Date: 02 June 2021
Our ref: 350822
Your ref: EN010012

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BY EMAIL ONLY

Dear Ms McKay

NSIP Reference Name / Code: The Sizewell C Project EN010012
Natural England's registration identification number: 20025411

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

WRITTEN REPRESENTATION

PART I: Summary and Conclusions of Natural England's advice. *In the context of our remit, a significant amount of further information is still required before it can be determined whether or not the proposal will have significant impacts on a number of internationally designated sites (Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar sites), nationally designated sites (Sites of Special Scientific Interest (SSSIs)), protected species, ancient woodland, a nationally protected landscape (Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB)) and the Aldeburgh to Hopton on Sea stretch of the England Coast Path (ECP). Natural England's advice continues to be that, in relation to these issues, there are fundamental reasons of principle why the project should not be permitted in its current form. The permanent loss of fen meadow habitat from Sizewell Marshes SSSI continues to be an issue which we consider is unlikely to be overcome within the examination period and remains our only '**red**' issue at this stage. For others, the applicant has provided insufficient information to establish the significance of impacts or efficacy of avoidance, mitigation and/or compensation proposals. While we consider these to be potentially resolvable with the submission of further information, they remain complex issues and may prove challenging to resolve in the remaining timeframe.*

PART II: Natural England's detailed advice (starting at page 22)

PART III: Natural England's detailed comments on the Development Consent Order (DCO), Deemed Marine Licence (DML) and associated documents (page 110)

Part I: Summary and Conclusions of Natural England's advice

1. Introduction

1.1. Natural England's advice in these Written Representations is based on information submitted by the Applicant[1] in support of its application for a Development Consent Order ('DCO') in relation to the Sizewell C Project (hereafter referred to as 'the project').

1.2. In the interests of clarity and issue resolution Natural England front-loaded our Relevant Representations [RR-0878] (September 2020) with detailed comments on our outstanding issues at the time. These Written Representations are to be considered as our updated position on the issues previously listed[2], in light of the Applicant's proposed changes submission, any updated documents or proposals submitted by the Applicant in response to our Relevant Representation, and our ongoing engagement with the Applicant.

1.3. Natural England reserves the right to develop these points further as appropriate during the examination process. We may have further or additional points to make, particularly if further information about the project becomes available.

1.4. Natural England has provided a significant amount of advice and guidance to the Applicant on the project proposals since 2013, including through the four rounds of statutory consultation under Section 42 of the Planning Act 2008. Our responses to individual issues throughout these consultations are highlighted in our Relevant Representations (Part II, fourth column) [RR-0878], as reiterated for each specific issue listed in Part II below (Column D). We would be happy to provide the Examining Authority with copies of these for your reference if this would be helpful.

1.5. We continue to work with the wider Defra Group bodies, including the Environment Agency (EA) and Marine Management Organisation (MMO), to coordinate advice wherever possible, providing complementary advice, based on sound science and evidence, whilst having regard to our respective remits.

1.6. Whilst a small number of issues have either been progressed or resolved since submission of our Relevant Representations (which we welcome), a large number remain unresolved at this time.

2. Structure of Written Representations

2.1. **Part I** of these representations provides an updated summary and conclusions of Natural England's advice, with an overview of our outstanding concerns within our remit, and any progress made since submission of our Relevant Representations

[1] NNB Generation Company (SZC) Limited

[2] Plus, issues relating to soils – see paragraphs 3.49 – 3.51 below

[RR-0878]. We have provided additional comment where our issues have developed and refer to our Relevant Representations where our comment remains the same.

2.1.1. These are issues on which Natural England:

- Have fundamental concerns which it may not be possible to overcome in their current form ('**red**' issues in Sections 3.16 - 3.47)
- Advise that further information is required to determine the effects of the project and allow the Examining Authority to properly undertake its task ('**amber**' issues in Sections 3.16 - 3.47).
- Advise that further information is required on mitigation/compensation proposals in order to provide a sufficient degree of confidence as to their efficacy ('**amber**' issues in Sections 3.16 – 3.47).
- Advise that issues have been successfully resolved (subject always to the appropriate requirements being adequately secured) ('**green**' issues in Sections 3.16 - 3.47)

2.2. **Part II** of these representations expands upon the detail of all the significant issues ('**red**' and '**amber**' issues) which, in our view remain outstanding and includes our advice on pathways to their resolution where possible. Part II also shows '**green**' issues which have been agreed since our Relevant Representations [RR-0878] (subject always to the appropriate requirements being adequately secured).

2.3. Natural England will continue engaging with the Applicant to seek to resolve these concerns throughout the examination. Natural England advises that the matters indicated as '**red**' and '**amber**' will require consideration by the Examining Authority during the examination.

2.4. For the Examining Authority's clarity, Natural England advises that any issues which have not been resolved by the end of the examination will be marked as '**red**' in our Deadline 10 submission of our Statement of Common Ground with the Applicant.

2.5. A full explanation of Natural England's risk and colour ratings, and a glossary of terms can be found in **Appendix I and II of our Relevant Representations [RR-0878]** respectively.

2.6. **Part III** of these representations provides Natural England's detailed comments on the Development Consent Order Addendum, Development Consent Order (Revision 3) and Deemed Marine License.

3. The natural features potentially affected by this application and summary of Natural England's outstanding concerns for these

3.1. Natural England considers that there continues to be a significant amount of further information required from the Applicant before it can be determined whether or not the proposal will have significant impacts on internationally and nationally important habitats, species, landscapes and access routes.

3.2. Natural England's advice remains that in relation to the identified issues, there are fundamental reasons of principle why the project should not be permitted in its current form.

3.3. In relation to certain internationally protected features, Natural England maintains that it does not consider that, as the proposals currently stand, it can be ascertained that they will not have an adverse effect on the integrity of the sites concerned.

3.4. In relation to SSSIs, Natural England continues to consider that the applicant's proposals, as they currently stand, will have a detrimental effect on the conservation of certain cited features of special interest.

3.5. These outstanding issues are summarised in sections 3.16 – 3.47 below and detailed further in **Part II** of this letter.

3.6. **Cumulative and 'in-combination' impacts**

3.7. Within the Habitat Regulations Assessment (HRA) process for internationally designated sites (SACs, SPAs and Ramsar sites), plans or projects must, as a matter of UK statute law, be considered 'alone' or 'in combination' with other plans or projects. On the basis of the information submitted at this stage, we do not consider that a suitably robust assessment has been undertaken within the HRA of cumulative impacts from different aspects of the project, or of 'in combination' impacts between other projects which may impact on the same internationally designated sites and features. This is a crucial element of the HRA process and therefore needs to be agreed before the project is consented (see issue 9 in Part II for further detail).

3.8. Similarly, we do not consider that a suitably robust assessment has been undertaken on cumulative impacts from all project elements on nationally designated sites (SSSIs) and their notified features. Again, this is a crucial element of the SSSI impact assessment process and therefore needs to be agreed before the project is consented (see issue 19 in Part II for further detail).

3.9. **Development Consent Order, Deemed Marine License and Associated Documents**

3.10. Natural England are concerned that very few of the comments Natural England made in our Relevant Representation [RR-0878] appear to have been addressed. While we do not have further comment to provide on these issues beyond those raised in our

Relevant Representations, we consider that all outstanding issues should still be addressed.

3.11. For further detailed comment please **see issues 1-17: Appendix III & issues 263-297: Appendix IV of our Relevant Representations [RR-0878].**

3.12. **Environmental permits**

3.13. Natural England cannot yet provide our final comments on any of the potential impacts to designated sites or features from those aspects of the proposed development of Sizewell C Power Station that will be managed by (or impacts mitigated for) the Water Discharge Activity, Combustion Activity, and Radioactive Substances Regulation Construction and Operational Permits, as these do not yet exist. This includes impacts from intake and outfall, fisheries impingement and entrainment, and WFD assessments.

3.14. Under the Environmental Permitting (England and Wales) Regulations 2016 the Environment Agency will undertake a review of the application and consult the public. Natural England, along with other Statutory Nature Conservation Bodies (SNCBs), may provide advice to the Environment Agency on certain aspects of environmental permitting application at this stage, including HRA. The Environment Agency may then take account of advice so operators can avoid, reduce or compensate for any adverse impacts from permitting operations. As outlined in Planning Inspectorate Advice Note 11 Annex D Permitting and DCO submissions should be timed to allow consideration of the outcome of the permitting process within the DCO application. We understand that the SZC Co DCO application was submitted at the same time as the permitting applications to the Environment Agency, to allow for parallel tracking. Given the different timelines in assessing permitting (usually 12-18 months) and DCO applications (usually 6 months) the permitting determination may not be available within the DCO timeframes.

3.15. Until the WDA permitting process is finalised Natural England will not be able to comment beyond scientific doubt about environmental impact on designated sites or any Adverse Effect on Integrity on Natura 2000 sites or the conservation status of Annex II species, as we will not have full sight of the final design or any mitigation secured. Natural England will continue to liaise closely with Defra bodies in relation to the permitting process and provide evidence into the DCO examination as appropriate. We will not be able to provide our final advice any earlier as we cannot be seen to prejudge the outcome of the permitting process.

3.16. **Internationally designated sites**

3.17. Natural England highlight that while the following table listed the European protected sites currently scoped into the Application. As details of the water supply scheme become available, a wider suite of European sites is potentially in scope for impact assessment. Natural England reserve the right to comment on these in future if further information becomes available.

3.18. On the basis of the information submitted in relation to these sites, Natural England provides our updated advice on the impacts to internationally designated sites and their features in the table below; further detail on our reasoning for this is given against each impact pathway within **Part II**. Natural England has only provided comment in this representation where we have additional advice to provide beyond that provided in our Relevant Representations [RR-0878].

3.18.1. Natural England is satisfied that '**green**' issues are unlikely to result in adverse effects on the integrity (AEoI) of the following internationally designated sites, subject always to the appropriate mitigation/compensation as outlined in the application documents being adequately secured.

3.18.2. Natural England is not yet satisfied that for '**amber**' and '**red**' issues it can be ascertained beyond reasonable scientific doubt that the project would not have an adverse effect on the integrity of the following internationally designated sites.

3.19. Natural England reserves the right to make further representations on the legal and policy protections afforded to internationally designated sites and on the conservation objectives for specific sites, having regard to their conservation objectives

Site name with link to Conservation Objectives	Features for which Natural England has outstanding concerns	Potential impact pathway where further information/assessment is required	Risk rating (see Appendix I of our Relevant Representations [RR-0878] for definitions)
Alde-Ore and Butley Estuaries Special Area of Conservation (SAC)[3]	All features	Damage to notified habitats from water use/abstraction (and/or associated works e.g. pipelines) for use during construction/operation (project-wide issue)	See issue 3 in Part II for further detailed advice
	All features	Damage to notified habitats from increased airborne pollution (dust and NO_X) (project-wide issue)	See issue 5 in Part II for further detailed advice
	All features	Damage to notified habitats from spread of invasive non-native species (INNS) (project-wide issue)	See issue 6 in Part II for further detailed advice
	Mudflats and sandflats not covered by seawater at low tide Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	Damage to notified habitats associated with increased recreational disturbance e.g. trampling (Main Development Site (MDS) issue)	See issue 29 in Part II for further detailed advice
Alde-Ore Estuary Special	All features	Damage to bird supporting habitats from water use/abstraction (and/or associated works e.g. pipelines) for	See issue 3 in Part II for further detailed advice

[3] Alde-Ore and Butley Estuaries Special Area of Conservation, Conservation Objectives supplementary advice: http://publications.naturalengland.org.uk/publication/4528783260385280 (accessed 14:20 02/06/2020)

Site name with link to Conservation Objectives	Features for which Natural England has outstanding concerns	Potential impact pathway where further information/assessment is required	Risk rating (see Appendix I of our Relevant Representations [RR-0878] for definitions)
Protection Area (SPA)[4]		use during construction/operation (project-wide issue)	
	All features	Damage to notified habitats from spread of invasive non-native species (INNS) (project-wide issue)	See issue 6 in Part II for further detailed advice
	All features	Noise, light and visual disturbance of birds which utilise the MDS as functionally linked land (MDS issue)	See issue 27 in Part II for further detailed advice
	All features	Impacts on birds and their supporting habitats associated with increased recreational pressure from Sizewell C workers and displaced locals during construction e.g. trampling of nests/habitat, direct disturbance of birds by walkers, dogs, bikes etc. (MDS issue)	See issue 29 in Part II for further detailed advice
	Lesser black-backed gull (*Larus fuscus*) Little tern (*Sternula albifrons*) Sandwich tern (*Thalasseus sandvicensis*)	Impacts on prey species (fish) for marine foraging birds arising from impingement/ entrainment.	See issue 30 in Part II for further detailed advice
	Lesser black-backed gull (*Larus fuscus*) Little tern (*Sternula albifrons*) Sandwich tern (*Thalasseus sandvicensis*)	Direct exposure of foraging birds to changes in marine water quality, temperature and turbidity, arising from the intakes and outfalls, CDO and drilling chemical discharges.	See issues 30-35 in Part II for further detailed advice
Alde-Ore Estuary Ramsar site[5]	All features	Damage to bird supporting habitats and species from water use/abstraction (and/or associated works e.g. pipelines) for use during construction/operation (project-wide issue)	See issue 3 in Part II for further detailed advice

[4] Alde-Ore Estuary Special Protection Area Conservation Objectives supplementary advice: http://publications.naturalengland.org.uk/publication/5170168510545920?category=6581547796791296 (accessed 14:22 02/06/2021)

[5] Alde-Ore Estuary Ramsar site Conservation Objectives supplementary advice: https://jncc.gov.uk/jncc-assets/RIS/UK11002.pdf (accessed 14:23 02/06/2021)

Site name with link to Conservation Objectives	Features for which Natural England has outstanding concerns	Potential impact pathway where further information/assessment is required	Risk rating (see Appendix I of our Relevant Representations [RR-0878] for definitions)
	All features	Damage to notified plant species from increased airborne pollution (NO_X) (project-wide issue)	See issue 5 in Part II for further detailed advice
	All features	Damage to notified habitats from spread of invasive non-native species (INNS) (project-wide issue)	See issue 6 in Part II for further detailed advice
	Avocet (*Recurvirostra avosetta*) Lesser black-backed gull (*Larus fuscus graellsii*) Redshank (*Tringa tetanus*) Waterbird assemblage Wetland bird assemblage Invertebrate assemblage	Noise, light and visual disturbance of birds which utilise the MDS as functionally linked land (MDS issue)	See issue 27 in Part II for further detailed advice
	All features	Impacts on plants, birds and bird supporting habitats associated with increased recreational pressure from Sizewell C workers and displaced locals during construction e.g. trampling of nests/habitat, direct disturbance of birds by walkers, dogs, bikes etc. (MDS issue)	See issue 29 in Part II for further detailed advice
	Little tern (*Sterna albifrons*)	Direct exposure of foraging birds to changes in marine water quality, temperature and turbidity, arising from the intakes and outfalls, CDO and drilling chemical discharges.	See issues 30-35 in Part II for further detailed advice
Benacre to Easton Bavents SPA[6]	Bittern (*Botaurus stellaris*) Little tern (*Sterna albifrons*) Marsh Harrier (*Circus aeruginosus*)	Noise, light and visual disturbance of birds which utilise the MDS as functionally linked land (MDS issue)	See issue 27 in Part II for further detailed advice

[6] Benacre to Easton Bavents SPA Conservation Objectives supplementary advice: http://publications.naturalengland.org.uk/file/5503127986110464 (accessed 11:31 19/06/2020)

Site name with link to Conservation Objectives	Features for which Natural England has outstanding concerns	Potential impact pathway where further information/assessment is required	Risk rating (see Appendix I of our Relevant Representations [RR-0878] for definitions)
The Humber Estuary SAC[7]	Grey seal	Noise, light and visual disturbance of seals which utilise the MDS as functionally linked land (MDS issue)	See issue 27 in Part II for further detailed advice
	Sea lamprey (*Petromyzon marinus*) River lamprey (*Lampetra fluviatilis*)	Impacts to lamprey from changes in marine water quality, temperature and turbidity, arising from the intakes and outfalls, CDO and drilling chemical discharges, may have on migratory paths.	See issues 30-35 in Part II for further detailed advice
Minsmere to Walberswick Heath and Marshes SAC[8]	European dry heaths	Damage to notified habitats from increased airborne pollution (dust and NO_X) (project-wide issue)	See issue 5 in Part II for further detailed advice
	All features	Damage to notified habitats from spread of invasive non-native species (INNS) (project-wide issue)	See issue 6 in Part II for further detailed advice
	European dry heaths	Damage to notified habitats due to impediment to management practices required for designated site conservation (project-wide issue)	See issue 8 in Part II for further detailed advice
	Annual vegetation of drift lines Perennial vegetation of stony banks	Damage to/loss of habitats arising from changes in coastal processes/ geomorphology as a result of the project (MDS issue)	See issue 28 in Part II for further detailed advice
	All features	Impacts on habitats associated with increased recreational pressure from Sizewell C workers and displaced locals during construction e.g. trampling of vegetation (MDS issue)	See issue 29 in Part II for further detailed advice
Minsmere-Walberswick SPA[9]	All features	Damage to bird supporting habitats from water use/abstraction (and/or associated works e.g. pipelines) for use during construction/operation (project-wide issue)	See issue 3 in Part II for further detailed advice
	All features	Damage to bird supporting habitats from waterborne pollution (project-wide issue)	See issue 4 in Part II for further detailed advice

[7] The Humber Estuary SAC Conservation Objectives supplementary advice: http://publications.naturalengland.org.uk/file/6294287600058368 (accessed 14:25 02/06/2021)

[8] Minsmere to Walberswick Heath and Marshes SAC Conservation Objectives supplementary advice: http://publications.naturalengland.org.uk/file/5537398570352640 (accessed 11:39 19/06/2020)

[9] Minsmere-Walberswick SPA Conservation Objectives supplementary advice: http://publications.naturalengland.org.uk/publication/4528783260385280 (accessed 14:17 02/06/2020)

Site name with link to Conservation Objectives	Features for which Natural England has outstanding concerns	Potential impact pathway where further information/assessment is required	Risk rating (see Appendix I of our Relevant Representations [RR-0878] for definitions)
	All features	Damage to notified habitats from spread of invasive non-native species (INNS) (project-wide issue)	See issue 6 in Part II for further detailed advice
	All features	Damage to bird supporting habitats due to impediment to management practices required for designated site conservation (project-wide issue)	See issue 8 in Part II for further detailed advice
	All features	Noise, light and visual disturbance of birds, including those which utilise the MDS as functionally linked land (MDS issue)	See issue 27 in Part II for further detailed advice
	All features	Damage to/loss of bird supporting habitats arising from changes in coastal processes/ geomorphology as a result of the project	See issue 28 in Part II for further detailed advice
	All features	Impacts on birds and their supporting habitats associated with increased recreational pressure from Sizewell C workers and displaced locals during construction e.g. trampling of nests/habitat, direct disturbance of birds by walkers, dogs, bikes etc. (MDS issue)	See issue 29 in Part II for further detailed advice
	Little tern (*Sterna albifrons*)	Direct exposure of foraging birds to changes in marine water quality, temperature and turbidity, arising from the intakes and outfalls, CDO and drilling chemical discharges.	See issues 30-35 in Part II for further detailed advice
	Little tern (*Sterna albifrons*)	Impacts on prey species for marine foraging birds arising from impingement/entrainment.	See issue 30 in Part II for further detailed advice
Minsmere-Walberswick Ramsar site[10]	All features	Damage to habitats, species and supporting habitats from water use/abstraction (and/or associated works e.g. pipelines) for use during construction/operation (project-wide issue)	See issue 3 in Part II for further detailed advice
	All features	Damage to bird supporting habitats from waterborne pollution (project-wide issue).	See issue 4 in Part II for further detailed advice
	All features	Damage to habitats and species from increased airborne pollution (dust and NO_X) (project-wide issue)	See issue 5 in Part II for further detailed advice

[10] Minsmere-Walberswick Ramsar site Conservation Objectives supplementary advice: https://rsis.ramsar.org/RISapp/files/RISrep/GB75RIS.pdf (accessed 14:27 02/06/2021)

Site name with link to Conservation Objectives	Features for which Natural England has outstanding concerns	Potential impact pathway where further information/assessment is required	Risk rating (see Appendix I of our Relevant Representations [RR-0878] for definitions)
	All features	Damage to notified habitats from spread of invasive non-native species (INNS) (project-wide issue)	See issue 6 in Part II for further detailed advice
	Little tern (*Sterna albifrons*)	Direct exposure of foraging birds to changes in marine water quality, temperature and turbidity, arising from the intakes and outfalls, CDO and drilling chemical discharges.	See issues 30-35 in Part II for further detailed advice
	All features	Damage to habitats, species and supporting habitats due to impediment to management practices required for designated site conservation (project-wide issue)	See issue 8 in Part II for further detailed advice
	Wetland bird assemblage - Breeding Wetland invertebrate assemblage	Noise, light and visual disturbance of birds, including those which utilise the MDS as functionally linked land (MDS issue)	See issue 27 in Part II for further detailed advice
	All features	Damage to/loss of habitats, species and supporting habitats arising from changes in coastal processes/ geomorphology as a result of the project	See issue 28 in Part II for further detailed advice
	All features	Impacts to habitats, species and supporting habitats associated with increased recreational pressure from Sizewell C workers and displaced locals during construction e.g. trampling of nests/habitat, direct disturbance of birds by walkers, dogs, bikes etc. (MDS issue)	See issue 29 in Part II for further detailed advice
Outer Thames Estuary SPA[11]	All features	Noise, light and visual disturbance of birds (MDS issue)	See issue 27 in Part II for further detailed advice
	Little tern (*Sterna albifrons*)	Impacts on birds and their supporting habitats associated with increased recreational pressure from Sizewell C workers and displaced locals during construction e.g. trampling of nests/habitat, direct disturbance of birds by walkers, dogs, bikes etc. (MDS issue)	See issue 29 in Part II for further detailed advice
	All features	Impacts on prey species for marine foraging birds arising from impingement/entrainment.	See issue 30 in Part II for further detailed advice

[11] Outer Thames Estuary Special Protection Area Conservation Objectives supplementary advice: http://publications.naturalengland.org.uk/file/5184120712069120 (accessed 14:29 02/06/2021)

Site name with link to Conservation Objectives	Features for which Natural England has outstanding concerns	Potential impact pathway where further information/assessment is required	Risk rating (see Appendix I of our Relevant Representations [RR-0878] for definitions)
	All features	Direct exposure of foraging birds to changes in marine water quality, temperature and turbidity, arising from the intakes and outfalls, CDO and drilling chemical discharges.	See issues 30-35 in Part II for further detailed advice
Sandlings SPA[12]	European nightjar (*Caprimulgus europaeus*) Woodlark (*Lullula arborea*)	Noise, light and visual disturbance of birds (MDS issue)	See issue 27 in Part II for further detailed advice
	European nightjar (*Caprimulgus europaeus*) Woodlark (*Lullula arborea*)	Impacts to birds and supporting habitats associated with increased recreational pressure from Sizewell C workers and displaced locals e.g. trampling of nests/habitat, direct disturbance of birds by walkers, dogs, bikes etc. (MDS issue)	See issue 29 in Part II for further detailed advice
Southern North Sea SAC[13]	Harbour porpoise	Impacts from physical interaction between harbour porpoise and/or their prey species (fish) with project infrastructure (project-wide issue)	See issue 7 Part II for further detailed advice
	Harbour porpoise	Noise, light and visual disturbance of harbour porpoise (MDS issue)	See issue 27 in Part II for further detailed advice
Staverton Park and the Thicks, Wantisden SAC[14]	Old acidophilous oak woods with *Quercus robur* on sandy plains	Damage to notified habitats and species from increased airborne pollution (NO_X) (project-wide issue)	See issue 5 in Part II for further detailed advice
The Wash and North Norfolk Coast SAC[15]	Common seal	Impacts from physical interaction between common seals and/or their prey species (fish) with project infrastructure (project-wide issue)	See issue 7 in Part II for further detailed advice
	Common seal	Noise, light and visual disturbance of common seals (MDS issue)	See issue 27 in Part II for further detailed advice

[12] Sandlings SPA Conservation Objectives supplementary advice: http://publications.naturalengland.org.uk/file/5201677619822592 (accessed 11:44 19/06/2020)

[13] Southern North Sea SAC Conservation Objectives supplementary advice: http://data.jncc.gov.uk/data/206f2222-5c2b-4312-99ba-d59dfd1dec1d/SouthernNorthSea-conservation-advice.pdf (accessed 14:30 02/06/2021)

[14] Staverton Park and the Thicks, Wantisden SAC Conservation Objectives supplementary advice: http://publications.naturalengland.org.uk/file/4783541078720512 (accessed 11:58 19/06/2020)

[15] The Wash and North Norfolk Coast SAC Conservation Objectives supplementary advice: http://publications.naturalengland.org.uk/file/5213489320951808 (accessed 14:32 02/06/2021)

3.20. **Nationally designated sites**

3.21. Natural England advise that the permanent direct loss of fen meadow habitat to the main platform and SSSI crossing (see issue 49, Part II) is an issue that we cannot see being resolved during the proposed examination period. While we note and welcome the design change to a hybrid bridge with embankment SSSI crossing, our position remains that there are less damaging options for its design which we believe should be adopted.

3.22. Natural England highlight that while the following table lists the SSSIs currently scoped into the Application. As detailed of the water supply scheme become available, a wider suite of SSSI is potentially in scope for impact assessment. Natural England reserve the right to comment on these in future if further information becomes available.

3.23. On the basis of the information submitted in relation to these sites, Natural England provides our updated position on the impacts to nationally designated sites and their features in the table below; further detail on our reasoning for this is given against each impact pathway within Part II. .

3.23.1. Natural England is satisfied that '**green**' issues are unlikely to damage features of interest of the following designated sites.

3.23.2. Natural England is not yet satisfied that '**amber**' and '**red**' issues are not likely to damage features of interest of the following nationally designated sites.

3.24. Natural England reserves the right to make further representations on the legal and policy protections afforded to SSSIs and their cited features.

Site name with link to citation	Features for which Natural England has outstanding concerns	Potential impact pathway where further information/assessment is required	Risk rating (see Appendix I of our Relevant Representations [RR-0878] for definitions)
Alde-Ore Estuary Site of Special Scientific Interest (SSSI)[16]	Reedbeds Lowland damp grassland Vascular plant assemblage Breeding and overwinter bird species Invertebrates	Damage to habitats, species and supporting habitats from water use/abstraction (and/or associated works e.g. pipelines) for use during construction/operation (project-wide issue)	See issue 13 in Part II for further detailed advice

[16] Alde-Ore Estuary Site of Special Scientific Interest (SSSI) https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003208.pdf (accessed 14:35 02/06/2021)

Site name with link to citation	Features for which Natural England has outstanding concerns	Potential impact pathway where further information/assessment is required	Risk rating (see Appendix I of our Relevant Representations [RR-0878] for definitions)
	All biological features	Damage to notified habitats and species from increased airborne pollution (NO_X) (project-wide issue)	See issue 15 in Part II for further detailed advice
	All features	Damage to notified habitats and species from spread of INNS (project-wide issue)	See issue 16 in Part II for further detailed advice
	Common tern (*Sterna hirundo*) Arctic tern (*Sterna paradisaea*) Sandwich tern (*Sterna sandvicensis*) Little tern (*Sterna albifrons*) Common gull (*Larus canus*)	Impacts on prey species (fish) for marine foraging birds arising from impingement/entrainment.	See issue 41 in Part II for further detailed advice
	All notified bird species	Noise, light and visual disturbance of birds which utilise the MDS as functionally linked land (MDS issue)	See issue 38 in Part II for further detailed advice
	All biological features	Impacts on habitats, species and supporting habitats associated with increased recreational pressure from Sizewell C workers and displaced locals during construction e.g. trampling of nests/habitat, direct disturbance of birds by walkers, dogs, bikes etc. (MDS issue)	See issue 40 in Part II for further detailed advice
	Common tern (*Sterna hirundo*) Arctic tern (*Sterna paradisaea*) Sandwich tern (*Sterna sandvicensis*) Little tern (*Sterna albifrons*) Common gull (*Larus canus*) Black-headed gull (*Larus ridibundus*)	Direct exposure of foraging birds to changes in marine water quality, temperature and turbidity, arising from the intakes and outfalls, CDO and drilling chemical discharges.	See issues 41-46 in Part II for further detailed advice

Site name with link to citation	Features for which Natural England has outstanding concerns	Potential impact pathway where further information/assessment is required	Risk rating (see Appendix I of our Relevant Representations [RR-0878] for definitions)
	Lesser-black-backed gull (*Larus fuscus*) Lerring gull (*Larus argentatus*)		
Leiston-Aldeburgh SSSI[17]	All features	Damage to habitats, species and supporting habitats from water use/abstraction (and/or associated works e.g. pipelines) for use during construction/operation (project-wide issue)	See issue 13 in Part II for further detailed advice
	All features	Damage to habitats, species and supporting habitats from waterborne pollution (project-wide issue)	See issue 14 in Part II for further detailed advice
	Acid grassland Broadleaved mixed woodland and yew woodland	Damage to notified habitats and species from increased airborne pollution (dust and NO_X) (project-wide issue)	See issue 15 in Part II for further detailed advice
	All features	Damage to notified habitats and species from spread of INNS (project-wide issue)	See issue 16 in Part II for further detailed advice
	Nightjar Woodlark Turtle dove Tree pipit Bullfinch Nightingale	Noise, light and visual disturbance of birds, including those which utilise the MDS as functionally linked land (MDS issue)	See issue 38 in Part II for further detailed advice
	All features	Impacts on habitats, species and supporting habitats associated with increased recreational pressure from Sizewell C workers and displaced locals during construction e.g. trampling of nests/habitat, direct disturbance of birds by walkers, dogs, bikes etc. (MDS issue)	See issue 40 in Part II for further detailed advice
Minsmere – Walberswick	Reedbeds and grazing marsh	Damage to habitats, species and supporting habitats from water use/abstraction (and/or associated works e.g. pipelines) for use during	See issue 13 in Part II for further detailed advice

[17] Leiston-Aldeburgh Site of Special Scientific Interest (SSSI)
https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/2000370.pdf (accessed 14:37 02/06/2021)

Site name with link to citation	Features for which Natural England has outstanding concerns	Potential impact pathway where further information/assessment is required	Risk rating (see Appendix I of our Relevant Representations [RR-0878] for definitions)
Heath and Marshes SSSI[18]	Shallow lagoons Ditch systems Associated breeding and overwintering birds Invertebrates Rare vegetation	construction/operation (project-wide issue)	
	All features	Damage to habitats, species and supporting habitats from waterborne pollution (project-wide issue)	See issue 14 in Part II for further detailed advice
	Lowland heath Acid grassland	Damage to notified habitats and species from increased airborne pollution (dust and NO_X) (project-wide issue)	See issue 15 in Part II for further detailed advice
	All features	Damage to notified habitats and species from spread of INNS (project-wide issue)	See issue 16 in Part II for further detailed advice
	Waterbirds	Impacts from physical interaction between notified species with project infrastructure (project-wide issue)	See issue 17 in Part II for further detailed advice
	All features	Damage to notified habitats due to impediment to management practices required for designated site conservation (project-wide issue)	See issue 18 in Part II for further detailed advice
	All notified bird species	Noise, light and visual disturbance of birds, including those which utilise the MDS as functionally linked land (MDS issue)	See issue 38 in Part II for further detailed advice
	All features	Damage to/loss of habitats, species and supporting habitats arising from changes in coastal processes/ geomorphology as a result of the project (MDS issue)	See issue 39 in Part II for further detailed advice
	All features	Impacts on habitats, species and supporting habitats associated with increased recreational pressure from Sizewell C workers and displaced locals during construction e.g. trampling of nests/habitat, direct disturbance of birds by walkers, dogs, bikes etc. (MDS issue)	See issue 40 in Part II for further detailed advice

[18] Minsmere-Walberswick Heath and Marches Site of Special Scientific Interest (SSSI) https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1000721.pdf (accessed 14:38 02/06/2021)

Site name with link to citation	Features for which Natural England has outstanding concerns	Potential impact pathway where further information/assessment is required	Risk rating (see Appendix I of our Relevant Representations [RR-0878] for definitions)
Pakenham Meadows SSSI[19]	All features	Damage to habitats, species and supporting habitats from hydrological changes in ground and surface water.	See issue 11 in Part II for further detailed advice
Sizewell Marshes SSSI[20]	Tall herb fen (reedbed)	Permanent loss of SSSI habitat to the main platform and SSSI crossing for which a satisfactory compensation approach has been identified but where a less damaging alternative design option may be available	See issue 48 in Part II for further detailed advice
	Lowland ditch systems	Permanent loss of SSSI habitat to the main platform and SSSI crossing for which a satisfactory compensation approach has been identified but where a less damaging alternative design option may be available	See issue 48 in Part II for further detailed advice
	Fen meadow	Permanent loss of SSSI habitat to the main platform and SSSI crossing for which a potential compensation approach has now been identified subject to further information but where a less damaging alternative design option may be available	See issue 49 in Part II for further detailed advice
	Invertebrate assemblage	Permanent loss of wet woodland (supporting habitat) to the main platform and SSSI crossing for which a potential compensation approach has now been identified, but where a less damaging alternative design option may be available	See issue 50 in Part II for further detailed advice
	All features	Damage to habitats, species and supporting habitats from hydrological changes in ground and surface water (project-wide issue)	See issue 11 in Part II for further detailed advice
	All features	Damage to habitats, species and supporting habitats from water use/abstraction (and/or associated works e.g. pipelines) for use during construction/operation (project-wide issue)	See issue 13 in Part II for further detailed advice
	All features	Damage to habitats, species and supporting habitats from waterborne pollution (project-wide issue)	See issue 14 in Part II for further detailed advice
	All features	Damage to notified habitats and species from increased airborne pollution (dust and NO_X) (project-wide issue)	See issue 15 in Part II for further detailed advice

[19] Pakenham Meadows Site of Special Scientific Interest (SSSI) https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1005849.pdf (accessed 14:39 02/06/2021)

[20] Sizewell Marshes Site of Special Scientific Interest (SSSI) https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1003416.pdf (accessed 14:40 02/06/2021)

Site name with link to citation	Features for which Natural England has outstanding concerns	Potential impact pathway where further information/assessment is required	Risk rating (see Appendix I of our Relevant Representations [RR-0878] for definitions)
	All features	Damage to notified habitats and species from spread of INNS (project-wide issue)	See issue 16 in Part II for further detailed advice
	All features	Damage to habitats and species due to impediment to management practices required for designated site conservation (project-wide issue)	See issue 18 in Part II for further detailed advice
	All features	Damage to/loss of habitats, species and supporting habitats arising from changes in coastal processes/ geomorphology as a result of the project (MDS issue)	See issue 39 in Part II for further detailed advice

3.25. **Nationally designated landscapes**

3.26. Natural England's position regarding nationally designated landscapes relevant to this application has not changed since submission of our Relevant Representations [RR-0878].

3.27. While we are content with the LVIA methodology and the baseline presented, and we believe some elements of the changes accepted into the DCO in April are likely to have positive landscape impacts (such as the relocated facilities car park) and others negative (such as the additional beach landing facility). Overall, our position remains that we believe that the proposed development, with all the proposed mitigation applied, would have a significant adverse effect on the AONB and its statutory purpose.

3.28. See issue 20 in Part II for further detailed advice.

3.29. Natural England reserves the right to make further representations on the legal and policy protections afforded to AONBs and Heritage Coasts

3.30. **European protected species**

3.31. Natural England's position regarding European protected species has not changed since submission of our Relevant Representations [RR-0878].

3.32. Natural England is still awaiting submission of draft protected species license applications for review. Without these, we are unable to issue Letters of No Impediment (LoNI).

3.33. It is an offence[21] to deliberately capture, injure or kill EPS or to deliberately disturb them, take or destroy their eggs or to damage or destroy a breeding or resting site of such species, without a licence[22]. Natural England reserves the right to make further representations on the legal and policy protections afforded to EPS.

3.34. For further detailed advice on this issue, see Issues 10, 37, 52, 54-62 in Part II.

3.35. **Nationally protected species**

3.36. Natural England's position regarding nationally protected species has not changed since submission of our Relevant Representations [RR-0878].

3.37. Natural England is still awaiting submission of draft protected species license applications for review. Without these, we are unable to issue Letters of No Impediment (LoNI).

3.38. Natural England reserves the right to make further observations on the legal and policy protections afforded to nationally protected species.

3.39. For further, detailed advice on this issue, see issues 10, 37, 52, 54-62 in Part II.

3.40. **Ancient woodland and ancient/veteran trees**

3.41. Natural England's position regarding ancient woodland and ancient or veteran trees has not changed since submission of our Relevant Representations [RR-0878].

3.42. On the basis of the information submitted to date, Natural England remain unsatisfied that the project will not lead to the loss of/damage to ancient woodland and ancient or veteran trees.

3.43. See issue 18 & 50 in part II for further detailed advice.

3.44. **National trails**

3.45. Natural England welcomes proposals by the Applicant to keep the Aldeburgh to Hopton on Sea stretch of the England Coast Past open as far as is possible during construction to minimise the need for an alternative route diversion. However, we still consider the following concerns need to be addressed.

3.46. Natural England reserves the right to make further representations on the legal and policy protections afforded to the ECP.

[21] Regulation 43 of the Conservation of Habitats and Species Regulations 2017 (as amended). See also Part I of the Wildlife and Countryside Act 1981 (as amended).

[22] Regulation 55 of the Conservation of Habitats and Species Regulations 2017 (as amended). See also Part I of the Wildlife and Countryside Act 1981 (as amended).

National trail	Further information	Summary of outstanding issues	Risk rating (see Appendix I of our Relevant Representations [RR-0878] for definitions)
Aldeburgh to Hopton on Sea stretch of the England Coast Path (ECP)	The proposals for this stretch of the ECP have been submitted to the Secretary of State for determination. Further up-to-date information on timescales for its adoption is given on our website: https://www.gov.uk/government/collections/england-coast-path-aldeburgh-to-hopton-on-sea	Concerns for walker safety and suitability of inland alternative route and need for ongoing monitoring.	See issue 25 in Part II for further detailed advice

3.47. **Other valuable and sensitive habitats and species, landscapes and access routes**

3.48. Natural England has no further comment to provide on other valuable and sensitive habitats and species, landscapes and access routes beyond that provided in sections 2.11, 2.12 and 2.13 of our Relevant Representations [RR-0878] which we reiterate at this time. We also reiterate our advice in paragraph 2.11.2 of our Relevant Representations in terms of biodiversity net gain (BNG) considerations.

3.49. **Soils**

3.50. Natural England provides comment on soil issues as part of its wider statutory remit for the natural environment.

3.51. Our statutory advice regarding soils was not included in our Relevant Representations in error. For our detailed comments regarding soils **see issue 63, Part II** (located in 'Project-wide issues')**.**

4. Natural England's overall conclusion

4.1. **While the Applicant has made progress in resolving four outstanding issues since submission of our Relevant Representations, we advise that a significant number of other issues have not been resolved satisfactorily to date. These are summarised in Section 3 above and set out in further detail in Part II below.**

4.2. **Natural England consider that one of these issues may not be capable of being overcome as proposed ('red' issue in section 3.14-3.16 and part II).**

4.3. **For other issues, there remains insufficient information to determine the significance of impacts or efficacy of avoidance, mitigation and/or compensation proposals. While we believe that the majority of the issues could potentially be overcome with the provision of further information or assessment ('amber' issues in section 3 and Part II), we highlight the significant risk that this may not be possible given their complexity and remaining timescales for their consideration during the examination. For the Examining Authority's clarity, Natural England advises that any issues which have not been resolved by the end of the examination will be marked as 'red' in our Deadline 10 submission of our Statement of Common Ground with the Applicant.**

4.4. **Natural England maintain that some of these matters are important enough to mean that if they are not satisfactorily addressed it would not be lawful to permit the project due to its impacts on SAC, SPA, Ramsar and SSSI interests or protected species.**

4.5. **Natural England advises that, if approved, the project must be subject to all necessary and appropriate requirements which ensure that unacceptable environmental impacts either do not occur or are sufficiently mitigated or compensated as necessary.**

Natural England
2nd June 2021

Part II: Natural England's further detailed advice on the key outstanding issues within our remit

Note: Key issue references are in line with those provided in our Relevant Representations [RR-0878].

A	B	C	D	E	F
Natural England key issue reference	**Topic**	**Issue summary** **(C) Impacts during construction** **(O) Impacts during operation**	**Natural England commentary and advice on the further information required to enable assessment**	**Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO**	**Risk**
Overarching issues for the project as a whole (MDS and AD sites)					
3	**ECOLOGY:** Project-wide impacts on internationally designated sites ▪ Alde-Ore and Butley Estuaries SAC ▪ Alde-Ore Estuary SPA ▪ Alde-Ore Estuary Ramsar site ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site	Water use impacts from a number of project elements, (including potable and non potable freshwater supply) and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** At its peak during construction, it is proposed that Sizewell C will require over 4 megalitres of water per day. Considering Suffolk, and the wider East Anglia area, is under serious water stress, it is essential that the Applicant can demonstrate that this level of abstraction can be sourced sustainably, and without adverse impacts on designated sites already scoped into the application, or potentially those further afield. This should include consideration of potential impacts from associated works such as pipelines and other infrastructure as well as the abstraction itself. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 3 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further information required*** Natural England welcomes proposals for a new abstraction/water use strategy to be designed to ensure no adverse effects on any protected sites or watercourses. However, until the Water Industry National Environment Programme (WINEP) study is undertaken by Essex and Suffolk Water and the	TBC	

	▪ ***Note:*** a wider suite of European sites are potentially in scope for impact assessment, to be confirmed following further details of the water supply scheme		resulting assessments (including HRA) reviewed in this regard, this issue remains unresolved and outstanding. Without such evidence, Natural England is unable to advise on whether or not this key element of the project proposals may have impacts on those European sites already scoped into assessment (as listed in column B) through any pipeline works etc. or European sites further afield within the Waveney catchment area (where it is understood the preferred scheme would take water) through abstraction of this magnitude and associated works to facilitate it. We do not therefore consider that this issue has been addressed by the Applicant in sufficient detail and are still seeking key information in this regard.		
4	**ECOLOGY:** Project-wide impacts on internationally designated sites ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site	Waterborne pollution impacts from a number of project elements, and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** Minsmere-Walberswick SPA and Ramsar site are sensitive internationally designated sites which are reliant on water quality for many of their notified features. Considering the close proximity of the proposed development to these sites, it is essential that the Applicant can demonstrate waterborne pollution will not adversely impact these sites and their notified features. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 4 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** Having reviewed the further information provided, we advise that risks through this impact pathway can be adequately mitigated through the provisions of the Outline Drainage Strategy and Code of Construction Practice providing these are rigorously implemented and maintained.	The Drainage Strategy and Code of Construction Practice must be rigorously implemented. We recommend that these mitigation measures are secured in the requirements of the DCO.	
5	**ECOLOGY:** Project-wide impacts on internationally designated sites ▪ Alde-Ore and Butley Estuaries SAC	Airborne pollution impacts from a number of project elements and subsequent ecological effects on internationally designated sites (SACs, SPAs	**<u>Executive Summary</u>** Bearing in mind the very close proximity of the MDS to these highly sensitive designated sites, there is the potential for particulate (dust) emissions generated by the development during construction and operation to impact on the air quality sensitive features of those nearby sites. Dust and particulate matter falling onto plants can physically smother leaves affecting photosynthesis, respiration, transpiration and leaf temperature. There	In terms of dust and particulates, the Outline Dust Management Plan and Code of Construction Practice must be rigorously implemented and maintained. We recommend that these	

	▪ Alde-Ore Estuary Ramsar site ▪ Minsmere to Walberswick Heath and Marshes SAC ▪ Minsmere-Walberswick Ramsar site ▪ Staverton Park and the Thicks, Wantisden SAC	and Ramsar sites) and their notified features. **(C) and (O)**	may be toxicity issues and potential changes in pH. We recommend that mitigation is in place that prevents significant change of baseline levels at designated sites. We note that baseline data has been gathered and established by monitoring in sensitive locations. This monitoring should continue to ensure that there is no significant change in dust levels at sensitive ecological receptors. For those sites listed which are further from the MDS, there could potential impacts from increased nitrogen oxide (NOx) emissions generated during construction and operation both from MDS and AD site elements. In particular, road traffic is a source of NOx emissions, meaning that increases in traffic can represent a risk to designated site features where there is exceedance of critical levels (CLe) for sensitive vegetation. This can result in changes in the species composition of designated site features, reduction in the species richness of designated habitat, damage or loss of sensitive lichens and bryophytes and increases in nitrate leaching and changes in soil nutrient status which may affect the structure and function of a designated or supporting habitat. It is essential that the Applicant can demonstrate airborne pollution will not adversely impact these sites and their notified features. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 5 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further information required*** ***Dust*** Having reviewed the further information provided, we advise that impacts from dust on internationally designated sites can be adequately mitigated through the provisions of the Outline Dust Management Plan and Code of Construction Practice provided these are rigorously implemented and maintained. ***Combustion*** Increased concentrations of NOx can lead to direct, foliar damage while changes in species composition and related damage is a result of indirect nitrogen deposition. It is important in air quality assessment to ensure levels in the air and loadings on the ground are considered.	mitigation measures are secured in the requirements of the DCO. TBC in terms of potential combustion impacts	

			It is the case that short-term exposure tends to be given less weighting in an assessment than the annual average. The applicant provides an argument regarding the realistic operational hours of the diesel generators and likelihood of worst-case MET data co-occurring. Whilst it is reasonable to make an argument as to why the daily NOx exceedance is not of concern in this specific case, this must be underpinned by clear evidence. The applicant has gone some way toward doing this, but it lacks clarity and detail. Reliance is placed upon the rate of recovery in the justification however no evidence as to the time taken for the specific habitat type to recover (which will vary) is provided. The applicant must provide reassurance that this will not cause long term damage to the site. There is a general pattern throughout the reports of a reliance upon the justification that a background exceedance of the CLo/CLe means that significant changes/noticeable damage as a result of further additions from the process contribution (PC) of the development are unlikely. Whilst it is not the applicant's responsibility to get concentrations and loadings to below the threshold, they must not undermine our ability to reach the site conservation objectives. More evidence is required as to why these further additions will not undermine meeting those Conservation Objectives. In many cases the background was not far from the range considered less likely to cause damage – it should be noted that there is a dose-response relationship between nitrogen deposition and loss of species richness. Whilst less damage may occur at higher background levels, this is likely to be a result of having already lost species richness due to prolonged exposure. This is not a justification to allow further deposition, especially when they have been found to be significant (greater than 1% of the CLe/Clo) as the potential for restoration is being undermined. Whilst we acknowledge that the proposed changes to the transport strategy are likely to contribute positively towards air quality, we advise that further information is required to outline how the proposed development will work to mitigate impacts from the development that will add further pressure to already sensitive sites in this regard.		
6	**ECOLOGY:** Project-wide impacts on internationally designated sites ▪ Alde-Ore and Butley Estuaries SAC	Unintentional introduction or spread of invasive non-native species (INNS) from a number of project elements and subsequent ecological effects	**<u>Executive Summary</u>** The unintentional introduction of invasive non-native species (INNS) (via marine and terrestrial sources) during development could have a detrimental effect on designated sites and their features through, for example, increased competition with habitats and species. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 6 of Natural England's Relevant Representation [RR-0878].**	The Code of Construction Practice must be rigorously implemented. We recommend that these mitigation measures are secured in the requirements of the DCO.	

	▪ Alde-Ore Estuary SPA ▪ Alde-Ore Estuary Ramsar site ▪ Minsmere to Walberswick Heath and Marshes SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site	on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	**<u>Further comments on the DCO application, June 2021</u>** Having reviewed the further information provided, we advise that risks to these sites through this impact pathway can be adequately mitigated through the provisions of the Code of Construction Practice provided it is rigorously implemented and maintained.		
7	**ECOLOGY:** Project-wide impacts on internationally designated sites ▪ Alde-Ore Estuary SPA ▪ Minsmere-Walberswick SPA ▪ Outer Thames Estuary SPA ▪ Southern North Sea SAC	Physical interaction between species and project infrastructure from a number of project elements and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** Some of the built elements of the proposals present a physical interaction (i.e. collision) risk to mobile species for which these sites are in part notified, in particular birds and marine mammals. Specific elements which may present particular risks include marine vessel activity, capital dredging, piling and drilling works and pylons and associated over ground cables. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 7 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** *Marine Mammals* Having reviewed the further information provided, Natural England have no further concerns regarding physical interaction between project infrastructure and marine mammals. *Birds*	TBC	

	▪ The Wash and North Norfolk Coast SAC		The Pylon Plans for Approval document depicts an illustrative arrangement of the new power lines; a single line running north – south (alongside the western end of the main development site), and two new parallel lines running north - south (alongside the western end of the existing site). At the southern end of the existing site, the new powerlines connect to the existing National Grid powerlines. Powerlines can impact birds through electrocution, displacement and collision: Electrocution occurs when larger birds cause a short circuit by touching two live wires. Larger pylons, such as those proposed at Sizewell C, typically have bigger spaces between live components reducing the risk of electrocution. Birds are displaced through; i) direct habitat loss linked to construction; ii) indirect habitat loss if birds avoid the structure due to its physical presence; iii) avoidance linked to increased predation risk, should pylons provide perches or nest sites for predators; iv) disturbance due to construction and maintenance and, finally; v) the barrier effect preventing birds accessing foraging and roosting areas. As the new pylons and powerlines are contained within either the proposed, or existing, development footprint, then direct loss, avoidance, disturbance and barrier effects will not be as pronounced, when considered against a baseline level of anthropogenic effect already affected by the presence of Sizewell B, and the potential for effects already considered as part of the proposed Main Development Site for Sizewell C. Mortality through collision with power lines, however, has not been considered as part of the assessment. This can occur when a bird flies into a wire and is killed either from the impact, from hitting the ground, or from injuries sustained in the process. On power lines, bird collisions are often concentrated along relatively short sections where several factors interact to create a collision problem or 'hotspot'. The factors that create a hotspot may not always be apparent, but SPAs, SSSIs, Ramsar sites or known flight paths that connect bird habitats should be avoided at the routing stage. The illustrative powerline plan mixes scales and does not provide a plan in cross-section, to show the height of powerlines relative to buildings and, consequently, the degree to which powerlines protrude from, or are screened by, the outline of adjacent development. For example, owing to morphology and their gregarious behaviour, swans and large waterbirds are at greater risk of collision with powerlines. Potentially, waterbirds moving between freshwater and coastal habitats, or flying between wetland habitats along the coast, must gain sufficient elevation to fly over the intervening visible buildings, becoming concentrated at collision risk height of the less-visible high-voltage powerlines.		

			Typically, new high-voltage powerlines would require significant survey work to inform Environmental Impact Assessments, in order to assess potential impacts on birds and to avoid, and subsequently mitigate, any residual the risk of collisions. Survey work has not been conducted. Neither has any detail been provided about mitigation, such as installing line markers. Whilst the minimal length of these new stretches of powerline, compared to the length of larger scale connection projects, might ameliorate the potential for impact, some assessment and details of mitigation must be provided to exclude impact. It would also be useful to confirm that there are no plans for new high-voltage powerlines beyond the power station footprint, proposed by either the Applicant or National Grid, that are an inherent part of the transmission process for Sizewell C, but have not been included as part of this Development Consent Order submission or within planning applications for Associated Developments. We advise that this issue needs to be assessed within the HRA and mitigation provided if necessary. We do not therefore consider that this issue was addressed by the Applicant in sufficient detail and we are still seeking key information in this regard.		
8	**ECOLOGY:** Project-wide impacts on internationally designated sites ▪ Minsmere to Walberswick Heath and Marshes SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site	Impediment to the management practices required for conservation of any designated site from a number of project elements and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** Works in and around the MDS which is directly adjacent to Minsmere have the potential to impede the management practices required for its conservation (e.g. access for grazing animals etc.). **For further detailed comment containing the context and background of this issue, please see Part II, Issue 8 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** Having discussed this further with the respective land managers and stakeholders, we have identified several key areas which are fundamental to ensuring no impediment to management practices necessary for the conservation of the site. These are:	TBC	

			i) Ongoing management of groundwater levels to ensure access routes are not flooded and inaccessible more frequently than would naturally occur (which also falls under issue 14 below). ii) Ensuring access with land managers for specific access routes. iii) The timing of works and consultation with land managers to ensure there is no conflict. Whilst we acknowledge that certain aspects of this will require ongoing engagement between the applicant, Natural England and the RSPB in the longer term, we consider that an outline form of words on key principles/risks should be agreed between the applicant, Natural England and RSPB at this time to ensure potential impacts can be adequately foreseen and mitigated in this regard.		
9	**ECOLOGY:** Project-wide impacts on internationally designated sites ▪ Alde-Ore and Butley Estuaries SAC ▪ Alde-Ore Estuary SPA ▪ Alde-Ore Estuary Ramsar site ▪ Benacre to Easton Bavents SPA ▪ The Humber Estuary SAC ▪ Minsmere to Walberswick	Cumulative and in-combination assessment of impacts and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. Includes assessment between different elements of the project/impact pathways and other plans/ projects. **(C) and (O)**	**<u>Executive Summary</u>** The consideration of impacts from the project alone (of different project elements and impact pathways cumulatively) and in combination with other plans and projects within a shadow HRA is fundamental to ensure no adverse effects on internationally designated sites. These topics include but are not limited to hydrological impacts, recreational disturbance impacts, noise and visual disturbance, air and water quality. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 9 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** Natural England reiterate the above comments provided in our Relevant Representations. We welcome the Applicant's continued engagement on the issues. However, we would require all issues relating to European protected sites be resolved before we can agree to an absence of in-combination effects.	TBC	

	Heath and Marshes SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site ▪ Outer Thames Estuary SPA ▪ Sandlings SPA ▪ Southern North Sea SAC ▪ Staverton Park and the Thicks, Wantisden SAC ▪ The Wash and North Norfolk Coast SAC				
10	**ECOLOGY:** Project-wide impacts on protected species ▪ Bats ▪ GCN ▪ Natterjack toads ▪ Otters	Protected species' mitigation, compensation and licencing approach for the project as a whole **(C) and (O)**	**<u>Executive Summary</u>** Protected species licences are required from Natural England for any development activity which carries the risk of significant disturbance or injury to the relevant species, which may be significantly impacted by the development proposals. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 10 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required***	TBC	

	▪ Reptiles ▪ Water voles ▪ Badgers ▪ Deptford Pink ▪ Breeding birds		Further to our previous advice Natural England would reiterate the best course of action for the progression of this issue would be to for the applicant to submit draft protected species licence applications to Natural England for review. If agreed Natural England may provide LoNIs to ensure the ExA has the required certainty in this regard. Further engagement on this issue will therefore be undertaken as part of the licensing process. Natural England reiterates the advice in regard to CIEEM guidance on the lifespan of ecological reports. Whilst we understand that the applicant will be submitting these draft protected species licence applications in due course (timescales for each respective species to be confirmed) these remain outstanding at this time. We will not be providing any further detailed advice on non-licensable species where they are not a notified feature of protected site for which Natural England is the statutory consultee.		
11	**ECOLOGY:** Project-wide impacts on nationally designated sites ▪ Sizewell Marshes SSSI ▪ Pakenham Meadows SSSI	Groundwater and surface water impacts from a number of project elements, and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** It is essential to properly assess the risk of any changes to water levels arising from the proposals to the nationally important habitats and species for which Sizewell Marshes SSSI is notified, and fully consider and agree any necessary mitigation/ compensation measures to ensure that adverse effects do not occur. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 11 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required – MDS Impacts*** Natural England welcomes the updated information provided in the Code of Construction Practice and Groundwater and Surface Water chapter in the revised Environmental Statement. Whilst we acknowledge and welcome further botanical monitoring proposed in the upcoming Terrestrial Ecology Monitoring and Mitigation Plan (TEMMP), the response relationship between plant communities and groundwater levels can take decades to be reflected by monitoring.	TBC	

			The updated documents provide welcome information outlining ongoing monitoring however the priority in mitigating groundwater impacts will be in the detail of water level management plan for which we are yet to see for review. This document is required for review in order to assess the suitability of the proposed mitigation and the scale of potential impacts to the SSSI. We also advise that the proposed Sizewell Marshes SSSI fen meadow compensation works at Pakenham should fully consider potential impacts on nearby Pakenham Meadows SSSI and its interest features. These impact assessments have not yet been provided.		
13	**ECOLOGY:** Project-wide impacts on nationally designated sites: ▪ Alde-Ore Estuary SSSI ▪ Leiston-Aldeburgh SSSI ▪ Minsmere – Walberswick Heath and Marshes SSSI ▪ Sizewell Marshes SSSI ▪ ***Note:*** a wider suite of SSSIs are potentially in scope for impact assessment, to be confirmed following further details of the	Water use impacts from a number of project elements (including potable and non potable freshwater supply) and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** See comments under issue 3 above for a general summary of the impact pathway and risks to designated site features. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 13 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further information required*** Natural England welcomes proposals for a new abstraction/water use strategy to be designed to ensure no adverse effects on any protected sites or watercourses. However, until the Water Industry National Environment Programme (WINEP) study is undertaken by Essex and Suffolk Water and the resulting assessments (including ES where SSSI impacts are assessed) reviewed in this regard, this issue remains unresolved and outstanding. Without such evidence, Natural England is unable to advise on whether or not this key element of the project proposals may have impacts on those SSSIs already scoped into assessment (as listed in column B) through any pipeline works etc. or SSSIs further afield within the Waveney catchment area (where it is understood the preferred scheme would take water) through abstraction of this magnitude and associated works to facilitate it.	TBC	

	water supply scheme		We do not therefore consider that this issue has been addressed by the Applicant in sufficient detail and are still seeking key information in this regard.		
14	**ECOLOGY:** Project-wide impacts on nationally designated sites ▪ Leiston-Aldeburgh SSSI ▪ Minsmere – Walberswick Heath and Marshes SSSI ▪ Sizewell Marshes SSSI	Waterborne pollution impacts from a number of project elements during construction and operation (including acidic leachate as a result of backfilling any borrow pits) and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** See comments under issue 4 above for a general summary of the impact pathway and risks to designated site features. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 14 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***No further comment*** Having reviewed the further information provided, we advise that risks through this impact pathway can be adequately mitigated through the provisions of the Outline Drainage Strategy and Code of Construction Practice providing these are rigorously implemented and maintained.	The Drainage Strategy and Code of Construction Practice must be rigorously implemented. We recommend that these mitigation measures are secured in the requirements of the DCO.	
15	**ECOLOGY:** Project-wide impacts on nationally designated sites: ▪ Alde-Ore Estuary SSSI ▪ Leiston-Aldeburgh SSSI ▪ Minsmere – Walberswick Heath and Marshes SSSI ▪ Sizewell Marshes SSSI	Airborne pollution impacts from a number of project elements and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** See comments under issue 5 above for a general summary of the impact pathway and risks to designated site features. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 15 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further information required*** **Dust and particulates**	In terms of dust and particulates, the Outline Dust Management Plan and Code of Construction Practice must be rigorously implemented and maintained. We recommend that these mitigation measures are secured in the requirements of the DCO. **TBC in terms of potential combustion impacts**	

			Having reviewed the further information provided, we advise that impacts from dust on these SSSIs can be adequately mitigated through the provisions of the Outline Dust Management Plan and Code of Construction Practice provided these are rigorously implemented and maintained. **Combustion** Increased concentrations of NOx can lead to direct, foliar damage while changes in species composition and related damage is a result of indirect nitrogen deposition. It is important in air quality assessment to ensure levels in the air and loadings on the ground are considered. It is the case that short-term exposure tends to be given less weighting in an assessment than the annual average. The applicant provides an argument regarding the realistic operational hours of the diesel generators and likelihood of worst-case MET data co-occurring. Whilst it is reasonable to make an argument as to why the daily NOx exceedance is not of concern in this specific case, this must be underpinned by clear evidence. The applicant has gone some way toward doing this, but it lacks clarity and detail. Reliance is placed upon the rate of recovery in the justification however no evidence as to the time taken for the specific habitat type to recover (which will vary) is provided. Given the extremely high process contribution and exceedance for Sizewell Marshes SSSI the applicant must provide reassurance that this will not cause long term damage to the site. This argument needs to be much clearer to justify such a large exceedance. There is a general pattern throughout the reports of a reliance upon the justification that a background exceedance of the CLo/CLe means that significant changes/noticeable damage as a result of further additions from the process contribution (PC) of the development are unlikely. Whilst it is not the applicant's responsibility to get concentrations and loadings to below the threshold, they must not undermine our ability to reach the sites conservation objectives. More evidence is required as to why these further additions will not undermine meeting those objectives of achieving/maintaining favourable conservation status. In many cases the background was not far from the range considered less likely to cause damage – it should be noted that there is a dose-response relationship between nitrogen deposition and loss of species richness. Whilst less damage may occur at higher background levels, this is likely to be a result of having already lost species richness due to prolonged exposure. This is not a justification to allow further deposition, especially when they have been found to be significant (greater than 1% of the CLe/Clo) as the potential for restoration is being undermined.		

			Whilst we acknowledge that the proposed changes to the transport strategy are likely to contribute positively towards air quality, we advise that further information is required to outline how the proposed development will work to mitigate impacts from the development that will add further pressure to already sensitive sites in this regard.		
16	**ECOLOGY:** Project-wide impacts on nationally designated sites: ▪ Alde-Ore Estuary SSSI ▪ Leiston-Aldeburgh SSSI ▪ Minsmere – Walberswick Heath and Marshes SSSI ▪ Sizewell Marshes SSSI	Unintentional introduction or spread of invasive non-native species (INNS) from a number of project elements and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** See comments under issue 6 above for a general summary of the impact pathway and risks to designated site features. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 16 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further information required*** Having reviewed the further information provided, we advise that risks to these sites through this impact pathway can be adequately mitigated through the provisions of the Code of Construction Practice provided it is rigorously implemented and maintained.	The Code of Construction Practice must be rigorously implemented. We recommend that these mitigation measures are secured in the requirements of the DCO.	
17	**ECOLOGY:** Project-wide impacts on nationally designated sites: ▪ Alde-Ore Estuary SSSI ▪ Minsmere – Walberswick Heath and Marshes SSSI	Physical interaction between species and project infrastructure from a number of project elements and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** See comments under issue 7 above for a general summary of the impact pathway and risks to designated site features. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 17 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further information required*** *Marine Mammals*	TBC	

			Having reviewed the further information provided, Natural England have no further concerns regarding physical interaction between project infrastructure and marine mammals. *Birds* The Pylon Plans for Approval document depicts an illustrative arrangement of the new power lines; a single line running north – south (alongside the western end of the main development site), and two new parallel lines running north - south (alongside the western end of the existing site). At the southern end of the existing site, the new powerlines connect to the existing National Grid powerlines. Powerlines can impact birds through electrocution, displacement and collision: Electrocution occurs when larger birds cause a short circuit by touching two live wires. Larger pylons, such as those proposed at Sizewell C, typically have bigger spaces between live components reducing the risk of electrocution. Birds are displaced through; i) direct habitat loss linked to construction; ii) indirect habitat loss if birds avoid the structure due to its physical presence; iii) avoidance linked to increased predation risk, should pylons provide perches or nest sites for predators; iv) disturbance due to construction and maintenance and, finally; v) the barrier effect preventing birds accessing foraging and roosting areas. As the new pylons and powerlines are contained within either the proposed, or existing, development footprint, then direct loss, avoidance, disturbance and barrier effects will not be as pronounced, when considered against a baseline level of anthropogenic effect already affected by the presence of Sizewell B, and the potential for effects already considered as part of the proposed Main Development Site for Sizewell C. Mortality through collision with power lines, however, has not been considered as part of the assessment. This can occur when a bird flies into a wire and is killed either from the impact, from hitting the ground, or from injuries sustained in the process. On power lines, bird collisions are often concentrated along relatively short sections where several factors interact to create a collision problem or 'hotspot'. The factors that create a hotspot may not always be apparent, but SPAs, SSSIs, Ramsar sites or known flight paths that connect bird habitats should be avoided at the routing stage. The illustrative powerline plan mixes scales and does not provide a plan in cross-section, to show the height of powerlines relative to buildings and, consequently, the degree to which powerlines protrude from, or are screened by, the outline of adjacent development. For example, owing to morphology and their gregarious behaviour, swans and large waterbirds are at greater risk of		

			collision with powerlines. Potentially, waterbirds moving between freshwater and coastal habitats, or flying between wetland habitats along the coast, must gain sufficient elevation to fly over the intervening visible buildings, becoming concentrated at collision risk height of the less-visible high-voltage powerlines. Typically, new high-voltage powerlines would require significant survey work to inform Environmental Impact Assessments, in order to assess potential impacts on birds and to avoid, and subsequently mitigate, any residual the risk of collisions. Survey work has not been conducted. Neither has any detail been provided about mitigation, such as installing line markers. Whilst the minimal length of these new stretches of powerline, compared to the length of larger scale connection projects, might ameliorate the potential for impact, some assessment and details of mitigation must be provided to exclude impact. It would also be useful to confirm that there are no plans for new high-voltage powerlines beyond the power station footprint, proposed by either EDF or National Grid, that are an inherent part of the transmission process for Sizewell C, but have not been included as part of this Development Consent Order submission or within planning applications for Associated Developments. We advise that this issue needs to be assessed within the ES for SSSI species and mitigation provided if necessary. We do not therefore consider that this issue was addressed by the Applicant in sufficient detail and we are still seeking key information in this regard.		
18	**ECOLOGY:** Project-wide impacts on nationally designated sites: ▪ Minsmere – Walberswick Heath and Marshes SSSI ▪ Sizewell Marshes SSSI	Impediment to the management practices required for conservation of any designated site from a number of project elements and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features.	**<u>Executive Summary</u>** See comments under issue 8 above for a general summary of the impact pathway and risks to designated site features. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 18 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further information required***	TBC	

		(C) and (O)	Having discussed this further with the respective land managers and stakeholders, we have identified several key areas which are fundamental to ensuring no impediment to management practices necessary for the conservation of the site. These are: i) Ongoing management of groundwater levels to ensure access routes are not flooded and inaccessible more frequently than would naturally occur (which also falls under issue 11 above). ii) Ensuring access is maintained for land managers to specific access routes. iii) The timing of works and consultation with land managers to ensure there is no conflict. Whilst we acknowledge that certain aspects of this will require ongoing engagement between the applicant, Natural England, RSPB and Suffolk Wildlife Trust in the longer term, we consider that an outline form of words on key principles/risks should be agreed between the applicant, Natural England, RSPB and Suffolk Wildlife Trust at this time to ensure potential impacts can be adequately foreseen and mitigated in this regard.		
19	**ECOLOGY:** Project-wide impacts on nationally designated sites: ▪ Alde-Ore Estuary SSSI ▪ Leiston-Aldeburgh SSSI ▪ Minsmere – Walberswick Heath and Marshes SSSI ▪ Sizewell Marshes SSSI	Cumulative assessment of impacts from a number of project elements and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. Includes assessment between different elements of the project/impact pathways and other plans/ projects. **(C) and (O)**	**<u>Executive Summary</u>** It must be ensured that all relevant sites, features and impact pathways to these nationally important sites are correctly identified and included in the EIA. The impact assessments and any mitigation measures must also consider cumulative impacts on these SSSIs. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 19 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** Natural England reiterate the comments provided in our Relevant Representations. We welcome the Applicant's continued engagement on the issues. However, we require all issues relating to nationally designated sites be resolved before we can agree to there being no cumulative effects.	TBC	

20	**LANDSCAPE:** Project-wide impacts on nationally protected landscapes: ▪ Suffolk Coast and Heaths AONB ▪ Suffolk Heritage Coast	Adequacy of assessment, mitigation and compensation approach for landscape impacts from the project as a whole on the special features for which the AONB is designated. **(C) and (O)**	**<u>Executive Summary</u>** The proposed development is a major development scheme in any context, but it presents a particular challenge to the highly sensitive and nationally important landscape of the Suffolk Coast and Heaths AONB and Heritage Coast. Should permission be granted, Natural England's priority in this regard is to ensure that the statutory purpose of the AONB (i.e. to conserve and enhance the natural beauty of the area) is maintained as far as possible through the design, construction and operation of the power station. Our primary focus is therefore on the MDS and those parts of the scheme located outside the AONB but within its immediate setting. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 20 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** **The effect of the Sizewell C scheme on the Suffolk Coast and Heaths AONB and delivery of its statutory purpose** Natural England welcomes our continued engagement with the Applicant on the issue of landscape and specifically the effect of this scheme on the Suffolk Coast and Heaths AONB and its statutory purpose. **Natural England's focus** This is the largest development scheme proposed for an AONB. As the national landscape agency and designating authority for AONBs Natural England's advice is focused on the implications of this scheme for the statutory purpose of the AONB. Compromising the continued delivery of that purpose through this part of the AONB would also diminish the AONB as a whole. We believe that the proposed development, with all the proposed mitigation applied, would have a significant adverse effect on the AONB and its statutory purpose. That effect arises from the scheme by itself but would be particularly expressed cumulatively with the existing two power stations and other energy infrastructure in this part of the AONB. Our advice generally relates to how the development as a whole would affect the statutory purpose, rather than how individual elements would do so. We believe	TBC	

			that this advice presented in this way is appropriate to the national landscape agency in aiding the examining authority and provides a helpful context for and complements more detailed advice that the AONB Partnership, local planning authority and others may offer. **The geographical extent of our 'landscape' advice** Our advice is only concerned with the AONB and elements of the scheme within its immediate setting. Landscape advice for the wider countryside should be sought from the local planning authority. **The application of national planning policy** A nuclear power station would neither conserve nor enhance the natural beauty of the AONB so there is a direct conflict with its statutory purpose. NPS EN-1 concedes that the visual impact of a nuclear power station cannot be eliminated, and EN-6 recognises the potential for Sizewell C to have long lasting effects on landscape character and visual impacts on the AONB and that this could affect the statutory purpose. Our advice to the Examining Authority is intended to help them interpret and apply that and other relevant policy. **The applicant's Landscape and Visual Impact Assessment (LVIA)** We have reviewed the applicant's LVIA (together with the MDS Design and Access Statement, outline LEMP and other relevant documents). We are not able to comment on all aspects of the LVIA, for example in relation to each viewpoint. We are not in a position to visit each viewpoint in order to confirm or refute each set of individual conclusions presented in the applicant's LVIA. The local planning authority and the AONB Partnership may, however, be able to comment on the viewpoint assessments and other individual elements of the LVIA in greater detail. We are content with the LVIA methodology and the baseline. That does not however oblige us to accept its conclusions and we are bringing our perspective as the national landscape agency and designating authority to bear on what a scheme of this type and scale and in this location means for the AONB and its statutory purpose. **Defined Special Qualities and Natural Beauty Indicators:** These articulate why the area has been designated as an AONB and what makes it distinctive		

			and of high quality. Development which has a significant adverse effect on special qualities and / or natural beauty indicators will therefore directly affect delivery of the area's statutory purpose. The LVIA's assessment of effects on the Natural Beauty Indicators and Special Qualities is helpful in that they confirm (particularly for the construction phase) that fundamental characteristics of the AONB would be significantly affected. The LVIA considers these effects to be 'limited' in extent (para13.6.149) and of low magnitude, slight and not significant. Our view is that a high adverse impact on characteristics as fundamental to the AONB (or any designated landscape) as landscape quality, scenic quality, wildness and tranquillity (LVIA Table 13.14) indicates that the capacity of this area to continue to deliver the AONB's statutory purpose would be significantly compromised and across more than a limited extent. **Design principles and mitigation:** We are content with the design principles for the scheme. This, however, does not mean that those design principles can produce a scheme which would not have a significant effect on the AONB. The NPS recognises the likely limits to mitigating the effects of this scheme. We are not able to confirm whether all practicable design measures have been identified because we are not nuclear industry architects or engineers. We do however, acknowledged that the proposed design mitigation measures would make a positive contribution to managing the impact of the scheme, although the impact on the AONB and its statutory purpose would, we believe, still be significant. We recognise and welcome the work to minimise land take for the main nuclear platform, retain existing screening landscape features where possible, factor the rurality of the area into the design of subsidiary structures, address light spill, the embedded mitigation for the scheme in terms of the axial alignment of the built structures in relation to Sizewell A and B, attempts to simplify the outline of the main buildings with 'large, bold and simple forms', and the work to identify the best colour and surface finishes. The recent (post-DCO submission) proposal for the height of the training centre to be reduced is also welcome. There are however, four areas where we need to qualify this recognition and welcome i.e.: - Colour: We welcome the work done to identify an appropriate colour treatment for the turbine halls but are not able to confirm that the colour treatment selected is the most appropriate. We hope that the AONB		

			Partnership may be able to provide the examining authority with a view on this. - Axial alignment: NE regards the issue of 'alignment' as only relevant in so far as it contributes to reducing the effect of the new power station (both individually and cumulatively with the A and B stations) on the AONB. That the resulting line-up of structures presents the changing design of nuclear infrastructure (something that the applicant highlights) is not relevant to the purpose of the AONB. - Design Council: We note, but are unable to comment further, on the endorsement of the scheme's design by the Design Council. We were not involved in that exercise and do not know how the area's statutory purpose was factored into their work. - Overhead cables rather than undergrounding: The use of large bold and simple forms and neutral finishes to produce a clean lined profile for the main buildings will be compromised by the need to have connector cables carried on pylons and monopoles between the turbine halls and National Grid sub-station instead of being undergrounded. Overall, we do not believe that the design mitigation measures could adequately address the general cumulative effect of the power station with existing energy infrastructure on the landscape character of the AONB and on the delivery of its statutory purpose. **The construction phase**: The applicant contends that the significant effects on landscape character and visual resources would be localised with no significant effect on the AONB as a whole. Natural England's expectation is that even where effectively screened the development site and activities will communicate their presence through a host of perceptual cues* to people across the wider landscape. This would be a significant detractor from natural beauty and therefore the statutory purpose. This we believe is a realistic assessment when considering , in combination, the huge scale of the construction site, the very long duration of the construction phase, the high sensitivity of people (receptors) seeking to experience the AONB and the sensitivity of the landscape itself. Post-DCO submission proposal to change to certain parameter heights and activities on the main development site to facilitate the construction process will not, we believe, reduce these effects to a below significant level.		

			* Some perceptual cues may be individually relatively subtle, arising from general construction activities across the site, but collectively intrusive. Others will be clear markers of major construction within the AONB, notably large stockpiles and cranes and noisier construction activity. The need for six hundred daily HGV movements in the early years** of the construction phase, rising to as many as a thousand at peak construction is a stark indication of what the AONB designation is expected to contend with. **We note the post-DCO submission to increase in the frequency of freight train movements to facilitate bulk material imports by rail so allowing a reduction in Heavy Goods Vehicle (HGV) movements. This change is to the pattern and type of vehicle movements and to the character of site activities and noise and not an overall set of changes which would produce a less significantly adverse construction phase for the AONB and its statutory purpose. An eventual major reduction in HGV movements (not in the early years but to coincide with peak construction) is likely to benefit the wider area but the AONB less so. **Construction phase mitigation:** We note the intention to provide temporary bunds and fences to visually contain the construction site. We welcome the plans to protect (exclude from the construction site) some wooded areas like the Kenton Hills and some woodland on part of Goose Hill, and to protect and reinforce with new and advance planting some perimeter hedges and tree belts. We welcome the intention to retain woodland and forested areas at Ash Wood, Great Mount Wood and the northern extents of Dunwich Forest and Goose Hill which could provide screening of some construction activities such as vehicle movements from vantage points to the north. (DAS 6.2.5) . We note the proposal to use temporary landscaped bunds (some of which may be retained permanently) to aid visual screening e.g. on the northern edge of Kenton Hills to screening of views of vehicle movements along the Sizewell access. **The length of the construction phase and how this area is perceived, valued and used:** We believe that the combined scale and long duration (9 to 12 years) of the construction phase would permanently alter how this part of the AONB is viewed, used and plays its part in the designated area as a whole. The applicant presents a Sizewell C visitor survey (volume 2, Chapter 15 of the ES and summarised in table 13.14 of the LVIA). This reports that 29% of people said that they would stop using the area. We anticipate that a far greater		

			percentage of people would be displaced as the actual scale and nature of the construction site and activities are actually encountered. We also: • consider that this displacement would be greater given the post-DCO changes to the scheme which involve increased construction infrastructure, other changes and activities on the beach, which is of course a major focus for visitors; and • anticipate that some of those who said that they would continue to use the area may be principally drawn and kept there by convenience because they live locally and/or need somewhere to quickly walk the dog or take exercise. **The operational phase and cumulative effects:** The scheme when built will produce a significant cumulative effect with the existing two nuclear power stations. We believe that this would produce a visible massing of nuclear development in views along the coast from the north*, as well as of course in the area around the three power stations. There is a risk that with the addition of another nuclear power station (plus the existing Galloper and Greater Gabbard substations and high voltage transmission lines) this part of the AONB will primarily associated with major energy generation and transmission and not natural beauty. Most certainly the sizeable area occupied by the power station buildings and ancillary infrastructure would no longer be able to contribute to the statutory purpose. *notably in long coastal views such as those from the Coast Guard Cottages and from Minsmere Sluice and the Suffolk Coast Path (viewpoints 17, 14 ad 16) **The capacity of the landscape to accommodate the development:** We do accept that distance, combined with few if any higher vantage points, and intermediate vegetation screening should diminish the visual impact of the power station as one moves inland. We would, however, expect occasional, repeated and sequential views of the power station and combined nuclear and other energy infrastructure to maintain a strong awareness of this industrial component of the landscape. **The vulnerability of this narrow section of the AONB:** This is a narrow neck of the designated area linking more extensive areas north and south. In this constrained area the addition of a third nuclear power station could shift its		

			landscape character from one of principally 'natural beauty' to one which is primarily associated with major energy infrastructure. That would: - functionally remove it from the AONB in terms of delivering the statutory purpose and delivery of the statutory purpose; and - functionally sever the AONB at this coastal narrow point. This would be a significant effect on the integrity AONB as a whole, affecting both the continuity and extent of the area across which its statutory purpose is delivered. The severance issue also pertains to the construction phase with the whole width of the AONB in this area being affected by the development. Starting at the beach and moving inland the development phase consists of: - New proposals for a larger jetty and a conveyor belt and other works on the beach - The construction works on the nuclear platform - The wider (very expansive) construction site including an access road across the AONB - Entrance facilities and of course a large accommodation village abutting the AONB boundary. **The ability of the landscape outside the AONB to 'buffer' the effects of the scheme:** The applicant contends in recent advice to us that the character of the landscape within the setting of the AONB would help to 'buffer' changes produced by the development. NE advises that this is not relevant. Land in the setting of an AONB may have an important role in supporting the designation if its character complements that of the designated area itself. As such development <u>within</u> the setting should be carefully considered. The government's Planning Practice Guidance confirms this and NPS EN-1 says that a statutory duty to 'have regard' to the AONB's statutory purpose applies outside the AONB as well as within its boundaries. However, national planning policy does not stipulate a role for the setting in 'buffering' the effects of development within the AONB. **Negating the design mitigation for the Sizewell B station** The Sizewell C scheme would adversely affect how the Sizewell B station relates visually to its immediate and wider landscape setting. Sizewell B is a well-		

			considered bespoke design which seeks to be as sensitive as it can to that landscape character. It is widely regarded as having achieved a good degree of success in that regard, particularly in how it appears in more distant views. Its simple clean lines and profile and colour treatment generally works well with the low-lying topography, seascape, and natural lighting of the area. The Design and Access Statement notes (para 2.12.6) that 'The built form of Sizewell B ……. utilizes white and a dominant blue tone which at times recedes into the expanse of sky'. Sizewell C would detract significantly from the effectiveness of Sizewell B's embedded mitigation by introducing structures which, whilst attempting to complement the existing power station in terms of architectural style/merit and orientation, will entirely alter how it is perceived. This would be particularly noticeable in the view from the Coast Guard Cottages. Currently the combined simple, visually compact form and clean lines of Sizewell B and the simple block structure of Sizewell A is relatively well contained and managed within that view. Sizewell B's position and colour treatment helps to screen and mute (make more recessive) what would otherwise be the lone grey presence of Sizewell A. But with the addition of Sizewell C this would be replaced by a much greater massing and spread of industrial development which performs very differently in views from the north. The before and after images provided for viewpoint 17 (View from National Trust Dunwich Coastguard Cottages car park) illustrate this. **Cumulative effects with other schemes** The Suffolk Coast and Heaths AONB is facing growing development pressures from onshore and offshore energy schemes. The effects of the construction and operation of Sizewell C on the AONB and its statutory purpose needs to be properly understood in that context. A concern is the EA1 North and EA2 offshore wind energy schemes as the most advanced of the major energy scheme proposals currently proposed for this part of the AONB. Other proposed NSIPs i.e. Nautilus Interconnector, Eurolink Interconnector, Greater Gabbard extension and Galloper Extension offshore windfarm are at an earlier and more speculative stage. The cabling for EA1 North and EA2 would come ashore and be routed through this part of the AONB close to the Sizewell C construction site. The cable trenching and drilling can be expected to have a significant effect. A combination of this and the Sizewell C construction site raises the prospect of significant		

			cumulative effects. We are content that the Sizewell LVIA identifies a potential significant cumulative effect of the power station construction and trenching for the cable route, albeit the effect is deemed localised. The marine setting of the wider AONB also features offshore wind energy schemes with more proposed. There is local concern, communicated to central government, about the number of energy schemes the area is being asked to accommodate with no strategic oversight or consideration of cumulative effects on the landscape and seascape character of this part of Suffolk and the statutory purpose of the AONB. Whether this wider issue is relevant in planning terms to determining the Sizewell C scheme is something we leave to the examining authority. It would however be remiss of the national landscape agency not to highlight this as a significant concern and for the examining authority's consideration. **The beach, coastal landscape and seascape** **The Heritage Coast:** The purposes of the Heritage Coast include conserving, protecting and enhancing the natural beauty of the coast. This is not a statutory designation. The Heritage Coast does however highlight the qualities of this coastline which also contribute to the AONB designation. The addition of a third nuclear power station would therefore conflict with the purposes of the Heritage Coast which don't anticipate this type of industrialisation. To reinforce this point the NCA profile describes this coastline in terms of its sense of tranquillity and wildness, which has inspired writers, artists and naturalists and the area is a popular recreation and tourist destination. **Seascape and offshore views** The seascape setting of the AONB underpins its character and statutory purpose. Offshore views of the power station are not a principal concern for Natural England. We are however, struck by the operational phase image for viewpoint 26 (directly east of the power station) which shows the cumulative effect of the three power stations presenting a heavily industrialised stretch of coastline to an offshore observer. Our greater concern is how the development would affect onshore and longshore views combining land, foreshore and sea which are more important to how people experience the coastal part of the AONB. For Sizewell C the longshore views affected are primarily from the north along the coast path, from		

			Dunwich and near the Minsmere Sluice. There would be a notable extension to and massing of industrial development in these views. **Sea defences and screening vegetation:** We agree with the applicant that the vegetated sea defences and other screening measures should be effective in screening views of lower parts of the station and ground level activities in close views and more of the development in some longer views from inland. The applicant has provided an assurance that the required growth rates are achievable based on that achieved on the defences provided for Sizewell B. We are not persuaded however, that this screening, plus the other design mitigation measures, will overcome the cumulative effect of massing three nuclear power stations in views along the coast from the north. **EDF Energy Estate and Landscape and Ecological Management Plan (LEMP):** The LEMP appears to be crucial to delivering mitigation measures beyond the design and related screening measures proposed for the built structures themselves. The Plan may be able to address some of the significant effects that remain after all those mitigation measures are applied by seeking to lift the quality of the landscape (relative to the pre-construction landscape) so that it can better accommodate the power station by providing an enhanced landscape counterbalance to its presence. The landscape narrative around the oLEMP is about reinstatement / restoration to incorporate screening measures, rather than restoration and enhancement. Landscape is principally referred to in relation to landscape scale habitat creation. We recommend the examination to consider: - the extent to which the oLEMP in its current form can provide an 'uplift' in terms of landscape character and quality relative to the landscape pre-construction phase; - what that could constitute in terms of a mitigating counterbalance to the effect of the new power station and enabling the AONB landscape to better accommodate the development; and - whether what is proposed needs to be more ambitious. This could involve expanding the area proposed for new Sandlings grassland and heath where there is the potential within the EDF Estate or possibly acquiring other land in the area. Alternatively, the developer might enable enhancement works on land owned by other parties, so long as those enhancements would be maintained over the lifetime of the power station. That might include 'rewilding' projects to extend wetland areas		

			and features in conjunction with and to complement the Minsmere marshes. The detailed designs for the permanent landscape immediately around the nuclear island and across the wider estate will be submitted to the local planning authority for approval. This includes the Landscape and Ecology Management Plan, which will be prepared in general accordance with the measures set out in the Outline Landscape and Ecology Management Plan. It is unfortunate that those detailed designs are not available for review as part of the examination for the DCO given its importance to mitigating the operational power station. The examination could however elicit an agreement from the developer to full review of the oLEMP to secure further landscape mitigation benefits. The AONB Partnership and the statutory AONB management plan can guide and inform this exercise. As we have previously advised, the long-term post-construction restoration of the MDS and surrounding area to semi-natural habitats through the oLEMP) and Natural Environment Fund will be hugely important as a landscape and visual mitigation measures in this part of the Suffolk Coast and Heaths AONB, commensurate with its nationally designated status. Establishing a strong landscape character which reinforces and lifts the landscape quality can help to indirectly mitigate those significant impacts of the scheme which cannot be directly mitigated by altering the design or location of buildings or by screening. This is therefore the only way in which the Sizewell C project can provide for landscape net gain. In the meantime, we welcome the intention to create approximately 121ha of new Sandlings grassland to re-establish that traditional landscape across some of its former range, and 51ha mixed woodland. This would replace improved agricultural land and commercial forestry. We note that this is also a means of using excess excavated material to create new 'naturalistic' landforms. We recommend that the detailed plans are backed by a clear commitment that the need to utilise spoil to create naturalistic landforms. **Some comments on individual components of the scheme** Main power station platform – reactor buildings and turbine halls The turbine halls and reactor domes will be the largest and therefore most visually dominant parts of the Sizewell C complex. We note the 'embedded' mitigation proposed for the major structures of the power station, notably the turbine halls and reactor buildings with the developer striving for large, bold and		

			simple built forms 'informed' by the design of Sizewell B and in terms of this and their orientation intended to 'mirror' how the existing power station behaves in the landscape (para 13.5.8 refers). We also note the neutral and consistent colour scheme and that the turbine halls will lack glass and will feature a light responsive surface treatment. A simplified form for the Interim Spent Fuel Store, now without a chimney, is also noted. Our earlier qualifying comments on the effectiveness of design mitigation measures also apply here of course. We had asked whether the reactor domes could be covered in white cladding to complement that treatment of the Sizewell B dome. We understand that the reactor domes for Sizewell C cannot be clad because, unlike for the earlier station, they need to be regularly and closely inspected. <u>Outage car park</u> The post-DCO proposal to move the remove the outage car park from within Pillbox Field (within the AONB) is welcome, and we expect any alternative site option to minimise impacts on the AONB. <u>Coastal and beach structures</u> In relation to sea defences, beach frontage and impacts on the coastal zone we offer the following comments: • We welcome the intention to complete works to the sea defences, northern mound and beach landing facility and access road as early as possible, in part to minimise the effect on users of Sizewell Beach and Suffolk Coast Path/Sandlings Walk. We note that the new sea defences and the northern mound would be designed to tie in the existing sea defences at Bent Hills adjacent to Sizewell B and that the heights would be such that these features screen views to activity and lower lying buildings and structures adjacent to the main power station. As stated earlier we believe that this screening would be effective. We also note that planting on the sea defences and northern mound would comprise species that are characteristic of the local coastline, including trees that, once established, would add further screening. • Regarding the BLF we believe that from a coastal landscape and seascape perspective this is much preferable to a long term or permanent jetty, although it will still present as a significant coastal feature whilst in operation. The post-DCO proposed changes to the scheme provide for enhancement of the permanent beach landing		

			facility and options for a new temporary beach landing facility to facilitate material imports by sea. This is a significant change from a landscape and visual (AONB) perspective. It will bring much more construction phase activity down across the beach both in terms of structures and activity. It would tie the beach, for all intents and purposes and certainly in how people perceive things, into the main construction site. • In relation to changes to the coast we wish to point out that the landscape character of the beach and land immediately behind the beach frontage will be significantly altered. We understand the vital need to protect the power station but the extent of the changes to the Coastal Levels and Coastal Dunes and Shingle Ridges landscape types should not be underplayed. The issues include: • The re-profiling of the beach, the current 12m Northern Mound replaced with a higher 14.2m mound, the final main sea defence at 10.2 metres high but with a retained option to raise this to 14 metres in the future if necessary, the increased heights of existing defensive mounds – Brent Hills and lower vegetated bunds. This will make the bunds more prominent landscape features which may further emphasise their artificial nature and increase any contrast with the natural topography of the area. • The use of rock armour. Volume 2 Chapter 3 Description of Construction 3.4.41 says that: *The Northern Mound is likely to consist of mainly made ground material as a repository for Sizewell B surplus construction materials. Due to seismic requirements, the existing Northern Mound would need to be demolished and excavated down to a suitable formation layer before being built back up. Piling foundations may need to be constructed to stabilise the ground works prior to the installation of large rock armour. The rock armour would then be overlaid with site-won fill material and seeded to allow vegetation to take hold as early in the construction period as practicable*. We have raised the issue several times of how beach materials can adhere to underlying rock armour and not frequently washed away by storms and strong tides. We have lately been assured that that adherence would be achieved although we have no way of verifying that. <u>Accommodation campus</u> The accommodation campus would be located outside but immediately adjacent to the AONB and therefore fully within the setting of the designated area. This		

			puts it in a very sensitive location with the potential to impact significantly on the AONB, including in combination with the power station construction site and activities. The campus site is immediately adjacent to the main stockpiling site. The campus would therefore be perceived in conjunction with the main development site and as essentially contiguous with it. The accommodation campus is by itself a significant development for the boundary of an AONB, given that it includes: • 3-storey and 4-storey residential buildings placed in a broadly east–west orientation and providing up to 2,400 bed spaces; • non-residential welfare, administration, and amenity facilities, including: a 2-storey recreation building with a restaurant, kitchen, two bars, gym, multi-functional room, prayer / quiet room, plant, and services; and a two-storey reception building, incorporating administration /management space and a medical facility; • 300 surface car parking spaces and a covered accommodation campus multi-storey car park, providing approximately 1,300 car parking spaces; We note the application of the design principles to this scheme and the resulting mitigation measures proposed including consideration of the heights (maximum four storeys rather than five) and the orientation of the buildings east / west to minimise visual effects. The proposal to locate non-essential facilities elsewhere is also important e.g. sports pitches which may involve flood lighting and will generate noise to be locate at Leiston. <u>New National Grid 44 kilovolts substation, with associated infrastructure including electrical connections (additional pylons)</u> Initial plans for the power station included the undergrounding of cable connections to the nuclear island. It has now been concluded that there isn't room to bury the cabling which must therefore be carried overhead on pylons. The additional four pylons and six monopoles will add visual 'clutter' and detract from any positive attributes (strong clean lines) the reactor buildings may be able to achieve. <u>Site access road and Sizewell Link Road</u> We welcome the construction and operational phase mitigation for the access road set out at para 13.5.9 of the LVIA which promises to: *Align the construction*		

			access road vertically and horizontally to permit its retention in the operational phase and in a location that can be properly integrated in the restored landscape, that connects at grade, with the bridleway whilst also connecting to the SSSI crossing and without undue impact on retained tree cover. Para 13.5.12 of the LVIA also states that: *The access road delivered during the construction phase would be reduced in width and set within the restored landscape by the creation of undulating naturalistic landforms to ensure that it is integrated in the landscape and substantially screened in views from the surrounding landscape*. We welcome the mitigation proposals for the Sizewell Link Road within the setting of the AONB. We would however, like to caution against the risk of creating a road for the operational phase which despite the promised mitigation, still presents as a suburbanising feature in a rural landscape. This also pertains to the access road. We cannot confirm from the plans contained in the DCO that this will not be the case for the Sizewell Link Road. Features which can easily detract from the character of a minor country road belonging in this landscape are concrete kerbing and a plethora of signs. If soft verges are not an option for operational or safety reasons, then alternatives to concrete kerbing could be explored. Speed limits can be painted in roundels on the road surface instead of being put on poles. Natural England is not stipulating that this can or must be done but that the road plans are properly scrutinised to ensure that the full potential to achieve a 'rural' road has been explored. <u>SSSI crossing</u> From a landscape and AONB perspective we are pleased that the applicant is now proposing a SSSI crossing using a single span bridge with embankments bridge rather than a causeway. This improves the chances of retaining the wetland SSSI in good condition. The wetland is a prominent landscape feature as well as a valuable habitat, so its presentation in good visible health is important for this part of the AONB and to help retain a local landscape counterbalance to the presence of a nuclear power station.		
21	**ECOLOGY:** Loss of/ damage to ancient woodland and ancient or veteran trees	Impacts from the proposals (MDS and AD sites) on ancient woodlands and ancient or veteran trees	**<u>Executive Summary</u>** Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. Any proposals (MDS and AD sites) within close proximity to ancient woodlands must consider potential impacts to them in line with the avoidance-mitigation-compensation hierarchy in terms of:	TBC	

		(C) and (O)	• **Direct loss:** as a first principle, direct loss should be avoided. • **Damage:** damage to ancient woodland should also be avoided. The Natural England/Forestry Commission Ancient Woodland Standing Advice advises a minimum buffer of 15 meters between development and any ancient woodland. However, the advice also says that the size of the buffer should be suitable for the scale, type and impacts of the development and that a wider buffer may be suitable. The minimum 15 meter buffer is to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, a larger buffer zone is likely to be needed e.g. to avoid the effect of air pollution from development that results in a significant increase in traffic. • **Fragmentation:** fragmentation of ancient woodland which would reduce the ecological connectivity between them should be avoided. This can negatively impact on species movement and create/increase edge effects. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 21 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required*** It should be noted that ancient woodland is a classification rather than a designation and changes to these references should be made accordingly in the application documents. We note that there remains no identification or mention of ancient or veteran trees and appropriate consideration of avoidance of loss of these irreplaceable habitats in their own right, or mitigation of indirect impacts. This was a point raised in our relevant representations that has yet to be addressed. Currently the ES does not assess the impacts on ancient woodland in sufficient detail and further work should be undertaken in regard to predicted cumulative and landscape impacts.		

			Furthermore, it is not clear where habitat fragmentation and severance of connectivity is covered in relation to ancient woodland. We advise that these issues be covered in detail within the ES and suitable mitigation demonstrated. We advise that further information is also required to outline how the proposed development will work to mitigate impacts from the development that will add pressure to sensitive and irreplaceable habitats. For more detailed information on specific impacts to ancient woodland see our advice under issue 50 below.		
22	**ECOLOGY:** Project-wide impacts on wider biodiversity receptors of importance, including but not limited to: ▪ Priority habitats and species listed under section 41 of the NERC Act (various) ▪ Regional and local sites of ecological importance	Assessment of impacts from the project on wider biodiversity	**<u>Executive Summary</u>** The project proposals have potential to significantly impact a wide range of habitats and species of importance beyond internationally designated sites (SACs, SPAs, and Ramsar sites), nationally designated sites (SSSIs) and European and nationally protected species. These include priority habitats and species and regional and local sites of ecological importance (e.g. County Wildlife Sites) and consideration should be given to these as set out in our Relevant Representations. Some of the priority habitats which are likely to be impacted include: ▪ *Deciduous woodland* (MDS, FMF, SLR and Theberton bypass) ▪ *Floodplain grazing marsh* (Two Village Bypass) ▪ *Heathland* (MDS) ▪ *Parkland* (SLR and Theberton bypass) Some of the regionally and local importance likely to be impacted include: • *Suffolk Shingle Beaches County Wildlife Site (CWS)* (MDS): An area of shingle habitat (of SSSI quality) will be directly lost to the footprint of the proposed development and that in front of the hCDF will be squeezed and eventually lost. The current coastal frontage is of nationally high value for its vegetation communities and invertebrates. ▪ *Southern Minsmere Levels CWS* (MDS) ▪ *Sizewell Levels and Associated Areas CWS* (MDS) ▪ *Leiston Common CWS* (MDS) ▪ *Sizewell Rigs CWS* (MDS)	N/A	

			▪ *Buckle's Wood CWS* (green rail route) A large number of priority species may also likely to be impacted. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 22 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** As stated in our Relevant Representations, Natural England will not be providing further comments on the above within our Written Representations. **Fisheries – use of ICES management units as a population baseline** Natural England's view is that the best available evidence summarising this ongoing scientific debate regarding appropriate scales of assessment for cooling water intake impacts on fishes is found within the ongoing public enquiry in the Hinkley Point C project. In this case NE strongly support the approach taken by EA (letter dated 28/04/2021 NE ref 313466) in their HRA (link) and as detailed in their supporting TB011 (link). While recognising the myriad of differences between the projects, not least the different environments of Sizewell Bay compared to Bridgewater within Severn Estuary, we hold that in both instances the applicants exclusive use of ICES management units does not utilise best available evidence, and so risks underestimation of the fish entrapment impact. There is evidence in support of local population or subpopulation structure within a number of the species assessed. Despite Natural England flagging this with the applicant throughout our engagement, most fish mortality impacts continue to be contextualised against large ICES SSB as a proxy for population estimates. Because of this, Natural England advises that the best available evidence has not been used in assessing the impacts of SZC and we therefore cannot support or disagree with the estimates around fish entrapment and conclusions based on these estimates. Finer population structure and highly localised behaviours are apparent in the following species which have been assessed against ICES SSB: • Cod (Gadus morhua) • Whiting (Merlangius merlangus)		

			• Seabass (Dicentrarchus labrax) • Herring (Clupea harengus) • Plaice (Pleuronectes platessa) "*As such, ICES stock units represent the best available evidence for assessing the impacts of the proposed development in relation to stock sustainability*" is contained within TR406 Impingement predictions Rev07, Pg 11, in which the whole section oversimplifies the processes and procedures used to change ICES SSB definition (explored recently in Schuch et al 2021), and presents a false dichotomy, omitting the possibility of using existing evidence to derive more accurate population estimates that incorporate all existing evidence. Natural England acknowledges the significant detail and technical nature of the calculations provided by EDF England. However, we maintain that the degree of uncertainty contained within the assessment risks adverse environmental outcomes. Henderson and Seaby (2000) identify a number of ways that the abstraction for cooling water can negatively impact a fish community and ecosystem, and conclude that "*the deterioration in measure of ecosystem health, such as species richness, or trophic complexity, can be quite gradual and irregular and take many years to recognise… The trend is easily lost in random variation caused by events such as exceptionally cold or warm spells or lost within other man-made changes such as eutrophication or acidification*". Uncertainty around fish populations and their resilience is a characteristic aspect of fisheries management, in turn the largest source of fish biology evidence (albeit not the exclusive source). Lessons learned from the long history of the fishing sector have concluded that to manage risk arising from uncertainty, management of commercially fished populations must be "*robust, adaptive and precautionary*" (Charles 1998). The Applicant's statement that "*Fish mortality due to impingement at SZC can be considered as a form of fish harvesting*" (TR406 Impingement predictions Rev07, 4.10, pg 46) is an imperfect comparison. Unlike fisheries, SZC lacks the capacity for adaptation if sustainable harvesting levels are exceeded, or if the wider population crashes due to other external factors. SZC is uncontrolled, unmanaged harvesting at a constant rate over the lifetime of the project. Therefore, due to the long-term operational duration of the intakes, the potential impacts and uncertainty around impacts on Sizewell Bay, and the improved evidence base around ecosystem functioning and services informing the UK's evolving environmental policy, Natural England continues to stress the		

			importance of maximising opportunities to reduce fish mortality at every stage of this project.		
23	**ECOLOGY:** Project-wide impacts on wider biodiversity receptors of importance	Delivery of biodiversity net gain (BNG) through the project as a whole (MDS and AD sites)	**<u>Executive Summary</u>** We welcome the inclusion of a commitment to the delivery of BNG in the DCO application. The BNG approach has been developed to not only help halt declines in wildlife by conserving what habitats and species are left, but begin the task of restoring some of what has been lost. In simple terms, BNG calculations should compare the current biodiversity value of the habitats within the project red line boundary to be lost (excluding designated sites and ancient woodland) with the biodiversity value of the habitats forecast to be created following development, with the intention being to demonstrate an overall increase in biodiversity (minimum 10 %). In addition to the considerable ecological benefits, such an approach would also be hugely important as a landscape and visual mitigation measure in this part of the Suffolk Coast and Heaths AONB, commensurate with its nationally designated status. Establishing a strong landscape character which reinforces and lifts the landscape quality can help to indirectly mitigate those significant impacts of the scheme which cannot be directly mitigated by altering the design or location of buildings or by screening. This is therefore the only way in which the Sizewell C project can provide for landscape net gain. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 23 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** As a first principle, it is imperative that the project as a whole avoids, mitigates and/or compensates for impacts on sites and species of existing high value which sit outside the BNG considerations (i.e. internationally and nationally protected sites and species and ancient woodland). The necessary measures as required through the respective statutory requirements must therefore be agreed and secured through the appropriate mechanisms. Delivery of BNG is therefore dependent on all relevant parties, including Natural England, agreeing that the project represents 'no biodiversity net loss' in these regards. **This necessarily requires all issues relating to protected sites and species and ancient woodland, as set out in the Statement of Common Ground to first be classified as 'green'.** We advise that there should be a clear distinction in the	TBC	

			project documents as to which habitats are being created for mitigation and/or compensation purposes and which are being delivered as BNG uplift. We advise that such clarity is needed to avoid double counting. The version of the BNG Report presented in the DCO application as submitted in May 2020 assessed BNG for the main development site and associated development sites separately. Natural England's recommendation was that this was re-calculated for the development as a whole and we welcome that this has now been done in the updated versions of the BNG Report. We advise that it is essential to consider the interaction of the BNG outputs with landscape impacts by considering how the habitats which will be delivered within the red line boundary and more widely across the AONB and surrounding area will also translate into an uplift in landscape character. Natural England has also offered to advise the applicant on the incorporation a bespoke species-based approach for farmland birds (e.g. turtle dove, nightingale, yellow wagtail, stone curlew etc.). These species are specifically associated with arable habitats which are categorised as low value through the BNG habitats-based approach and therefore likely to be lost. Provisions could therefore be made for these species without compromising the current approach and this offer remains open. We understand that a revised version of the BNG Report will be submitted by the applicant shortly for examination and that this will confirm the final percentage uplift figures and where this will be delivered, at which time we will be advise further as necessary.		
24	**LANDSCAPE:** Project-wide impacts on wider landscape receptors of importance, such as those which are highly valued locally	Impacts from the project on wider landscapes (MDS and AD sites)	**<u>Executive Summary</u>** The project proposals will also have significant impacts on landscapes of importance beyond the nationally designated Suffolk Coast and Heaths AONB. For these landscapes, consideration should also be given to potential impacts arising from the project during construction and operation from those elements of the project within the MDS and AD sites, against the current baseline, as outlined in NPS EN – 1 (see paragraphs 5.9.14 – 5.9.17 (wider landscapes which are highly valued locally). **For further detailed comment containing the context and background of this issue, please see Part II, Issue 24 of Natural England's Relevant Representation [RR-0878].**	N/A	

			<u>Further comments on the DCO application, June 2021</u> ***No further comment*** Natural England will not be providing further detailed comments on this issue.		
25	**ACCESS:** Project-wide impacts on access and recreation receptors of national importance: ▪ England Coast Path (ECP)	Impacts from the project on the route of the ECP	**<u>Executive Summary</u>** The Marine and Coastal Access Act 2009 places a duty on the Secretary of State and Natural England to secure a long distance walking trail around the open coast of England, i.e. the ECP, together with public access rights to a wider area of land along the way for people to enjoy. Our current proposals for this section is a route which uses the already well-used 'track' on the beach seaward of the Sizewell site as the main trail. The main trail sits within the wider coastal margin which is also subject to coastal access rights and the coastal margin comprises land both seaward and landward of the main trail. Those aspects of the project proposals which may affect the ECP route, such as the use of the BLFs, may require access mitigation (e.g. facilitation of access during beach closures, provision of an alternative temporary diversion route during beach closures etc.). **For further detailed comment containing the context and background of this issue, please see Part II, Issue 25 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further information required*** Whilst the England Coast Path (ECP) has been identified as a National Trail in the application documents, Natural England maintains that the they make no distinction between what this means to users in terms of its importance and value compared to existing local and regional routes. We do however accept that the ECP, Suffolk Coast Path and Sandlings Walk have all been assessed as high value and sensitivity and that this contributes to an assessment of greatest potential effects on users of these routes.	TBC	

			Whilst the inland alternative route of the ECP is longer and of poorer amenity than the main route of the ECP, Natural England welcome the efforts made to minimise its use during construction. We welcome the confirmation that the ECP would remain open during the operation of the BLF and temporary BLF (except in rare circumstances only) and that a banksman will not be required. We welcome the commitment to continued liaison with Natural England and Suffolk County Council to identify an appropriate easy to use surface and ensure that this is provided through the main development site. We welcome the Applicant's commitment to recharging the soft coastal defence to protect the ECP should it be eroded by the sea. However, we remain concerned about walkers using Eastleigh Road and request that the suitability and safety of this route for walkers is formally assessed by Suffolk County Councils Highways Department before it is finalised. Should they approve it, we would be pleased to see ongoing monitoring of walker safety here and welcome the commitment to mitigation measures should these prove necessary. We welcome the progress made on this issue and although there are a few outstanding issues we foresee these being easily surmountable by the Applicant.		
26	**ACCESS:** Project-wide impacts on access and recreation: ▪ Wider public access	Impacts from the project on wider public access and amenity	**<u>Executive Summary</u>** More widely, recreation and access within the project red line (MDS and AD sites) is currently provided by public footpaths, including the Sandlings Walk, the Suffolk Coast Path and permissive footpaths and bridleways. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 26 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***No further comment*** Natural England will not be providing further detailed comments on this issue.	N/A	

63 (Issue number is out of sequence as this is a new issue in this section raised for the first time at this stage)	**SOILS:** Project-wide **i**mpacts to Best and Most versatile (BMV) land, and wider soil issues	Impacts from loss of BMV land to infrastructure associated with both the MDS and associated developments during construction and operation .	**Executive Summary** Natural England provides comment on soil issues as part of its wider statutory remit for the natural environment. **Comments on the DCO Application, June 2021** Based on the information provided with the application documents, it appears that the proposed development comprises 583.28 ha of agricultural land, including 143.3 ha classified as 'best and most versatile' (BMV) (Grades 1, 2 and 3a in the Agricultural Land Classification (ALC) system). We understand that, of the 143.3 ha of BMV land which will be affected by the proposals during construction (10-12 years), 67.6 ha of this will be permanently and irreversibly lost following removal and reinstatement of temporary development at the end of the construction phase. The land take figures provided in *6.11 Volume 10, Cumulative and Transboundary Effects, Chapter 3 Assessment of Project-wide Effects* show discrepancies between individual ES Soil chapter. We advise that the Applicant should provide simple breakdowns in this summary for each of the individual components. For example, total agricultural area impacted by scheme (split by scheme component and by ALC grade), total area of BMV agricultural land (split by component) and total BMV agricultural area permanently and temporarily required for the development (split by component). The main impact on BMV appears to be the in relation to the ancillary development rather than the main development site. The loss of BMV land can only be considered temporary if it can be restored back to its original quality – given some of the development proposed (e.g. rail works involving cut and fill earthworks or roadways involving compacting basal layers and the application of tarmac, paving etc) is somewhat doubtful and greater justification is required as to how the soil will be restored back to its original quality post development. Furthermore, it is not clear how the route options or site design has been devised to help minimise this loss.		

			Nevertheless, having reviewed the ALC surveys provided within APP-278 and the assessment conclusions provided within APP-577, we agree with the general conclusion that effects in this regard would be **major adverse (significant).** Having reviewed the ALC survey approach and methodologies, we have the following concerns: i) It is not clear whether suitably qualified and experienced individuals have undertaken the survey work ii) Representative soil pits have been dug to support the ALC grades applied which means it is unclear how the applicants have accurately assessed key ALC metrics such as subsoil structure (for wetness and droughtiness assessment) or subsoil stone content and rooting for which is also a component of soil droughtiness assessment. iii) The laboratory assessment of soil particle size lacks rigour given the range of soil types and survey locations. Where particle size assessment to inform grading has been carried out it is not clear how the results relate back to the individual auger borings as the laboratory and field assessment of soil texture do not always closely match, potentially effecting the reliability of the findings. iv) The ALC surveys do not cover the whole project area We advise that if the development proceeds, the developer uses an appropriately experienced soil specialist to advise on, and supervise, soil handling, including identifying when soils are dry enough to be handled and how to make the best use of the different soils on site. The outline Soil Management Plan (OSMP) (APP-278) already draws on the Defra Construction Code as a source of key guidance and confirms that detailed Soil Resources Plans will be produced by the Contractor for each part of the Sizewell project in line with the Defra Code. However, the OSMP needs to be clearer that the aim is for BMV agricultural land to be returned to its original quality and all soils to be suitable for the planned end use. For example, this could be actioned by a target specification for the restored soils according to location and soil types, end use and required ALC grade.		

			It is expected that soil data collected as part of the ALC surveys will be re-used to develop the Soil Resources Plans. This soil data should be supplemented, where necessary, to provide coverage for all soils including those in non-agricultural use. There should be least one soil observation per ha for all soils, including on parts of the main site where ALC surveys have been carried out at a semi-detailed level. Where information on soil nutrients has not already been collected, this should also be carried out. All soils should only be handled in a dry and friable condition, and it is expected that soil handling will be confined to the drier summer period to minimise risk of soil damage. Soil handling methods should normally be as specified as in the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (including accompanying Toolbox Talks). To avoid risk of soil damage and compaction, bulldozers (as currently proposed in the OSMP) should not normally be employed for soil stripping or replacement for soils being reused. Soil stockpiles should not exceed 3m in height for topsoils and 5m for subsoils. Soils should also be stored 'like on like' with topsoil stored on topsoil, and subsoil on subsoil. As set out in the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites, a Soil Resource Plan should feed into a Materials Management Strategy (MMS) to describe how the applicants intend to manage excavated materials. Given that descriptions of soil resources and their management will be a part of the Soil Management Plan (currently outline) and that the applicants state that the Outline Soils Management Plan is a key overarching document feeding into their (original) MMS, Natural England is content with the approach and current content of the MMS regarding soils and agricultural land, provided the approach and content is maintained in updated versions.		
MAIN DEVELOPMENT SITE					
27	**ECOLOGY:** Impacts on internationally designated sites: ▪ Alde-Ore Estuary SPA	Impacts from noise, light and visual disturbance from a number of the MDS project	**Executive Summary** A large proportion of the proposed works within the MDS are in close proximity to a number of sensitive designated sites which are either wholly or in part notified for mobile species such as birds (terrestrial and marine species, breeding and non breeding) and marine mammals.	TBC	

	▪ Alde-Ore Estuary Ramsar site ▪ Benacre to Easton Bavents SPA ▪ The Humber Estuary SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site ▪ Outer Thames Estuary SPA ▪ Sandlings SPA ▪ Southern North Sea SAC ▪ The Wash and North Norfolk Coast SAC	elements, and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	The project therefore presents the potential for noise, visual and light disturbance impacts to these species (and their prey species where relevant) during both construction and operational phases of the project. This relates to land used by birds within the designated site boundaries and also land outside the boundaries but within and around them which can play an important role as 'functionally linked land' (FLL) and are therefore afforded the same protection. If shown to be required following the noise modelling, measures to avoid, mitigate or compensate for such impacts should be identified. In line with the avoidance-mitigation-compensation hierarchy, this should first consider avoidance measures (e.g. phasing works to avoid the most sensitive times for the relevant species), then mitigation measures (e.g. acoustic screening), then compensation measures (e.g. creation of compensatory habitat elsewhere). Details of how any proposed measures are likely to be effective (e.g. for mitigation measures, how they would reduce noise levels to acceptable levels in the context of the bird disturbance thresholds) should be provided, along with details of how they would be monitored to ensure their efficacy **For further detailed comment containing the context and background of this issue, please see Part II, Issue 27 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further information required*** **Terrestrial bird species – Marsh harrier** We reiterate the comments above from our Relevant Representations and note that there remains outstanding information regarding the detailed design of the marsh harrier compensation area which is necessary for us to review in order to progress this issue. **Terrestrial bird species – Gadwall and Shoveler** *Initial conclusions based on limited data* In the May 2020 Shadow Habitat Regulations Assessment (HRA), the applicant excluded adverse effect on site integrity for both breeding and non-breeding SPA populations of gadwall and shoveler. This conclusion was reached in the		

			absence of any project-specific breeding bird survey and without a single complete winter's project-specific bird survey. One of the key areas of waterbird habitat potentially affected is Minsmere South Levels. Impact was excluded based on the number of waterbirds present, relative to SPA populations, and their distribution within this sector and proximity to development effects. There were, however, no distributional data for breeding birds and the limited non-breeding data were supplemented with WeBS data; the latter only providing sector-based counts without the necessary within-sector distribution. *Shadow HRA May 2020 breeding gadwall and shoveler* The Shadow HRA estimated the breeding gadwall SPA population to be 84 breeding pairs based on 2012-16 data. The five year mean count, including functionally linked land at Minsmere South Levels and Sizewell Marshes, was 106 breeding pairs, suggesting that these two areas of functional land supported 16% and 5% of the wider SPA population respectively in recent years. Assuming 40% of the area of the Minsmere South Levels would be affected by noise and visual disturbance, and assuming an even distribution of birds (no data on bird distribution were available), the shadow HRA concluded up to 11% of the wider SPA breeding gadwall population could be displaced. The Shadow HRA estimated the breeding shoveler SPA population to be 65 pairs based on 2012-16 data. The five year mean count, including functionally linked land at Minsmere South Levels and Sizewell Marshes, was 77 breeding pairs, suggesting that these two areas of functional land supported 16% and 0.5% of the wider SPA population respectively in recent years. Assuming 40% of the area of the Minsmere South Levels would be affected by noise and visual disturbance, and assuming an even distribution of birds (no data on bird distribution were available), the shadow HRA concluded up to 7% of the wider SPA breeding shoveler population could be displaced. *Shadow HRA May 2020 non-breeding Gadwall and Shoveler* The Shadow HRA provided a mean peak count of 419 non-breeding gadwall within the SPA and Sizewell Marshes combined, between the winters of 2013-14 and 2016-17 (range approximately 280-600 birds). Numbers on the Minsmere South Levels were often relatively high, particularly in the earlier years for which data were obtained. They accounted for an average of 30% of the birds (range 0% – 91%) across all available counts in the Minsmere sector (i.e. from 2012-13 to 2018-19). It was unclear how the zero % figures reported in the Shadow HRA were derived as there were no zero counts.		

			The Shadow HRA provided a mean peak count of 173 non-breeding shoveler within the SPA, between winters of 2013-14 and 2016-17 (range approximately 140-250 birds). Numbers on Minsmere South Levels accounted for an average of 23% (range 0-83%) across all available counts in the Minsmere sector. It was unclear how the zero % figures reported in the Shadow HRA were derived as there were no zero counts. *Updated Shadow HRA Addendum; new breeding and non-breeding bird surveys* The Shadow Habitat Regulations Assessment Addendum (January 2021) provided data from the first project-specific breeding waterbird survey conducted in 2020, and the first complete up-to-date project-specific non-breeding waterbird survey conducted in winter 2019-20. Analyses of these new data provided within the Shadow HRA Addendum did not alter the conclusions reached in the earlier Shadow HRA; adverse effect on site integrity continued to be excluded in relation to both breeding and non-breeding gadwall and shoveler. For breeding gadwall and shoveler, the 2020 breeding survey data are broadly consistent with the earlier survey data upon which the Shadow HRA Report is based. In addition, the 2020 surveys also provided data on distribution, indicating that birds are concentrated in the northeast of the Minsmere South Levels around the large pool system. This is largely beyond the area within which any effects of noise and visual disturbance from the construction activities are considered likely. For non-breeding gadwall and shoveler, however, the 2019-20 winter survey recorded substantially higher numbers of birds using Minsmere South Levels. *Natural England's interpretation of Shadow HRA addendum conclusions* Displacement figures provided in the original Shadow HRA for breeding gadwall and shoveler of 11% and 7% respectively are significant. Displacement figures of this magnitude would be expected to be associated with a negative Stage II HRA conclusion (i.e. adverse effect could not be excluded). The first project-specific breeding bird data provided in the HRA addendum does not significantly alter the bird counts in the key South Minsmere Levels sector and distribution data are only available for a single year. Furthermore, whilst the use of a peak or impulsive noise threshold of 70dB(A) for non-breeding waterbirds was derived from experimental study, the behavioural response of breeding waterbirds to noise is less certain. Therefore, the degree to which the zone of potentially significant disturbance effects might overlap with the area used by breeding SPA birds is also less certain. Previously, the two most recent winters' survey data provided in the Shadow HRA where most (but not all) months were surveyed, provided a 2 year peak		

			mean gadwall and shoveler count on Minsmere South Levels of 77 and 51.5 birds respectively. The HRA addendum provides data from the first complete winter's project-specific waterbird count in 2019/20, giving a peak count on Minsmere South Levels of 238 and 334 birds respectively. This equates to a significant increase in wintering gadwall of approximately 210% and wintering shoveler of approximately 550%. Whilst natural inter-annual fluctuations are more pronounced when undertaking comparison against a single year's data, the lack of project-specific data is the responsibility of the applicant. Although the applicant's written description of the wintering distribution of gadwall and shoveler on Minsmere South Levels supports the view that birds are not concentrated close to areas of predicted disturbance, the mapped data provided within the Environmental Statement Addendum Appendices show just 1 and 3 point locations for the peak counts of 238 gadwall and 334 shoveler recorded during the January 2020 survey (see FIGURE 2.9.A3.5). The manner in which these limited data are presented is insufficient to support this conclusion. The limited data on birds' distribution have been used to conclude minimal overlap with disturbed areas affected by visual and noise development to the south of Minsmere South Levels. The effect of increased recreational pressure, which is likely to occur along the north of Minsmere South Levels, has not been highlighted when considering the overlap between birds and potential disturbance. On the basis of i) limited data; ii) uncertainties about the behavioural response of breeding birds to visual and acoustic disturbance; iii) the compounding effects of recreational pressure; iv) the significant % of predicted breeding bird displacement (where new data show breeding numbers remain consistent), and; v) the significant increase in non-breeding birds, the applicant's conclusions are lacking precaution. The lack of impact is a possible scenario but, for a development of this scale, the information provided in the HRA is insufficient to exclude adverse effect on site integrity for breeding and non-breeding gadwall and shoveler. **Marine bird species – Over-wintering Red-throated diver** Natural England consider that insufficient evidence has been presented to make a conclusion of no Adverse Effect on Integrity for the non-breeding red-throated diver population at the Outer Thames Estuary SPA arising from disturbance and displacement by vessel traffic. We advise that an indicative vessel route 'corridor' is not sufficient to assess the likely disturbance and/or displacement of red-throated diver. It is essential that a		

			full vessel management plan, detailing appropriate mitigation to reduce red-throated diver disturbance and displacement, is defined. The increased vessel activity has been described as a small increase to the existing. We do not consider the evidence provided as sufficient to assess this, as the proposed vessel activity is not considered against clearly defined baselines over appropriate timescales. The likely disturbance and displacement impacts on red-throated diver have not been considered with due consideration of the evidence. Red-throated diver typically show strong disturbance responses to vessels from distances up to 5km, leading to long resettlement times (3-7 hours). There is considerable uncertainty around individual or population level impacts of disturbance and displacement of wintering birds, although the acknowledged vulnerability of this species to anthropogenic disturbance suggests a risk of significant stress responses to disturbance events. **Marine Mammals** Natural England are satisfied that the results of the noise modelling undertaken are either within previously the previously assessed impact ranges, or where there are increases, they are only slight and can be successfully mitigated by the 500m mitigation zone outlined in the Marine Mammal Monitoring Plan. We also welcome the use of a hydrohammer as mitigation at source, to reduce the amount of noise introduced in the marine environment. However, Natural England note that while the Applicant refers to a Southern North Sea Site Integrity Plan (HRA Addendum, Appendix 9a), we have been unable to locate the Appendix mentioned, and therefore unable to provide comment on it. Natural England require this document to be submitted to the examination for our review before we reach any conclusion on adverse impacts to the Southern North Sea SAC.		
28	**ECOLOGY:** Impacts on internationally designated sites: ▪ Minsmere to Walberswick	Impacts from changes to coastal processes/ geomorphology arising from a number of the	**<u>Executive Summary</u>** The stretch of coast alongside the proposed main development site is important for habitats, species and geomorphology at international, national and local level. It supports a number of shoreline features that are typical of Suffolk and East Anglia but which are rare in UK and Europe, and often under pressure from a range of human activities including coastal development.	TBC	

	Heath and Marshes SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site	MDS project elements (e.g. hCDF, BLF) and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(O)**	Potential indirect effects extend beyond the immediate foreshore. The Minsmere Valley, part of the Minsmere to Walberswick protected area (SAC/SPA and SSSI) is for all intents and purposes a low-lying coastal wetland, buffered from the sea by the shingle beach and ridges, and impacted by predicted future sea level rise and frequency and intensity of storm surge breaching and over-topping. The integrity of the foreshore habitats in turn helps conserve the wetland habitats in the valley behind, building resilience and time to plan future adaptation. Any potential effects of the project on the geomorphology and hydrodynamic processes which effect the alignment of the coast, need to be thoroughly and properly understood and assessed. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 28 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further information required*** Natural England note the assessments provided in the HRA addendum provided in the Applicant's proposed changes application. We are yet to review the underpinning coastal processes modelling reports for both the presence of an additional Beach Landing Facility, and the alteration to the Coastal Defence Features, as well as an in-combination assessment of the interaction between the two before we are able to advise that there will be no adverse effect on integrity to European protected sites. These were not provided within the additional information submission in January 2021. Natural England note that TR543 'Modelling of the Temporary and Permanent Beach Landing Facilities at Sizewell C' has now been submitted to the examination at Procedural Deadline B. However, our review of this report is still ongoing, and additional reports on the alterations to the Coastal Defence Feature are still outstanding.		
29	**ECOLOGY:** Impacts on internationally designated sites	Impacts from changes/ increases in recreational disturbance	**<u>Executive Summary</u>** The proposed development is likely to change the way designated sites in the area are used by people for recreation, both during construction and operation. Such changes are likely to be driven by the new population of workers within the	TBC	

	▪ Alde-Ore and Butley Estuaries SAC ▪ Alde-Ore Estuary SPA ▪ Alde-Ore Estuary Ramsar site ▪ Minsmere to Walberswick Heath and Marshes SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site ▪ Outer Thames Estuary SPA ▪ Sandlings SPA	arising from the MDS project elements (accommodation campus and temporary caravan site on the LEEIE), and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	Sizewell area (7900 at peak) who will likely use designated sites for recreation to some degree, and the displacement of local people who currently use the development site and surrounding area (e.g. Sizewell Beach) to other locations for recreation, including these nearby sensitive designated sites. Recreational activities such as walking, dog walking, cycling/mountain biking, etc. can negatively impact on the designated site features (species and habitats) through noise disturbance to species, trampling of nests and vegetation, increased fire risk, enrichment of habitats etc. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 29 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required*** Natural England has further engaged with the applicant on this issue via two meetings in February 2021. On the basis of the further information which was shared in relation to recreational disturbance, Natural England is not yet satisfied that an adverse effect on integrity of nearby designated sites from increased recreational disturbance arising from the project as proposed can be ruled out. In recent years, Natural England has worked with local planning authorities (LPAs), housing developers, consultants and local environmental stakeholders to develop and agree a fair, consistent and effective approach to mitigating recreational disturbance impacts to coastal European designated sites in Suffolk at a strategic level. For large scale housing developments, this approach is centred on a two-pronged approach of: 1. **Provision of a Suitable Alternative Natural Greenspace (SANG):** The function of this is to provide an attractive and readily accessible area for new residents to use for recreation in preference to nearby designated sites, minimising the need to visit those sites and the additional pressures this would bring; <u>and</u> 2. **Provision of 'off-site' measures (often referred to as Strategic Access Management and Monitoring Strategies (SAMMS)) which aim to make the coastal European sites themselves more resilient to increased recreational pressures:** This is on the basis that, even if well designed, a SANG will likely not be used in preference to coastal designated sites by all residents due to the latter's unique draw, and so		

			there will be some residual pressures to these sites which need further mitigating. For housing, this element of mitigation is routinely delivered through the Suffolk Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS) which includes a package of strategic mitigation measures funded by financial developer contributions (a per dwelling tariff) and includes visitor engagement (coordinated wardens/rangers, responsible dog owner project etc.), visitor access management (audit of current signage and car parks, new signage and interpretation, new paths, path diversions etc.), visitor education/ information (including codes of conduct etc.) and effectiveness monitoring (of visitors, species and habitats). **Sizewell C recreational disturbance issues** The Sizewell C development has similar potential to increase recreational disturbance impacts to European designated sites through: **a) Additional recreational pressures from the Sizewell C construction workforce;** we understand from the information presented to date that this includes up to 7900 workers, 5900 of whom will be new to the area (with a large proportion of these based at the accommodation campus and temporary caravan site on the Land East of Eastlands Industrial Estate (LEEIE)) and 2000 who will already live in the surrounding area. Those at the accommodation campus and caravan site will not be allowed dogs; **b) Displacement of existing recreational users away from the Sizewell area;** this includes those people who currently use the Sizewell area (including for dog walking etc.) and who will likely be displaced during the construction period due to beach access restrictions, loss of tranquillity etc. and so will seek alternative open space for recreation. With regards changes to access along the beach, we are aware that the Applicant's recent changes to the application will reduce the length of time the beach will be closed to walkers during construction and operation to 'rare circumstances' only. This would open up access northwards along the beach (and sensitive SAC vegetated shingle habitats) for workers which will need to be considered through a revised assessment of evidence, impacts and mitigation. Whilst we accept that there are some differences between the likely impacts from Sizewell C when compared to new housing (e.g. recreational impacts largely generated during the construction period (10-12 years) when compared to housing (in perpetuity), no dogs allowed at the accommodation campus and caravan site etc.), the proposals are long term and at a scale where significant		

			changes to recreational behaviour is likely to occur. The construction of accommodation for 5,900 new workers would be hugely significant in scale, and also occur in an area with no existing residential dwellings, close to the coast and adjacent to important wildlife habitats. The effect could be an order of magnitude greater than the effect of allocated housing at an equivalent scale, proposed elsewhere within the local authority's administrative boundary . Although the Applicant has collected some evidence and data to inform the recreational disturbance impact assessment, we consider there to be significant limitations to this. As such, we advise that a precautionary approach should be taken in line with the strategic approach to mitigating impacts from new housing pressures around the Suffolk Coast, and the measures which we consider necessary to mitigate impacts from Sizewell C are: **1. A Suitable Alternative Natural Greenspace (SANG) within or in close proximity to the development red line boundary;** The function of this area should be to provide an attractive and readily accessible area for the construction workers and displaced local people to use for recreation in preference to nearby designated sites, minimising the need to visit the latter and the additional pressures this would bring. As such, this needs be of sufficient size and quality to fulfil this function in terms of workers (e.g. for walking, dog walking (for those allowed dogs), jogging, cycling, mountain biking etc.) and displaced local people (e.g. especially for dog walking). The capacity to fulfil this function first needs to be considered against any current baseline use of the site for recreation if it is already publicly accessible. As we have previously advised, if there is shown to be capacity, the design of the SANG should broadly be in line with the Thames Basin Heaths SANG guidance here, but as a minimum should: ▪ **Be of a sufficient size to accommodate the new users**; 8 ha per 1000 people is often used as a general guide, although the quality of the site is also important (see below) ▪ **Include high-quality, informal, semi-natural areas including a variety of habitat types and topography where possible** ▪ **Include a circular dog walking route of at least 2.7 km within the site and/or with links to surrounding public rights of way (PRoW)**		

			▪ **Include dedicated 'dogs-off-lead' areas** ▪ **Include adequate parking provisions** ▪ **Include signage/information leaflets to users (workers and displaced local people in this case) to promote the area for recreation** ▪ **Include dog waste bins** ▪ **Be subject to a commitment to long term maintenance and management of these provisions for the duration of the period within which impacts are predicted to occur**; in the case of Sizewell C this would need to consider the construction and operational periods bearing in mind that recreational behaviours may revert gradually post-construction We understand that the Applicant does consider Aldhurst Farm to be a SANG as part of the necessary mitigation for predicted impacts from displaced local people; in this regard, we advise that its ability to fulfil this function must be fully justified in line with the above. However, we understand that they do not consider Aldhurst Farm to be a SANG as part of the necessary mitigation for recreational impacts from workers, as such impacts are not considered likely by the Applicant. Our advice remains that a SANG is also required for the workers before an adverse effect on the integrity (AEoI) of nearby European designated sites from increased recreational disturbance can be ruled out. This is on the basis that 5900 workers new to the area equates to roughly 2500 houses by number of people (based on 2.4. people per house). For a housing development of that scale in a similar location, we would advise that a SANG is required before an AEoI from recreational disturbance could be ruled out. For example, a SANG was required for a development of 2000 houses at Brightwell Lakes in the district as per *Policy SCLP12.19: Brightwell Lakes* (item a) of East Suffolk Council - Suffolk Coastal Local Plan (September 2020). As has been acknowledged by the Applicant, the extent to which the Local Plan is deemed material, important and relevant to the decision making process is a matter for the Examining Authority and the Secretary of State. It is our advice that the current East Suffolk Council Local Plan seems to support the need for a SANG for Sizewell C		

			through the following overarching and Sizewell C-specific policies and supporting text: ▪ **Policy SCLP10.1**: **Biodiversity and Geodiversity**: "*Depending on the size and location of the development, additional measures such as Suitable Alternative Natural Green Spaces (SANGS) may be required as part of development proposals*". ▪ **Paragraph 2.19**: "*Many of the European designated sites cross administrative boundaries and experience visitor pressure from residents and visitors. The collaborative approach is therefore required to ensure that green infrastructure requirements are considered across the wider area in a consistent manner*". ▪ **Paragraph 3.54**: Specifically with regards to Sizewell C "*…it is considered that one of the biggest development and construction programmes faced by the Council and its communities in generations should be developed alongside the overall policy framework for East Suffolk to enable the impacts and benefits to be managed, including addressing the issues of cumulative impact and outcomes of other large scale projects*". ▪ **Paragraph 3.69**: "*Provision of open space can also help to mitigate impacts of recreational pressure on protected environments. The necessary infrastructure requirements should form part of the Habitats Regulations Assessment where one is required, and information will be required to be submitted to demonstrate that the infrastructure provision will not impact upon European protected sites*". ▪ **Paragraph 10.8**: "*Seminatural areas, circular dog walking routes, dedicated dogs off leads areas and dog waste bins should be incorporated into ecological corridors or networks within new developments in order to encourage routine recreational activities within the vicinity of the development*". It is our understanding that the Applicant's conclusion that there will not be an AEoI from recreational disturbance by workers is partly made on an assumption, based on Hinkley Point C, that c.90% of workers will return home to families at weekends so will not undertake recreation in the surrounding area when they will have the most free time. We advise that this would still leave c.590 workers on site during weekends who will require nearby open space for recreation; this number of people is at a scale roughly equivalent to a housing development of 250 dwellings in		

			the area where a SANG would still be required in order to avoid AEoI. This assumption also does not take into account the full 5900 workers' recreational needs during weekday evenings, in particular during fine summer weather. A further assumption by the Applicant, again based on experience of Hinkley Point C, is that workers will use the leisure/sports facilities provided through the development in preference to visiting the nearby designated sites for recreation. It is important to note that Hinkley Point C is set in a very different landscape to the proposed Sizewell C development, with very different designated site habitats and public rights of way (PRoW) networks surrounding it. The Severn Estuary and surrounding area is of great nature conservation value with all the statutory designations at international (SAC, SPA, Ramsar) and national (SSSI) level, including large areas of grazing marsh, mudflat and saltmarsh which will no doubt be attractive to some of the Hinkley Point C workers (e.g. wildlife enthusiasts). However, these habitats do not have the same amenity value and therefore recreational draw as the Suffolk coast designated site habitats of concern which include dry heath, vegetated shingle beach and woodland/forest (including significant areas of open-access land), all set within an Area of Outstanding Natural Beauty (AONB). These habitats are likely to be very attractive to a typical worker seeking to undertake a number of recreational activities outdoors in the surrounding area (e.g. walking, jogging, cycling, mountain biking, meeting with friends etc.). We welcome that a trail for bike riding will be provided through Kenton Hills for the workers to use as part of the current proposals but advise that this only provides for limited types of recreational use. **2. A package of 'off-site' measures (often referred to as Strategic Access Management and Monitoring Strategies (SAMMS)) which aim to make the coastal European sites themselves more resilient to increased recreational pressures;** We advise that further consideration is needed to draw up a holistic Monitoring and Mitigation Plan which integrate these measures. We have received an updated draft HRA Mitigation and Monitoring Plan in May 2021 and are currently reviewing it in order to further develop our position on this issue; we understand that this document will be submitted into the examination in due course. This document should include the provision of 'off-site' measures targeted to all designated species and habitats which are likely to be impacted by increased recreational disturbance. As previously stated,		

			this is on the basis that, even if well designed, a SANG would not be used in preference to coastal designated sites by all workers and displaced local walkers due to the latter's unique draw. These residual pressures to the sites therefore require further mitigation. We advise that clear links back to the HRA evidence base for assessment of significance for each site and feature must be provided and that the Plan should outline the details of the following 'off-site' mitigation and monitoring measures in one place: ▪ **The measures to be delivered through a proportionate financial contribution to the Suffolk Coast RAMS in relation to recreational impacts from the workers:** we understand that a financial contribution has been agreed between the Applicant and East Suffolk Council. We advise that this should be targeted towards an agreed suite of measures from the Suffolk Coast RAMS mitigation package specific to the predicted Sizewell C development impacts. ▪ **A bespoke package of measures targeted at mitigating wider recreational impacts which are not covered by the Suffolk Coast RAMS payment (e.g. from displaced local users)**: We understand and very much welcome that the Applicant has now committed to funding a ranger as part of this package which we will advise on further in due course.		
30	**ECOLOGY:** Impacts on internationally designated sites ▪ Alde-Ore Estuary SPA ▪ Alde-Ore Estuary Ramsar site ▪ The Humber Estuary SAC	Impacts from intakes and outfalls and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** The Intakes and Outfalls may have potential water quality impacts upon designated sites and species, either directly through the presence of the infrastructure itself and the chemical thermal plume or indirectly through food webs and associated displacement of prey species and bioaccumulation. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 30 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** Natural England's ability to provide comment is still limited by the ongoing WDA permit application being assessed by the Environment Agency. While we are	TBC	

	▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site ▪ Outer Thames Estuary SPA ▪ Southern North Sea SAC ▪ The Wash and North Norfolk Coast SAC		liaising with the Environment Agency we are unable to provide final comment to the DCO process until we have been formally consulted on the permitting process. **General Comments:** • Due to the high levels of uncertainty inherent in the fish entrapment assessment, Natural England remains concerned about the impact of predicted fish mortality rates on rare/vulnerable species, localised sub-populations, and the functioning of the surrounding inshore habitats in the vicinity of the intakes (eg as fish nursery areas). • We advise that the applicant should consider exploring/revisiting mitigation opportunities to further reduce fish mortality rates (e.g. Fish Deterrent devices), especially for those species with the highest impingement rates and 100% FRR mortality rates (clupeids such as sprat and herring). • We are mindful that new evidence may come to light through the examination and associated processes. NE reserves the right to take into account best available evidence in our advice when it becomes available. <u>Twaite Shad</u> The following statement are made in the application documents: **SPP100:** *"Given the distance of SZC from the spawning rivers in mainland Europe and the likelihood of population mixing during feeding in the marine environment it is not logical to associate all the fish impinged at Sizewell to a single river system."* **SPP103 2.2 Twaite Shad:** "*The twaite shad caught at Sizewell range from >1 yr old juveniles to sexually mature adults that are probably a part of the North Sea mixed population widely dispersed across feeding grounds…Sizewell C is expected to impinge fish from different European rivers on a pro-rata basis according to their abundance and it is therefore considered highly unlikely that there would be a significant effect on the population in any given river."*		

			Due to lack of information on behaviour at sea, for example any genetic studies using shad sampled at sea (majority of shads caught in spawning locations) there is no evidence to either confirm or refute this assumption. However, this assumption is not consistent with a precautionary HRA approach. Jolly *et al* (2012) have stated: "*In particular, samples from Looe bay and Hastings-Sizewell exhibited the strongest genetic divergence. While this suggests that movement within the marine environment is limited, the lack of significant genetic differences between the [twaite shad] populations of the Solway Firth and River Tywi also suggests that some migration could occur over spatial scales as great as 300 km*". Given this indication of variable movements within marine environment, it is equally illogical to assume equal mixing across multiple North Sea sub-populations. **SPP100 section 3.1 population estimation.** Natural England welcomes additional data on twaite shad provided by SPP100 and updates to the HRA Addendum. However, we disagree with the method used to estimate Twaite Shad populations from the Scheldt and Elbe river systems; in our view the use of averaging and scaling factors risks grossly overestimating the population size, so consequently misjudging the risks from entrapment. For example, the Elbe population estimate is formed from averaging of just 2 lower estuary stations (excluding locations higher up the estuary). This number was scaled up to 24hours, then 30days across the entire season. Finally, the number scaled to the full estuary width by multiplying by the estuary width at the sampling location divided by the anchor net width (8m). This approach runs counter to established understanding and observation of twaite shad runs: there is not a continuous, evenly distributed stream of fish maintained uniformly over the estuary, and remaining constant over 24hour cycles for the entirety of the season. Some limitations and caveats are discussed (such as the coverage of the net, and the spawning condition of fish caught) but critical limitations and uncertainties of this approach are not addressed. Overall, on the basis of		

			information presented, we advise that this method is not suitable for HRA purposes. The conclusions of the HRA addendum and SPP100 are founded upon a likely over estimation of twaite shad population combined with some unevidenced, general assumptions, for example of fish behaviour at sea. Overall Natural England advises that the methodology is not suitably precautionary for HRA purposes, and therefore insufficient evidence has been provided to allow us to advise on the likelihood that impacts from entrapment at SCZ will adversely impact the integrity of the Natura 2000 network/ SAC's in which this Annex 2 species is designated. <u>Allis Shad</u> Natural England welcome the inclusion of the Tamar population of Allis shad into LSE screening. <u>Migratory Fishes</u> Overall, the applicant has identified direct losses to several migratory fish species. In particular, the average losses of adults per annum* of river lamprey (215), European eel (223), twaite shad (1,067), and smelt (5,653) for the multi-decadal lifetime of the project are stark when compared to the conservation status of these species. Natural England advises that any further mitigation measures to further reduce mortalities of these protected species, and the prey upon which they rely, should be pursued. <u>Fish as prey for HRA bird species</u> We welcome the addition of a localised effects assessment in SPP103 Chapter 3. The simple model (recognised by EDF) aims to explore the potential for small scale depletion of fish in the locality, natural variation, and from there the probability of SZC significantly reducing the prey availability of SPA species within their foraging range. The assumptions and limitations of the model are clearly displayed and noted. In terms of direct losses to rare/vulnerable fish species (e.g.: twaite shad, smelt, European eel, and at-risk commercial species) this model does not add much additional information.		

			SPP103 (pg 44): This report states *"The scale of local depletion of prey resources is well within the bounds of natural variability , which predator/prey relationships are adapted to."* Seabirds are generally long-lived, and individuals tend to have a high number of reproductive chances. It is acknowledged that seabirds may respond to natural variability in prey resource, e.g. 'switch' to target another prey species, or even breed/overwinter at another location. However, the depletion of prey (fish) in this instance is more akin to the impact of a continuous and unrestricted commercial fishery i.e. the prey resource is being depleted constantly, and the impact of that depletion is cumulative. Therefore, rather than "natural variability" in prey resource that may lead to poor breeding success or over winter survival of seabirds in some years, this depletion of prey could impact seabirds year on year. Anecdotal evidence from tern colonies often points to low foraging success as a driver of seasonal breeding failures, with this in turn usually being attributed to poor recruitment of local fish stocks. If the depletion of prey (fish) locally (by impingement and entrainment) causes a baseline shift, to a situation where the 'normal' fish stock is represented by the current 'low' end of natural variability in prey resource, the remaining fishery might be insufficient to support the designated populations of breeding or overwintering seabirds, or allow for their recovery where required. It is unclear if "opportunistic feeding opportunities" will be available to seabirds. If moribund fish are returned at the surface or near surface waters (<1.5m deep), then they are highly likely to be utilised by gulls. However, terns will discard any deceased fish captured, so this resource will not be available to those species regardless of its location. If moribund fish are available as a food source to gulls there may be an increased risk of exposure to chemical discharges, both from the fish themselves (ingestion) and possibly increased time spent in the area of the chemical plume, assuming this is where moribund fish are expelled. <u>Update to Baseline Conditions – Marine birds</u>		

			No additional useful information appears to have been gathered with respect to seabirds. This is partially due to a lack of terns in the survey areas but somewhat exacerbated by an unsuitable survey method being employed. Despite erratic breeding of low numbers of sandwich tern and little tern at the relevant SPA sites, these species remain qualifying features. The conservation objective is therefore to restore the populations of these species. It is accepted that it has only been possible to collect relatively limited information on terns due to their general absence. However, some consideration should be given to any impacts arising resulting from e.g. changes to habitat or prey availability i.e. is the prospect of restoration of breeding terns likely to be negatively impacted? <u>Scale of Assessment</u> Natural England's view is that the best available evidence summarising this ongoing scientific debate regarding appropriate scales of assessment for cooling water intake impacts on fishes is found within the ongoing public enquiry in the Hinkley Point C project. In this case NE strongly support the approach taken by EA (letter dated 28/04/2021 NE ref 313466) in their HRA (link) and as detailed in their supporting TB011 (link). While recognising the myriad of differences between the projects, not least the different environments of Sizewell Bay compared to Bridgewater within Severn Estuary, we hold that in both instances the applicants exclusive use of ICES management units does not utilise best available evidence, and so risks underestimation of the fish entrapment impact. There is evidence in support of local population or subpopulation structure within a number of the species assessed. Despite Natural England flagging this with the applicant throughout our engagement, most fish mortality impacts continue to be contextualised against large ICES SSB as a proxy for population estimates. Because of this, Natural England advises that the best available evidence has not been used in assessing the impacts of SZC and we therefore cannot support or disagree with the estimates around fish entrapment and conclusions based on these estimates. Natural England acknowledges the significant detail and technical nature of the calculations provided by EDF England. However, we maintain that the degree of uncertainty contained within the assessment risks adverse environmental outcomes. Henderson and Seaby (2000) identify a number of ways that the abstraction for cooling water can negatively impact a fish community and ecosystem, and conclude that "*the deterioration in measure of ecosystem health, such as species richness, or trophic complexity, can be quite gradual and*		

			irregular and take many years to recognise… The trend is easily lost in random variation caused by events such as exceptionally cold or warm spells or lost within other man-made changes such as eutrophication or acidification". The Applicant's statement that "*Fish mortality due to impingement at SZC can be considered as a form of fish harvesting*" (TR406 Impingement predictions Rev07, 4.10, pg 46) is an imperfect comparison. Unlike fisheries, SZC lacks the capacity for adaptation if sustainable harvesting levels are exceeded, or if the wider population crashes due to other external factors. SZC is uncontrolled, unmanaged harvesting at a constant rate over the lifetime of the project. Therefore, due to the long-term operational duration of the intakes, the potential impacts and uncertainty around impacts on Sizewell Bay, and the improved evidence base around ecosystem functioning and services informing the UK's evolving environmental policy, Natural England continues to stress the importance of maximising opportunities to reduce fish mortality at every stage of this project. For further detail on the use of ICES management units as a population baseline, see **Issue 22, Part II**		
31	**ECOLOGY:** Impacts on internationally designated sites ▪ Alde-Ore Estuary SPA ▪ Alde-Ore Estuary Ramsar site ▪ The Humber Estuary SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site	Impacts from the thermal plume and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** The thermal plume for the outfall may be above the 2/3 ºC threshold uplift criteria for SAC and SPAs and WFD criteria. The thermal plume may cause avoidance of the area by designated species or their prey items. The thermal plume may also form a barrier to migration for some fish species. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 31 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** Natural England do not have any comment to provide beyond that submitted in our Relevant Representations which we reiterate at this point.	TBC	

	▪ Outer Thames Estuary SPA				
32	**ECOLOGY:** Impacts on internationally designated sites ▪ Alde-Ore Estuary SPA ▪ Alde-Ore Estuary Ramsar site ▪ The Humber Estuary SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site ▪ Outer Thames Estuary SPA	Impacts from the Combined Drainage Outfall (CDO) and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** The Combined Drainage Outfall from the site will be used during the construction phase for the dewatering of the site, all brown water/ sewage, any hydrazine testing and all Tunnel Boring muds will be discharged via the CDO. The discharge from the CDO will be managed in accordance with the WDA Construction and Operation permits. There may be significant water quality impacts on the plume which may impact upon designated sites and species. The Applicant currently proposes to leave the CDO in place during the operational phase, but not use it as a discharge point. The increase in hard surface area may mean that the infrastructure is above the threshold criteria for Non-Native Invasive Species. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 32 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** Natural England do not have any comment to provide beyond that submitted in our Relevant Representations which we reiterate at this point.	TBC	
33	**ECOLOGY:** Impacts on internationally designated sites ▪ Alde-Ore Estuary SPA ▪ Alde-Ore Estuary Ramsar site	Impacts from the chemical plume and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features.	**<u>Executive Summary</u>** The chemical plume associated with the outfall exceeds EQS or PNEC for Bromoform. Water quality effects may have direct and indirect effects on designated sites and species, as well as indirectly though impacts to prey species. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 33 of Natural England's Relevant Representation [RR-0878].**	TBC	

	▪ The Humber Estuary SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site ▪ Outer Thames Estuary SPA	**(C) and (O)**	**<u>Further comments on the DCO application, June 2021</u>** ***Further information required*** The HRA addendum does not consider any direct risks to seabirds arising from chemical discharges. These chemicals are toxic, with exposure known to be highly injurious to humans. This was raised in Natural England's Relevant Representations (i.e. the loss of foraging habitat for seabirds through sea sterilization has been considered, but direct impacts have not). It is noted that terns have been observed to show no apparent avoidance of the thermal and chemical plumes associated with discharges from Sizewell B, although there is limited data and no comparison is drawn with a pre-construction baseline. Furthermore, a lack of avoidance of these areas does not imply a lack of impact arising from their use but does confirm that the impact pathway through direct contact and ingestion of contaminated prey should be considered. Information is required on the potential risks to the relevant breeding and wintering seabird populations arising from: ▪ Direct physical contact with the chemical outfall plume waters ▪ Ingestion of prey contaminated by chemical discharges ▪ Ingestion of stunned or moribund prey (fish), and levels of chemical contamination of these items ▪ Risks arising from repeated long-term exposure to discharged chemicals ▪ Potential for bioaccumulation of discharged chemicals		
34	**ECOLOGY:** Impacts on internationally designated sites ▪ Alde-Ore Estuary SPA	Impacts from chlorination and subsequent ecological effects on internationally designated sites (SACs, SPAs	**<u>Executive Summary</u>** The Applicant proposes to chlorinate the system, after the drum screens, to reduce biofouling. Chlorination will be seasonal when water temperatures are above 10 ºC with spot chlorination at other times. Chlorination may have water quality impacts to designated sites and species directly and indirectly though impacts to prey species.	TBC	

	▪ Alde-Ore Estuary Ramsar site ▪ The Humber Estuary SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site ▪ Outer Thames Estuary SPA	and Ramsar sites) and their notified features. **(C) and (O)**	**For further detailed comment containing the context and background of this issue, please see Part II, Issue 34 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further information required*** The HRA addendum does not consider any direct risks to seabirds arising from chemical discharges. These chemicals are toxic, with exposure known to be highly injurious to humans. This was raised in Natural England's Relevant Representations (i.e. the loss of foraging habitat for seabirds through sea sterilization has been considered, but direct impacts have not). It is noted that terns have been observed to show no apparent avoidance of the thermal and chemical plumes associated with discharges from Sizewell B, although there is limited data and no comparison is drawn with a pre-construction baseline. Furthermore, a lack of avoidance of these areas does not imply a lack of impact arising from their use but does confirm that the impact pathway through direct contact and ingestion of contaminated prey should be considered. Information is required on the potential risks to the relevant breeding and wintering seabird populations arising from: ▪ Direct physical contact with the chemical outfall plume waters ▪ Ingestion of prey contaminated by chemical discharges ▪ Ingestion of stunned or moribund prey (fish), and levels of chemical contamination of these items ▪ Risks arising from repeated long-term exposure to discharged chemicals ▪ Potential for bioaccumulation of discharged chemicals		

35	**ECOLOGY:** Impacts on internationally designated sites ▪ Alde-Ore Estuary SPA ▪ Alde-Ore Estuary Ramsar site ▪ The Humber Estuary SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site ▪ Outer Thames Estuary SPA	Impacts from hydrazine and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** The Hydrazine plume may be above EQS or PNEC and may have water quality impacts to designated sites and species directly and indirectly through prey species. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 35 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further information required*** The HRA addendum does not consider any direct risks to seabirds arising from chemical discharges. These chemicals are toxic, with exposure known to be highly injurious to humans. This was raised in Natural England's Relevant Representations (i.e. the loss of foraging habitat for seabirds through sea sterilization has been considered, but direct impacts have not). It is noted that terns have been observed to show no apparent avoidance of the thermal and chemical plumes associated with discharges from Sizewell B, although there is limited data and no comparison is drawn with a pre-construction baseline. Furthermore, a lack of avoidance of these areas does not imply a lack of impact arising from their use but does confirm that the impact pathway through direct contact and ingestion of contaminated prey should be considered. Information is required on the potential risks to the relevant breeding and wintering seabird populations arising from: ▪ Direct physical contact with the chemical outfall plume waters ▪ Ingestion of prey contaminated by chemical discharges ▪ Ingestion of stunned or moribund prey (fish), and levels of chemical contamination of these items ▪ Risks arising from repeated long-term exposure to discharged chemicals	TBC	

			▪ Potential for bioaccumulation of discharged chemicals		
36	**ECOLOGY:** Impacts on internationally designated sites ▪ Alde-Ore Estuary SPA ▪ Alde-Ore Estuary Ramsar site ▪ The Humber Estuary SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site ▪ Outer Thames Estuary SPA	Impacts from drilling mud and bentonite break out and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** The Applicant proposes to use Tunnel Boring Machines to install the intake and outfall pipelines. During the tunnelling process drilling muds including bentonite are frequently used. Through previous experiences with NSIPs utilising Horizontal Directional Drilling, bentonite break outs have the potential to cause significant damage to sensitive coastal habitats. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 36 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** Natural England reiterates our comments made in our Relevant Representations. We note the designation of Bentonite under the Oslo Paris Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) as 'posing little or no risk to the environment'. However, we highlight that bentonite break outs and frack outs have occurred at other coastal sites where HDD has been used and have caused damage to sensitive sites. We maintain that this impact pathway be considered a likely significant effect.	TBC	
37	**ECOLOGY:** Impacts on protected species ▪ Bats ▪ Natterjack toads ▪ Otters ▪ Reptiles	Protected species' mitigation and compensation for MDS impacts **(C) and (O)**	**<u>Executive Summary</u>** Protected species licences are required from Natural England for any development activity which carries the risk of significant disturbance or injury to the relevant species, which may be significantly impacted by the development proposals. . **For further detailed comment containing the context and background of this issue, please see Part II, Issue 37 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>**	TBC	

	▪ Water voles ▪ Badgers ▪ Deptford Pink ▪ Breeding birds		***Further Information Required*** Further to our previous advice Natural England would reiterate the best course of action for the progression of this issue would be to for the applicant to submit draft protected species licence applications to Natural England for review. If agreed Natural England may provide LoNIs to ensure the ExA has the required certainty in this regard. Further engagement on this issue will therefore be undertaken as part of the licensing process. Natural England reiterates the advice in regard to CIEEM guidance on the lifespan of ecological reports. Whilst we understand that the applicant will be submitting these draft protected species licence applications in due course (timescales for each respective species to be confirmed) these remain outstanding at this time. We will not be providing any further detailed advice on non-licensable species where they are not a notified feature of protected site for which Natural England is the statutory consultee.		
38	**ECOLOGY:** Impacts on nationally designated sites: ▪ Alde-Ore Estuary SSSI ▪ Leiston-Aldeburgh SSSI ▪ Minsmere – Walberswick Heath and Marshes SSSI	Impacts from noise, light and visual disturbance from a number of the MDS project elements, and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** A large proportion of the proposed works within the MDS are in close proximity to a number of sensitive designated sites which are either wholly or in part notified for mobile species such as birds (terrestrial and marine species, breeding and non-breeding). The project therefore presents the potential for noise, visual and light disturbance impacts to these species (and their prey species where relevant) during both construction and operational phases of the project. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 38 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required*** See our comments under issue 27 above with regards terrestrial bird species which also broadly apply here with regards breeding and non-breeding SSSI bird features.		

39	**ECOLOGY:** Impacts on nationally designated sites: ▪ Minsmere – Walberswick Heath and Marshes SSSI ▪ Sizewell Marshes SSSI	Impacts from changes to coastal processes/ geomorphology arising from a number of the MDS project elements (e.g. hCDF, BLF) and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(O)**	**<u>Executive Summary</u>** The stretch of coast alongside the proposed main development site is important for habitats, species and geomorphology at international, national and local level. It supports a number of shoreline features that are typical of Suffolk and East Anglia but which are rare in UK and Europe, and often under pressure from a range of human activities including coastal development. Potential indirect effects extend beyond the immediate foreshore. The Minsmere Valley, part of the Minsmere to Walberswick protected area (SAC/SPA and SSSI) is for all intents and purposes a low-lying coastal wetland, buffered from the sea by the shingle beach and ridges, and impacted by predicted future sea level rise and frequency and intensity of storm surge breaching and over-topping. The integrity of the foreshore habitats in turn helps conserve the wetland habitats in the valley behind, building resilience and time to plan future adaptation. Any potential effects of the project on the geomorphology and hydrodynamic processes which effect the alignment of the coast, need to be thoroughly and properly understood and assessed. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 39 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required*** See our comments under issue 28 above which also broadly apply here with regards SSSI features at risk through this impact pathway.	TBC	
40	**ECOLOGY:** Impacts on nationally designated sites: ▪ Alde-Ore Estuary SSSI ▪ Leiston-Aldeburgh SSSI	Impacts from changes/ increases in recreational disturbance arising from the MDS project elements (accommodation campus and temporary caravan site on	**<u>Executive Summary</u>** The proposed development is likely to change the way designated sites in the area are used by people for recreation, both during construction and operation. Such changes are likely to be driven by the new population of workers within the Sizewell area (7900 at peak) who will likely use designated sites for recreation to some degree, and the displacement of local people who currently use the development site and surrounding area (e.g. Sizewell Beach) to other locations for recreation, including these nearby sensitive designated sites. Recreational activities such as walking, dog walking, cycling/mountain biking, etc. can negatively impact on the designated site features (species and habitats) through	TBC	

	▪ Minsmere – Walberswick Heath and Marshes SSSI	the LEEIE), and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	noise disturbance to species, trampling of nests and vegetation, increased fire risk, enrichment of habitats etc.. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 40 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** See our comments under issue 29 above which also broadly apply here with regards SSSI features at risk through this impact pathway.		
41	**ECOLOGY:** Impacts on nationally designated sites: ▪ Alde-Ore Estuary SSSI	Impacts from intakes and outfalls and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** The Intakes and Outfalls may have potential water quality impacts upon designated sites and species, either directly through the presence of the infrastructure itself and the chemical thermal plume or indirectly through food webs and associated displacement of prey species and bioaccumulation. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 41 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** See our comments under issue 30 above which also broadly apply here with regards SSSI features at risk through this impact pathway.	TBC	
42	**ECOLOGY:** Impacts on nationally designated sites: ▪ Alde-Ore Estuary SSSI	Impacts from the thermal plume and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** The thermal plume for the outfall may be above the 2/3 ºC threshold uplift criteria for SAC and SPAs and WFD criteria. The thermal plume may cause avoidance of the area by designated species or their prey items. The thermal plume may also form a barrier to migration for some fish species. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 42 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>**	TBC	

			See our comments under issue 31 above which also broadly apply here with regards SSSI features at risk through this impact pathway.		
43	**ECOLOGY:** Impacts on nationally designated sites: ▪ Alde-Ore Estuary SSSI	Impacts from the Combined Drainage Outfall (CDO) and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** The Combined Drainage Outfall from the site will be used during the construction phase for the dewatering of the site, all brown water/ sewage, any hydrazine testing and all Tunnel Boring muds will be discharged via the CDO. The discharge from the CDO will be managed in accordance with the WDA Construction and Operation permits. There may be significant water quality impacts on the plume which may impact upon designated sites and species. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 43 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** See our comments under issue 32 above which also broadly apply here with regards SSSI features at risk through this impact pathway.	TBC	
44	**ECOLOGY:** Impacts on nationally designated sites: ▪ Alde-Ore Estuary SSSI	Impacts from the chemical plume and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** The chemical plume associated with the outfall exceeds EQS or PNEC for Bromoform. Water quality effects may have direct and indirect effects on designated sites and species, and indirectly though impacts to prey species. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 44 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** See our comments under issue 33 above which also broadly apply here with regards SSSI features at risk through this impact pathway.	TBC	

45	**ECOLOGY:** Impacts on nationally designated sites: ▪ Alde-Ore Estuary SSSI	Impacts from chlorination and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** The Applicant proposes to chlorinate the system, after the drum screens, to reduce biofouling. Chlorination will be seasonal when water temperatures are above 10 ºC with spot chlorination at other times. Chlorination may have water quality impacts to designated sites and species directly and indirectly though impacts to prey species. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 45 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** See our comments under issue 34 above which also broadly apply here with regards SSSI features at risk through this impact pathway.	TBC	
46	**ECOLOGY:** Impacts on nationally designated sites: ▪ Alde-Ore Estuary SSSI	Impacts from hydrazine and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	**<u>Executive Summary</u>** The Hydrazine plume may be above EQS or PNEC and may have water quality impacts to designated sites and species directly and indirectly through prey species. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 46 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** See our comments under issue 35 above which also broadly apply here with regards SSSI features at risk through this impact pathway.	TBC	
47	**ECOLOGY:** Impacts on nationally designated sites: ▪ Alde-Ore Estuary SSSI	Impacts from drilling mud and bentonite break out and subsequent ecological effects on nationally designated sites	**<u>Executive Summary</u>** The Applicant proposes to use Tunnel Boring Machines to install the intake and outfall pipelines. During the tunnelling process drilling muds including bentonite are frequently used. Through previous experiences with NSIPs utilising Horizontal Directional Drilling, bentonite break outs have the potential to cause significant damage to sensitive coastal habitats.	TBC	

		(SSSIs) and their notified features. **(C) and (O)**	**For further detailed comment containing the context and background of this issue, please see Part II, Issue 47 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** See our comments under issue 36 above which also broadly apply here with regards SSSI features at risk through this impact pathway.		
48	**ECOLOGY:** Impacts on nationally designated sites: ▪ Sizewell Marshes SSSI	Permanent direct habitat loss of the following SSSI features to the main platform and SSSI crossing: ▪ Tall herb fen (reedbed) ▪ Lowland ditch systems **(C)**	**<u>Executive Summary</u>** Two of the habitats for which Sizewell Marshes is in part notified as being of national significance are its tall herb fen (reedbed) and lowland ditch systems. The works for the construction of the main power station platform and SSSI crossing as proposed will lead to some the permanent loss of these habitats. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 48 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required*** Natural England notes and welcomes the design change to a hybrid bridge with embankment SSSI crossing which presents an improvement compared to the previously proposed embankment with culvert in terms of ecological impacts, including to the SSSI where there would be reduced direct loss of habitat. **Consideration of alternative designs of the SSSI crossing** However, our position remains as outlined above that project proposals should clearly follow the avoidance-mitigation-compensation hierarchy in terms of impacts to high value ecological receptors of national importance such as the SSSI and include consideration of less damaging alternatives where available, as per section 4.4. and paragraph 5.3.7 of NPS EN-1. While the applicant has improved the design for the SSSI crossing, we reiterate our previous advice that there remain potentially less damaging options for its design, including that of a three span bridge which was one of several designs initially proposed at pre-application.	TBC	

			Advice on the current proposals Should the hybrid bridge with embankment design for the SSSI crossing be considered justifiable against possible alternatives, Natural England is satisfied 'in principle' with the quantity and quality of tall herb fen (reedbed) and lowland ditch systems created as compensation at Aldhurst Farm. We welcome that the areas of habitats to be lost (reflecting the new SSSI crossing design) vs. the areas to created have now been quantified within the application documents, and that these exceed the agreed minimum compensation ratios. We also welcome that these compensatory habitats are now in place and functioning ecologically in advance of any loss occurring, in order that the extent of these nationally important habitats is maintained throughout the lifetime of the project should it be consented. **Advice on connectivity between Aldhurst Farm (SSSI compensation site) and Sizewell Marshes SSSI (from where the habitats to be compensated for are being lost)** It is important that the new compensatory habitats at Aldhurst Farm are as well connected as possible to Sizewell Marshes SSSI both in terms of hydrology and ecology. While welcome additional measures added to the ES addendum in the form of otter fencing and a new mammal culvert, our advice remains that replacement of the existing culvert at Lover's Lane is likely to be the optimal solution in this regard and to date the applicant has not provided sufficient evidence to justify that its replacement is not possible. **Conclusion** In light of the above, we do not consider that adequate justification for progressing with the current design options of both the SSSI crossing and existing culvert replacement at Lover's Lane have been provided which remain significant omissions to be addressed. Should these be considered justifiable against possible alternatives, then we are satisfied 'in principle' with the quantity and quality of tall herb fen (reedbed) and lowland ditch systems created as compensation at Aldhurst Farm but advise that connectivity could be further improved.		

49	**ECOLOGY:** Impacts on nationally designated sites: ▪ Sizewell Marshes SSSI	Permanent direct habitat loss of the following SSSI feature to the main platform and SSSI crossing: ▪ Fen meadow **(C)**	**<u>Executive Summary</u>** One of the habitats for which Sizewell Marshes is in part notified as being of national significance is its fen meadow. The works for the construction of the main power station platform and SSSI crossing as proposed will lead to the permanent loss of an area of this habitat type. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 49 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required*** Natural England notes and welcomes the design change to a hybrid bridge with embankment SSSI crossing which presents an improvement compared to the previously proposed embankment with culvert in terms of ecological impacts, including to the SSSI where there would be reduced direct loss of habitat. **Consideration of alternative designs of the SSSI crossing** However, our position remains as outlined above that project proposals should clearly follow the avoidance-mitigation-compensation hierarchy in terms of impacts to high value ecological receptors of national importance such as the SSSI and include consideration of less damaging alternatives where available, as per section 4.4. and paragraph 5.3.7 of NPS EN-1. While the applicant has improved the design for the SSSI crossing, we reiterate our previous advice that there remain potentially less damaging options for its design, including that of a three span bridge which was one of several designs initially proposed at pre-application. Progressing with a design option which goes against this principle of 'least direct SSSI land take' is contradictory the protection afforded to SSSIs in England under the Wildlife and Countryside Act 1981 (as amended) to minimise damage the special interest of the site. **In light of the above, we do not consider that adequate justification for progressing with this design option has yet been provided. This is therefore a significant omission which needs to be addressed.** **Advice on the current proposals** We welcome the submission of the Fen Meadow Strategy by the applicant since our Relevant Representations (Doc Ref. 6.14) where it is recognised that the fen meadow habitat within Sizewell Marshes SSSI is of National/High importance	TBC	

			(para 3.1.4). It is also acknowledged that the conclusion reached in the ES that there would be no significant effect on this SSSI habitat is subject to the Fen Meadow Strategy being successfully delivered (para 3.1.3). It should be noted that the applicant has been aware of the need to deliver the SSSI fen meadow habitat compensation since 2013 where our advice on the Stage 1 pre-application consultation stated that 'Part of Sizewell Marshes SSSI will be lost to the development…for which we understand replacement habitat is being sought by EDF Energy' (paragraph 4.3, ii) and that 'As a general principle, we advise that the area of replacement habitat should be greater than the area of habitat affected due to the inherent risk of creating habitat of same quality, quality and distinctiveness. Habitat creation should be established in advance of habitat loss which requires early securing of suitable land for habitat creation' (comment under 2.4.8). Having discussed this further with the applicant through focussed meetings and workshops, our advice on the Stage 4 pre-application consultation (2019) was 'We advise that the extent of compensatory habitat required is 9x that which would be destroyed by the development; this is considered a suitable multiplier given the complexity of habitat type to be lost, the risk and uncertainty involved in the habitat restoration being successful and the time to fully functioning habitat…We understand that EDF Energy are currently undertaking further detailed feasibility studies for these compensation sites. Once these studies have been completed, we would be keen to provide further advice at the earliest opportunity' (Natural England comment reference 8). Contrary to our pre-application advice, a sufficient amount of compensatory fen meadow habitat was not proposed by the applicant within the DCO application as submitted (May 2020) and we raised this omission within our Relevant Representations (RR-EN010012, September 2020). Through the applicant's Proposed Changes application, an additional site (Pakenham) has now been proposed which, in addition to the Benhall and Halesworth sites, could potentially provide the full required amount of compensatory habitat (minimum of 4.5ha). However, we are unable to advise as to whether or not this is likely to be successfully delivered until we have been able to review the detailed site feasibility studies for all three sites (Benhall, Halesworth and Pakenham). We understand that the applicant proposes 'a 'Fen Meadow Plan' be prepared in accordance with this Fen Meadow Strategy and be subject to a DCO Requirement'. If this is the document which will contain the detailed site feasibility studies, then we advise that this should be provided now and not left to		

			a requirement given the importance of that information in determining significance of impacts to a nationally important SSSI. **This is therefore a significant omission which needs to be addressed through the submission of further information**. As highlighted above under issue 14, we also advise that the proposed Sizewell Marshes SSSI fen meadow compensation works at Pakenham should be fully considered in the ES in terms of potential impacts (hydrological and wider) to nearby Pakenham Meadows SSSI and its interest features. It should also be noted that the proposed Sizewell Marshes SSSI fen meadow compensation works at Benhall are upstream of the Snape Wetland RSPB reserve which was provided as SPA wetland habitat compensation for habitat predicted to be lost through implementation of a Shoreline Management Plan. Impacts to this site should also therefore be considered through the relevant impact assessments which have not yet been provided. In terms of the contingency measures to be put in place should the compensatory fen meadow habitat creation attempts fail, we advise that potential compensation sites further afield (i.e. not restricted to Suffolk) should be investigated. The SSSI habitat to be lost is important at a national level and, if necessary, the compensation options should therefore be explored at that scale to ensure the overall amount of this habitat type is not reduced nationally. It is very disappointing that this compensatory habitat will not be in place and functioning ecologically in advance of any loss occurring, as has been accepted by the Applicant as a principle at Aldhurst Farm with respect to SSSI reedbed and ditch habitats which would be lost (see our comments under issue 49 above). As a result, even if the proposed compensation approach is eventually agreed between all parties, the extent of this nationally important habitat will not be maintained throughout the lifetime of the project should it be consented, and we draw the Examining Authority's attention to this point.		
50	**ECOLOGY:** Impacts on nationally designated sites: ▪ Sizewell Marshes SSSI	Permanent direct loss of habitat (wet woodland) which supports the following SSSI feature to the main platform and SSSI crossing: ▪ Invertebrate assemblage	**<u>Executive Summary</u>** Sizewell Marshes is in part notified as being of national significance for its invertebrate assemblage. The works for the construction of the main power station platform and SSSI crossing as proposed will lead to the permanent loss of 3.06ha of wet woodland. Whilst the wet woodland itself is not a notified feature of the SSSI, it is part of the SSSI site fabric and supports the invertebrate assemblage which is a notified feature; this is in part due to the braided nature of the ditches and open sediment where it passes through the alder woodland and this will be impacted by the proposals, including the re-routing of the Sizewell Drain. Compensation for the loss of this habitat must therefore be provided.	TBC	

		(C)	**For further detailed comment containing the context and background of this issue, please see Part II, Issue 50 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required*** Natural England notes and welcomes the design change to a hybrid bridge with embankment SSSI crossing which presents an improvement compared to the previously proposed embankment with culvert in terms of ecological impacts, including to the SSSI where there would be reduced direct loss of habitat. **Consideration of alternative designs of the SSSI crossing** However, our position remains as outlined above that project proposals should clearly follow the avoidance-mitigation-compensation hierarchy in terms of impacts to high value ecological receptors of national importance such as the SSSI and include consideration of less damaging alternatives where available, as per section 4.4. and paragraph 5.3.7 of NPS EN-1. While the applicant has improved the design for the SSSI crossing, we reiterate our previous advice that there remain potentially less damaging options for its design, including that of a three span bridge which was one of several designs initially proposed at pre-application. Progressing with a design option which goes against this principle of 'least direct SSSI land take' is contradictory the protection afforded to SSSIs in England under the Wildlife and Countryside Act 1981 (as amended) to minimise damage the special interest of the site. **In light of the above, we do not consider that adequate justification for progressing with this design option has yet been provided. This is therefore a significant omission which needs to be addressed.** **Advice on the current proposals** Should the hybrid bridge with embankment design for the SSSI crossing be considered justifiable against possible alternatives, we advise that the design should be optimised to allow sufficient light penetration for invertebrate dispersal while retaining the positive aspects of the design change in terms of hydrology and reduced land take. We understand that further information on this is to be provided by the applicant during the examination which will advise on in due course. As outlined above, contrary to our pre-application advice, a sufficient amount of compensatory wet woodland habitat was not proposed by the applicant within		

			the DCO application as submitted (May 2020) and we raised this omission within our Relevant Representations (RR-EN010012, September 2020). We have continued to engage with the applicant on this issue since the submission of our Relevant Representations to feed into the development of their SSSI Wet Woodland compensation strategy which we welcome. We understand that the applicant is in the process of updating this strategy in accordance with our advice and look forward to providing further advice once it has been submitted. This issue therefore remains outstanding at this time. It is very disappointing that this compensatory habitat will not be in place and functioning ecologically in advance of any loss occurring as has been accepted by the Applicant as a principle at Aldhurst Farm with respect to SSSI reedbed and ditch habitats which would be lost (see our comments under issue 49 above). As a result, even if the proposed compensation approach is eventually agreed between all parties, the extent of this habitat which supports the nationally important invertebrate assemblage will not be maintained throughout the lifetime of the project should it be consented, and we draw the Examining Authority's attention to this point.		
51	**ECOLOGY:** Impacts on nationally designated sites: ▪ Sizewell Marshes SSSI	Potential for temporary losses from the main platform and SSSI crossing to SSSI habitats and species (see issue refs 48 – 50 above) to become permanent **(C)**	**<u>Executive Summary</u>** There is potential for some of the temporary land take from the SSSI to become permanent which would be additional to losses outlined in issue references 45-47 above. Full detail must therefore be provided on the plans to restore these areas upon completion of the temporary works to ensure that this does not occur. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 51 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required*** We have continued to engage with the applicant on this issue since the submission of our Relevant Representations to feed into the development of their Terrestrial Ecology Monitoring and Mitigation Plan.	TBC	

			We understand that the applicant is in the process of updating this strategy in accordance with our advice and look forward to providing further advice once it has been submitted. This issue therefore remains outstanding at this time.		
ASSOCIATED DEVELOPMENT SITE – Two Village Bypass (A12)					
52	**ECOLOGY:** Impacts on protected species ▪ Bats ▪ Badgers ▪ Otters ▪ Water voles	Protected species' mitigation and compensation for Two Village Bypass impacts **(C) and (O)**	**<u>Executive Summary</u>** Protected species licences are required from Natural England for any development activity which carries the risk of significant disturbance or injury to the relevant species, which may be significantly impacted by the development proposals. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 52 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required*** Further to our previous advice Natural England would reiterate the best course of action for the progression of this issue would be to for the applicant to submit draft protected species licence applications to Natural England for review. If agreed Natural England may provide LoNIs to ensure the ExA has the required certainty in this regard. Further engagement on this issue will therefore be undertaken as part of the licensing process. Natural England reiterates the advice in regard to CIEEM guidance on the lifespan of ecological reports. Whilst we understand that the applicant will be submitting these draft protected species licence applications in due course (timescales for each respective species to be confirmed) these remain outstanding at this time.	TBC	
53	**ECOLOGY:** **D**amage to ancient woodland: ▪ Foxburrow Wood, Palant's Grove and Pond Wood	Impacts from the routing of the road on these woodlands **(C) and (O)**	**<u>Executive Summary</u>** Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. Any proposals (MDS and AD sites) within close proximity to ancient woodlands must consider potential impacts to them in line with the avoidance-mitigation-compensation hierarchy in terms of: • **Direct loss:** as a first principle, direct loss should be avoided.	TBC	

			• **Damage:** damage to ancient woodland should also be avoided. The Natural England/Forestry Commission Ancient Woodland Standing Advice advises a minimum buffer of 15 meters between development and any ancient woodland. However, the advice also says that the size of the buffer should be suitable for the scale, type and impacts of the development and that a wider buffer may be suitable. The minimum 15 meter buffer is to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, a larger buffer zone is likely to be needed e.g. to avoid the effect of air pollution from development that results in a significant increase in traffic. • **Fragmentation:** fragmentation of ancient woodland which would reduce the ecological connectivity between them should be avoided. This can negatively impact on species movement and create/increase edge effects. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 53 of Natural England's Relevant Representation [RR-0878].** **Further comments on the DCO application, June 2021** The minimal buffer zone at the north-west corner of Foxburrow Wood which will immediately grade into a 4.5m road cutting is the greatest concern for reasons of direct tree root damage. We welcome the proposed presence of an on-site arboriculturist during these works, however, it is if utmost importance that no veteran trees are affected in this regard. Given the general lack of information given regarding ancient and veteran trees, we cannot currently rule this out as a possibility. The close proximity of root protection areas to the cutting raises the concern of ecohydrological impacts on the trees and evidence that there will not be impacts in this regard needs to be provided. Given that the minimal 15m buffer with the closest part of Foxburrow Wood can only address localised root protection issues, we advise that clear evidence needs to be provided that no other impacts would require a wider buffer, such as air pollution from increased traffic. We note that protective fencing will be used to mitigate construction impacts where site works are immediately adjacent to ancient woodland. **We do not consider that this issue has yet been addressed by the Applicant in sufficient detail and we are seeking key information in this regard.**		

ASSOCIATED DEVELOPMENT SITE – Yoxford roundabout (A12)					
54	**ECOLOGY:** Impacts on protected species • Bats • Breeding birds	Protected species' mitigation and compensation for Yoxford roundabout impacts **(C) and (O)**	**Executive Summary** Protected species licences are required from Natural England for any development activity which carries the risk of significant disturbance or injury to the relevant species, which may be significantly impacted by the development proposals. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 54 of Natural England's Relevant Representation [RR-0878].** **Further comments on the DCO application, June 2021** ***Further Information Required*** Further to our previous advice Natural England would reiterate the best course of action for the progression of this issue would be to for the applicant to submit draft protected species licence applications to Natural England for review. If agreed Natural England may provide LoNIs to ensure the ExA has the required certainty in this regard. Further engagement on this issue will therefore be undertaken as part of the licensing process. Natural England reiterates the advice in regard to CIEEM guidance on the lifespan of ecological reports. Whilst we understand that the applicant will be submitting these draft protected species licence applications in due course (timescales for each respective species to be confirmed) these remain outstanding at this time.	TBC	
ASSOCIATED DEVELOPMENT SITE – Sizewell Link Road (B1122)					
55	**ECOLOGY:** Impacts on protected species • Bats • GCN • Water voles	Protected species' mitigation and compensation for SLR impacts **(C) and (O)**	**Executive Summary** Protected species licences are required from Natural England for any development activity which carries the risk of significant disturbance or injury to the relevant species, which may be significantly impacted by the development proposals. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 55 of Natural England's Relevant Representation [RR-0878].**	TBC	

			<u>Further comments on the DCO application, June 2021</u> ***Further Information Required*** Further to our previous advice Natural England would reiterate the best course of action for the progression of this issue would be to for the applicant to submit draft protected species licence applications to Natural England for review. If agreed Natural England may provide LoNIs to ensure the ExA has the required certainty in this regard. Further engagement on this issue will therefore be undertaken as part of the licensing process. Natural England reiterates the advice in regard to CIEEM guidance on the lifespan of ecological reports. Whilst we understand that the applicant will be submitting these draft protected species licence applications in due course (timescales for each respective species to be confirmed) these remain outstanding at this time.		
ASSOCIATED DEVELOPMENT SITE – Theberton Bypass (B1122)					
56	**ECOLOGY:** Impacts on protected species • Bats • GCN • Water voles	Protected species' mitigation and compensation for Theberton Bypass impacts **(C) and (O)**	**<u>Executive Summary</u>** Protected species licences are required from Natural England for any development activity which carries the risk of significant disturbance or injury to the relevant species, which may be significantly impacted by the development proposals. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 56 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required*** Further to our previous advice Natural England would reiterate the best course of action for the progression of this issue would be to for the applicant to submit draft protected species licence applications to Natural England for review. If agreed Natural England may provide LoNIs to ensure the ExA has the required certainty in this regard. Further engagement on this issue will therefore be	TBC	

			undertaken as part of the licensing process. Natural England reiterates the advice in regard to CIEEM guidance on the lifespan of ecological reports. Whilst we understand that the applicant will be submitting these draft protected species licence applications in due course (timescales for each respective species to be confirmed) these remain outstanding at this time.		
ASSOCIATED DEVELOPMENT SITE – Wickham Market Park and Ride (southern)					
57	**ECOLOGY:** Impacts on protected species • Bats • Badgers • Reptiles • Breeding birds	Protected species' mitigation and compensation for Wickham Market Park and Ride impacts **(C) and (O)**	**<u>Executive Summary</u>** Protected species licences are required from Natural England for any development activity which carries the risk of significant disturbance or injury to the relevant species, which may be significantly impacted by the development proposals. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 57 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required*** Further to our previous advice Natural England would reiterate the best course of action for the progression of this issue would be to for the applicant to submit draft protected species licence applications to Natural England for review. If agreed Natural England may provide LoNIs to ensure the ExA has the required certainty in this regard. Further engagement on this issue will therefore be undertaken as part of the licensing process. Natural England reiterates the advice in regard to CIEEM guidance on the lifespan of ecological reports. Whilst we understand that the applicant will be submitting these draft protected species licence applications in due course (timescales for each respective species to be confirmed) these remain outstanding at this time. **We will not be providing any further detailed advice on non-licensable species where they are not a notified feature of protected site for which Natural England is the statutory consultee.**	TBC	

ASSOCIATED DEVELOPMENT SITE – Darsham Park and Ride (northern)					
58	**ECOLOGY:** Impacts on protected species • Bats • GCN	Protected species' mitigation and compensation for Darsham Park and Ride impacts **(C) and (O)**	**<u>Executive Summary</u>** Protected species licences are required from Natural England for any development activity which carries the risk of significant disturbance or injury to the relevant species, which may be significantly impacted by the development proposals. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 58 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required*** Further to our previous advice Natural England would reiterate the best course of action for the progression of this issue would be to for the applicant to submit draft protected species licence applications to Natural England for review. If agreed Natural England may provide LoNIs to ensure the ExA has the required certainty in this regard. Further engagement on this issue will therefore be undertaken as part of the licensing process. Natural England reiterates the advice in regard to CIEEM guidance on the lifespan of ecological reports. Whilst we understand that the applicant will be submitting these draft protected species licence applications in due course (timescales for each respective species to be confirmed) these remain outstanding at this time.	TBC	
ASSOCIATED DEVELOPMENT SITE – Other Highway Improvements					
59	**ECOLOGY:** Impacts on protected species • GCN	Protected species' mitigation and compensation for Other Highway Improvement impacts **(C) and (O)**	**<u>Executive Summary</u>** Protected species licences are required from Natural England for any development activity which carries the risk of significant disturbance or injury to the relevant species, which may be significantly impacted by the development proposals. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 59 of Natural England's Relevant Representation [RR-0878].**	TBC	

			<u>Further comments on the DCO application, June 2021</u> ***Further Information Required*** Further to our previous advice Natural England would reiterate the best course of action for the progression of this issue would be to for the applicant to submit draft protected species licence applications to Natural England for review. If agreed Natural England may provide LoNIs to ensure the ExA has the required certainty in this regard. Further engagement on this issue will therefore be undertaken as part of the licensing process. Natural England reiterates the advice in regard to CIEEM guidance on the lifespan of ecological reports. Whilst we understand that the applicant will be submitting these draft protected species licence applications in due course (timescales for each respective species to be confirmed) these remain outstanding at this time.		
ASSOCIATED DEVELOPMENT SITE – Green Rail Route					
60	**ECOLOGY:** Impacts on protected species • Bats • GCN	Protected species' mitigation and compensation for Green Rail Route impacts **(C) and (O)**	**<u>Executive Summary</u>** Protected species licences are required from Natural England for any development activity which carries the risk of significant disturbance or injury to the relevant species, which may be significantly impacted by the development proposals. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 60 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required*** Further to our previous advice Natural England would reiterate the best course of action for the progression of this issue would be to for the applicant to submit draft protected species licence applications to Natural England for review. If agreed Natural England may provide LoNIs to ensure the ExA has the required certainty in this regard. Further engagement on this issue will therefore be undertaken as part of the licensing process. Natural England reiterates the advice in regard to CIEEM guidance on the lifespan of ecological reports.	TBC	

			Whilst we understand that the applicant will be submitting these draft protected species licence applications in due course (timescales for each respective species to be confirmed) these remain outstanding at this time.		
ASSOCIATED DEVELOPMENT SITE – Other Rail Improvements					
61	**ECOLOGY:** Impacts on protected species • Bats • GCN • Badgers • Breeding birds	Protected species' mitigation and compensation for other rail improvement impacts **(C) and (O)**	**<u>Executive Summary</u>** Protected species licences are required from Natural England for any development activity which carries the risk of significant disturbance or injury to the relevant species, which may be significantly impacted by the development proposals. **For further detailed comment containing the context and background of this issue, please see Part II, Issue 61 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required*** Further to our previous advice Natural England would reiterate the best course of action for the progression of this issue would be to for the applicant to submit draft protected species licence applications to Natural England for review. If agreed Natural England may provide LoNIs to ensure the ExA has the required certainty in this regard. Further engagement on this issue will therefore be undertaken as part of the licensing process. Natural England reiterates the advice in regard to CIEEM guidance on the lifespan of ecological reports. Whilst we understand that the applicant will be submitting these draft protected species licence applications in due course (timescales for each respective species to be confirmed) these remain outstanding at this time.	TBC	
ASSOCIATED DEVELOPMENT SITE – Freight Management Facility					
62	**ECOLOGY:** Impacts on protected species • Bats	Protected species' mitigation and compensation for freight	**<u>Executive Summary</u>** Protected species licences are required from Natural England for any development activity which carries the risk of significant disturbance or injury to the relevant species, which may be significantly impacted by the development proposals.	TBC	

	• Breeding birds	management facility impacts **(C) and (O)**	**For further detailed comment containing the context and background of this issue, please see Part II, Issue 62 of Natural England's Relevant Representation [RR-0878].** **<u>Further comments on the DCO application, June 2021</u>** ***Further Information Required*** Further to our previous advice Natural England would reiterate the best course of action for the progression of this issue would be to for the applicant to submit draft protected species licence applications to Natural England for review. If agreed Natural England may provide LoNIs to ensure the ExA has the required certainty in this regard. Further engagement on this issue will therefore be undertaken as part of the licensing process. Natural England reiterates the advice in regard to CIEEM guidance on the lifespan of ecological reports. Whilst we understand that the applicant will be submitting these draft protected species licence applications in due course (timescales for each respective species to be confirmed) these remain outstanding at this time.		

Part III: Natural England's detailed comments on:

- 3.1Ad3 SZC Third Draft Development Consent Order Addendum – Proposed Changes to the Draft Development Consent Order (DCO)
- 3.1 SZC Draft Development Consent Order – Revision 3

Page	DCO ref	Natural England's Comment	Risk
Third Draft Development Consent Order Addendum			
9	Article 75A	Natural England does not support the inclusion of an appeal procedure or the appeals schedule 20A. Similar schedules were submitted under the Vanguard and Hornsea 3 OWF applications and rejected by the Secretary of State following concerns raised by the MMO. Natural England supports the position on appeals the MMO presented during the Vanguard and Hornsea Project 3 examinations.	
10	Article 82(6)	Natural England supports the change made here regarding arbitration on MMO decisions. However, would note that in the Hornsea Project 3 and Vanguard decisions the Secretary of State for Business, Energy and Industrial Strategy (BEIS) also chose to exclude themselves from the arbitration provision.	
13	Requirement 4	Natural England notes the changes. However, the wording in the document implies that the changes will allow further control over the protection of terrestrial ecology. However, requirement 4 is for monitoring plans. For clarity, Natural England note that monitoring does not, on its own, allow for control of impacts only observation and record of impacts.	
18	Requirement 14B	Natural England notes the new requirement which states vegetation clearance within the Sizewell marshes SSSI must not commence until a wet woodland strategy has been approved by East Suffolk council in consultation with ourselves. While the wording appears appropriate, however there does not seem to be any timing secured prior to provision of any plans. We advise such requirements often have a restriction of 4 or 6 months prior to commencement of works.	
26	Schedule 20A	See point on Article 75A.	