been previously surveyed (due to lack of survey access or because of a change in the suitability of the watercourse since the pre-application surveys), will be surveyed for white-clawed crayfish as part of the pre-construction surveys	Minimise the impacts from construction on white-clawed crayfish or associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	As above, while undertaking surveys is welcomed, we note there is no obvious link between how undertaking a survey actually acts as a mitigation measure to minimise impacts to white-clawed crayfish. We advise the mitigation is added here as the described in para 67 of the EMP [REP8-026].
20.36	Deadline 4 Submission - 9.17 Outline Code of Construction Practice (Revision D)	Additional	Potential mortality, harm or disturbance of priority species	Impact on crayfish or associated habitat	All the watercourse crossings where signal crayfish have been detected are to be undertaken using HDD, therefore reducing the risk of transferring signal crayfish or spores of crayfish plague to other watercourses.	Minimise the impacts from construction on crayfish or associated habitats	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Effect of Mitigation commitment should be reworded to ensure the impacts are minimised to white clawed crayfish.
20.37	Deadline 3 Submission - 9.19 Outline Ecological Management Plan (Revision C)	Additional	Habitat loss or damage	Impacts on statutory designated nature sites and associated habitats	The HDD compound located on the floodplain of the river Wensum (but outside the SSSI and SAC) will be restored in accordance with the River Wensum Restoration Strategy and the River Wensum SAC conservation objectives.	Minimise the impacts from construction on statutory designated nature sites and associated habitats	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	Natural England welcomes this commitment and has no further comment.
20.38	Deadline 4 Submission - 18.2 The Applicant's Comments on Responses to the ExA's 2WQ	Additional	Habitat loss or damage	Impact on woodland habitats and biodiversity	The Applicant confirms that replacement hedgerow and tree planting will be undertaken on a minimum 1:1 basis to ensure no loss specifically of the number of individual trees or hedgerows.	Minimise any loss or damage to woodland habitats	DCO Schedule 2, Part 1, Requirement 11 Outline Landscape Management Plan	Natural England advises hedgerow and tree planting mitigation measures should be separated out. As stated in the LMP, to ensure overall ecological enhancement, we advise this 1:1 commitment is stated as being alongside the BNG commitment as

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
								stated in the EMP and the appropriate DCO Schedule included here.
20.39	Deadline 7 Submission - 9.17.1 Outline Code of Construction Practice (Revision F) (Tracked)	Additional	Habitat loss or damage	Impact on woodland habitats and biodiversity	<p>Buffer zones surrounding retained areas of woodland and trees will have a radius of at least 12 times the stem diameter of the tree (or 15 times the stem diameter for veteran/ancient trees) The buffer zone should be 5 metres from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter or as advised by the Arboriculturist and informed by Tree Protection Plans. This will create a minimum root protection area.</p> <p>A 30m buffer from the ancient woodland, Colton Wood, will be maintained at all times in which no construction vehicles and machinery will enter and no materials or activities will take place.</p>	Minimise any loss or damage to woodland habitats	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	While Natural England welcomes these commitments, we advise the Applicant ensures the detail of the mitigation is consistently captured both within the Outline EMP and the CoCP and both the DCO Schedule and Requirements for these documents are referenced here.
20.40	Deadline 7 Submission – 9.19.3 Outline Ecological Management Plan (Revision D) (Tracked)	Additional	Potential mortality, harm or disturbance of protected species	Impact on Pink Footed Geese	<p>Where works are undertaken between November and January and within areas of land which are potentially functionally linked to the North Norfolk Coast SPA/Ramsar site (i.e. sugar beet fields within 10.4km of the North Norfolk Coast SPA/Ramsar site), a pink-footed goose mitigation plan will be prepared and submitted to Natural England prior to its implementation and commencement of construction activities. The details of the plan will have regard to Natural England's emerging best practice advice on North Norfolk Coast SPA Pink Footed Geese.</p> <p>Potential mitigation measures could include:</p> <ul style="list-style-type: none"> • In the October prior to construction works commencing, all fields which are within the Order Limits and surrounding 200m buffer and also within 10.4km of the North Norfolk Coast SPA/Ramsar, would be inspected to identify and map fields which: <ul style="list-style-type: none"> ○ Have crop cover suitable for use by pink-footed geese; ○ Are over 6 hectares in size; and, 	Minimise potential impacts on Pink Footed Geese	DCO Schedule 2, Part 1, Requirement 13, Ecological Management Plan (EMP)	<p>Please refer to Natural England's advice in Refs 20.12 and 20.22 above and to our advice as set out in Annex C of this letter.</p> <p>The three points around PFG mitigation measures should tie in within this document.</p>

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<ul style="list-style-type: none"> ○ In which construction works are due to commence between November and January inclusive. • Any fields which comply with the above criteria would then be monitored by the ECoW at a rate of once per week between the following November and January. • Where the monitoring finds that pink-footed geese are present on a field, no construction works will take place within that field or the surrounding 200m until the geese have concluded their foraging activity, which will be confirmed by ongoing monitoring. Once foraging has concluded, construction works within that field and the surrounding 200m will be able to commence. • At other suitable fields where monitoring finds no evidence of pink-footed geese foraging, no construction works will commence until after January. This restriction will ensure that the resource of potential pink-footed goose foraging habitat is not pre-emptively depleted by construction works. • The presence of foraging pink-footed geese would be determined by visual observation of the birds themselves, plus inspections of the ground cover to check for foraged crops and bird droppings. 			
20.41	Deadline 8 – 9.17.1 Outline Code of Construction Practice (Revision G) (Tracked)	Additional	Potential mortality, harm or disturbance of protected species	Impacts to the River Wensum SAC	To reduce the risk of AEoI to the River Wensum SAC, Natural England will be consulted on the Bentonite Breakout Plan that will be submitted in respect of works that cross the River Wensum.	Minimise impacts to the River Wensum SAC	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	Natural England is willing to work with the Applicant to formulate the bentonite breakout plan to agree measures to minimise impacts to the River Wensum SAC. A requirement to implement Natural England's advice is required. Please refer to Natural England's advice in to Reference 20.4 and 20.6.
Chapter 22 Air Quality								
22.1	22.3.3	Embedded	Site selection	Various	SEP and DEP has undergone an extensive site selection process which has involved incorporating	Minimise impacts relating to air quality.	N/A	Not Applicable to Natural England's remit.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<p>environmental considerations in collaboration with the engineering design requirements.</p> <p>Considerations include (but are not limited to) adhering to the Horlock Rules (for explanation see Chapter 3 Site Selection and Assessment of Alternatives) [APP-089] for the onshore substation and associated infrastructure, a preference for the shortest route length (where practical) and developing construction methodologies to minimise potential impacts.</p> <p>Key principles that have informed the onshore cable corridor route include:</p> <ul style="list-style-type: none"> • Preference for the shortest onshore cable corridor to minimise the overall footprint and the number of receptors that will be affected. • Avoid key constraints, where possible; and • Avoid populated areas, where possible. <p>Consideration has been taken into account for the following constraints:</p> <ul style="list-style-type: none"> • Sites designated for nature conservation; • Residential properties; and • Other infrastructure (e.g. buried cables, railways, roads). 			
22.2	22.6.1.1.5	Additional	Dust and PM ₁₀	Potential impacts relating to dust and PM ₁₀ from construction activities.	<p>A list of mitigation measures that are highly recommended for a medium risk site, as determined by Step 2 of the dust assessment, by the Institute of Air Quality Management (IAQM) are provided below:</p> <p>Communications:</p> <ul style="list-style-type: none"> • Develop and implement a stakeholder communications plan that includes community engagement before work commences on site. • Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the 	Minimise potential impacts relating to dust and PM ₁₀	DCO Schedule 2, Part 1, Requirement),19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<p>environment manager/engineer or the site manager.</p> <ul style="list-style-type: none"> • Display the head or regional office contact information. • Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the local authority. The level of detail will depend on the risk and should include as a minimum the highly recommended measures in this document. The desirable measures should be included as appropriate for the site. 			
22.3	22.6.1.1.5	Additional	Dust management	Potential impacts relating to dust and PM ₁₀ from construction activities	<ul style="list-style-type: none"> • Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken. • Make the complaints log available to the local authority when asked. • Record any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the logbook. • Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked. • Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions. • Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible. • Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site. 	Minimise potential impacts relating to dust and PM ₁₀	DCO Schedule 2, Part 1, Requirement),19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<ul style="list-style-type: none"> • Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period. • Avoid site runoff of water or mud. • Keep site fencing, barriers and scaffolding clean using wet methods. • Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below. • Manage stockpiles to prevent wind whipping. • Ensure all vehicles switch off engines when stationary - no idling vehicles. • Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable. • Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials. • Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g., suitable local exhaust ventilation systems. • Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate. • Use enclosed chutes and conveyors and covered skips. • Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate. • Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as 			

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<p>reasonably practicable after the event using wet cleaning methods.</p> <ul style="list-style-type: none"> Avoid bonfires and burning of waste materials. 			
22.4	22.6.1.1.5	Additional	Construction	Potential impacts relating to dust and PM ₁₀ from construction activities	Ensure sand and other aggregates are stored in appropriate manner to minimise dust generation, for example the use of bunded areas.	Minimise potential impacts relating to dust and PM ₁₀	DCO Schedule 2, Part 1, Requirement),19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
22.5	22.6.1.1.5	Additional	Trackout	Potential impacts relating to dust and PM ₁₀ from construction activities	<ul style="list-style-type: none"> Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use. Avoid dry sweeping of large areas. Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport. Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable. Record all inspections of haul routes and any subsequent action in a site logbook. Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned. Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable). Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits. Access gates to be located at least 10 m from receptors where possible 	Minimise potential impacts relating to dust and PM ₁₀	DCO Schedule 2, Part 1, Requirement),19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
22.6	22.6.1.1.5	Additional	Dust management	Potential impacts relating to dust and PM ₁₀ from	<ul style="list-style-type: none"> Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to 	Minimise potential impacts relating to dust and PM ₁₀	DCO Schedule 2, Part 1, Requirement),19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
				construction activities	<p>monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100m of site boundary, with cleaning to be provided if necessary.</p> <ul style="list-style-type: none"> • Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate). • Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing). 			
22.7	22.6.1.1.5	Additional	Earthworks	Potential impacts relating to dust and PM ₁₀ from construction activities	<ul style="list-style-type: none"> • Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable. • Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable. • Only remove the cover in small areas during work and not all at once. 	Minimise potential impacts relating to dust and PM ₁₀	DCO Schedule 2, Part 1, Requirement),19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.
22.8	22.6.1.1.5	Additional	Construction	Potential impacts relating to dust and PM ₁₀ from construction activities	<ul style="list-style-type: none"> • Avoid scabbling (roughening of concrete surfaces) if possible. • Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery. • For smaller supplies of fine power materials ensure bags are sealed after use and stored appropriately to prevent dust. 	Minimise potential impacts relating to dust and PM ₁₀	DCO Schedule 2, Part 1, Requirement),19, Code of Construction Practice (CoCP)	Not Applicable to Natural England's remit.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
22.9	22.6.1.2.5	Additional	Non-Road Mobile Machinery (NRMM)	Potential impacts relating to NRMM and air quality	<p>NRMM and plant would be well maintained. If any emissions of dark smoke occur, then the relevant machinery should stop immediately, and any problem rectified. In addition, the following controls should apply to NRMM:</p> <ul style="list-style-type: none"> All NRMM should use fuel equivalent to ultralow sulphur diesel (fuel meeting the specification within EN590:2004) where practicable; All NRMM should comply with the appropriate NRMM regulations; All NRMM will be fitted with Diesel Particulate Filters (DPF) conforming to defined and demonstrated filtration efficiency (load/duty cycle permitting); The ongoing conformity of plant retrofitted with DPF, to a defined performance standard, should be ensured through a programme of onsite checks; and Fuel conservation measures should be implemented, including instructions to (i) throttle down or switch off idle construction equipment; (ii) switch off the engines of trucks while they are waiting to access the site and while they are being loaded or unloaded and (iii) ensure equipment is properly maintained to ensure efficient fuel consumption. 	Minimise potential impacts relating to NRMM and air quality	DCO Schedule 2, Part 1, Requirement),19, Code of Construction Practice (CoCP)	Natural England welcomes these mitigation measures in relation to reducing impacts to ecological receptors. Please cross reference to Ref 20.5.
Chapter 26 Landscape and Visual Impact Assessment								
26.1	26.3.3.1	Embedded	Cable corridor and HDD	Potential landscape and visual impacts	With regard to the onshore cable corridor, the first key design intervention was to have a combined cable corridor, and to underground the cables, thus avoiding the visual intrusion of new pylons and overhead cables during the operational phase. Subsequent cable routing has been designed to avoid settlement as far as possible (and thus reduce potential visual effects of the construction period), and to avoid crossing woodlands and areas or groups of trees, where possible. Where this is not possible, for example, Weybourne Wood within the Norfolk	Minimise potential landscape and visual impacts	NA	As advised in our Relevant Representations [RR-063], Natural England advises a key mitigation that could be committed to is to install the cable ducts simultaneously.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					Coast AONB, would be retained, by utilising trenchless crossing techniques (See Chapter 4 Project Description (Revision C) [REP5-021] and Appendix 4.1 Crossing Schedule [APP-178]) to minimise impacts in so far as possible. The same approach (where necessary) is proposed at locations where the cable corridor crosses other features such as main roads, railways and watercourses. Where such an interaction occurs, any trees, hedgerows and other vegetation associated with the feature would not be affected as a consequence of the trenchless crossing.			
26.2	26.3.3.1	Embedded	Cable corridor and HDD	Potential landscape and visual impacts	Key design interventions included the selection of the final onshore substation site (chosen from the two options assessed at the PEIR) and reducing, in so far as possible, the height of the onshore substation's platform height from the maximum parameter assessed at the PEIR.	Minimise potential landscape and visual impacts	NA	
26.3	26.3.3.1	Embedded	Cable corridor and HDD	Potential landscape and visual impacts	Where the cable corridor cross local roads, railways and/or watercourses, it would be installed via trenchless crossing techniques (such as HDD) and therefore avoid the loss of hedgerow and vegetation associated with the feature.	Minimise potential landscape and visual impacts	NA	Please refer to Natural England's comments to Chapter 20 above.
26.4	26.3.3.1	Embedded	Vegetation removal	Impacts on trees, woodland and hedgerows	<p>Where hedgerows and individual trees occur within the construction area of the cable corridor (and cables are not installed by trenchless techniques), they would be removed. Typically, hedgerows would be removed as follows:</p> <ul style="list-style-type: none"> • within the 12m crossing for either SEP or DEP in isolation; or • within the 20m crossing for SEP and DEP (concurrently or sequentially). <p>Where a bellmouth access junctions or cross-over points are required as part of a trenchless crossing, the following length would be removed:</p> <ul style="list-style-type: none"> • Bellmouth access: 20m either side of the crossing for SEP and/or DEP (all scenarios). • Cross over point: 12m either side of the crossing for SEP and/or DEP (all scenarios). 	Minimise potential landscape and visual impacts	NA	

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
26.5	26.3.3.1	Embedded	Vegetation removal	Impacts on trees, woodland and hedgerows	Hedges would be re-planted in all scenarios on their original alignment. Trees and woodland would be replanted within the construction corridor/Order Limits but outside the final permanent cable corridor easement. Where both SEP and DEP are built (concurrently or sequentially) the permanent easement will be 20m. Where only DEP or SEP is constructed, the permanent easement will be 10m. Within this permanent easement, tree planting would be prohibited. Planting would be implemented during the first planting season following the completion of entire construction of the cable installation works, of either DEP or SEP (subject to landowner agreements), whether constructed together or sequentially, and maintained for ten years.	Minimise any impacts on trees, woodland and hedgerows	DCO Schedule 2, Part 1, Requirement 19, Code of Construction Practice (CoCP)	
26.6	26.3.3.2	Embedded	Site selection of the onshore substation	Impacts on trees, woodland and hedgerows	Work has been carried out to identify further measures to minimise tree, woodland and hedgerow removal. Further details on hedgerow and tree removal, retention, replacement and management are presented in the Outline Landscape Management Plan (Revision D) [REP5-031] and Outline Ecological Management Plan (Revision E) (document reference 9.19) submitted with this DCO application.	Minimise any impacts on trees, woodland and hedgerows	DCO Schedule 2, Part 1, Requirement 11 and 12, Outline Landscape Management Plan (OLMP)	Natural England defers to the LPA on this matter.
26.7	26.3.3.3	Embedded	Site selection of the onshore substation	Impacts on visibility of final site	Landscape and visual considerations fed into the studies and final site selection process. The final onshore substation site has been identified as the most suitable site from a landscape and visual perspective for a number of reasons including: <ul style="list-style-type: none"> • It lies within an area of arable fields enclosed by woodland, tree belts and hedgerows which restricts potential visibility and effects to a relatively small area of landscape. • The existing woodlands and tree belts provide a context where further tree and woodland planting to integrate the onshore substation into the landscape and provide further screening would be appropriate. • The site lies within an area already influenced by existing electrical 	Minimise any visual impacts by selecting a more appropriate site	N/A	

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
					<p>infrastructure including the Norwich Main substation to the north, and lines of pylons and overhead wires, one of which crosses the fields west of the onshore substation site. Other existing infrastructure lies to the east – the Norwich-Stowmarket main railway line and A140. Grid and other infrastructure are already characteristic of this location.</p> <ul style="list-style-type: none"> The onshore substation lies west of the adjacent landscape character area (LCA) A1 Tas Rural River Valley. Policy DM 4.5 of the South Norfolk Development Management Development Document (adopted October 2015) states “Particular regard will be had to protecting the distinctive characteristics, special qualities and geographical extents of the identified Rural River Valleys and Valley Urban Fringe landscape character types”. Assessment identified that the site would not affect this LCA due to the presence of existing tree and woodland vegetation that would largely screen the onshore substation from the LCA. There are relatively few sensitive visual receptors within close proximity to the site that have potential to have clear views of the onshore substation, or to be significantly affected. There are no residential receptors that would have clear or close views of the onshore substation. Site selection is therefore a key part of the embedded mitigation proposals. 			
26.8	Deadline 3 Submission - 9.18.1 Outline Landscape Management Plan	Additional	Landscaping	Potential landscape and visual impacts	An arboricultural survey and assessment will be undertaken prior to the commencement of construction, to inform the detailed soft landscape design proposals post DCO consent award.	Minimise potential landscape and visual impacts	DCO Schedule 2, Part 1, Requirement 11 Outline Landscape Management Plan	Natural England welcomes this mitigation measure.
26.9	Deadline 3 Submission - 9.18.1 Outline	Additional	Landscaping	Potential impacts to local communities	Work will be planned and carried out in a manner and at times to minimise unnecessary disturbance to local	Minimise the potential impacts to local communities and protected species	DCO Schedule 2, Part 1, Requirement 11	Natural England welcomes this mitigation measure.

Reference	Cross Reference to ES / relevant document	Type of Mitigation	Parameter	Impact	Mitigation Measure or Commitment	Effect of Mitigation or Commitment	Means of Implementation	NE Comment
	Landscape Management Plan			and protected species	<p>residents, as well as taking into account the correct timing of seasonal works such as pruning and hedge cutting to comply with good horticultural practice and any restrictions imposed by ecological constraints.</p> <p>In addition, if, whilst carrying out landscaping works, protected species are found on site, and no management plan is in place, works will cease. Further information on the main responsibilities of the appointed Ecological Clerk of Works (ECoW) are set out in Section 1.2.4 of the OEMP (Revision E) (document reference 9.19); covering their role in the monitoring and reporting of the landscape and ecological works that will be implemented prior to, during and post construction of the onshore elements of SEP and DEP.</p>		Outline Landscape Management Plan	
26.11	Deadline 2 Submission - 14.3 The Applicant's Comments on the Local Impact Reports	Additional	Landscaping	Potential landscape and visual impacts	The Applicant will liaise with the relevant planning authorities to ensure that appropriate and sensitive materials will be used in the detailed design development of the onshore substation in order to minimise the potential impacts that could arise on the surrounding landscape character and visual amenity within the local area.	Minimise potential landscape and visual impacts	DCO Schedule 2, Part 1, Requirement 10, Detailed design parameters onshore Design and Access Statement (Onshore)	Natural England defers to the LPA on this matter.