The Sizewell C Project

9.10.7 Statement of Common Ground - Natural England

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CONTENTS

CHAPTER 1 - INTRODUCTION 1

1.1 Status of the SOCG 1

1.2 Purpose of this document 1

1.3 Parties to this Statement of Common Ground 2

1.4 Structure of this Statement of Common Ground 3

CHAPTER 2 – SUMMARY TABLE 4

CHAPTER 1 - INTRODUCTION

1.1 Status of the SOCG

1.1.1 This Statement of Common Ground ('SoCG') has been prepared in respect of the application for a development consent order ('DCO') to the Planning Inspectorate ('PINS') under the Planning Act 2008 ('the Application') for the proposed Sizewell C Project.

1.1.2 Version 02 of this SoCG has been prepared by NNB Generation Company (SZC) Limited ('SZC Co.') as the Applicant and Natural England and agreed on 2nd June 2021 and is submitted to the Examining Authority at Deadline 8 of the Sizewell C examination.

1.1.3 This SoCG has evolved through a programme of engagement and series of versions which have been updated as discussions have progressed.

1.1.4 This SoCG remains as draft and will be updated at the next suitable deadline.

1.2 Purpose of this document

1.2.1 The purpose of this SoCG is to set out the position of the parties, so far as they relate to the matters of concern ("uncommon ground") and agreement ("common ground") for Natural England, arising from the application for development consent for the construction and operation of the Sizewell C nuclear power station and together with the proposed associated development (hereafter referred to as 'the Sizewell C Project').

1.2.2 This SoCG has been prepared in accordance with the 'Guidance for the examination of applications for development consent' published in March 2015 by the Department of Communities and Local Government (hereafter referred to as 'DCLG guidance').

1.2.3 Paragraph 58 of the DCLG Guidance states:

1.2.4 "A statement of common ground is a written statement prepared jointly by the applicant and another party or parties, setting out any matters on which they agree. As well as identifying matters which are not in real dispute, it is also useful if a statement identifies those areas where agreement has not been reached. The statement should include references to show where those

matters are dealt with in the written representations or other documentary evidence"

1.2.5 The aim of this SoCG is therefore to inform the Examining Authority and provide a clear position of the state and extent of discussions and agreement between SZC Co. and Natural England on matters relating to the Sizewell C Project.

1.2.6 This SoCG does not seek to replicate information which is available elsewhere within the DCO application documents. All documents are available on the Planning Inspectorate website https://infrastructure.planninginspectorate.gov.uk/projects/eastern/the-sizewell-c-project/).

1.3 Parties to this Statement of Common Ground

1.3.1 SZC Co. has submitted an application for development consent to build and operate a new nuclear power station, Sizewell C, along with the associated development required to enable construction and operation.

1.3.2 Natural England is the government's advisor on the natural environment. They work in partnership with local government, developers, local communities and other key stakeholders to ensure every opportunity is taken through the planning process to protect, and wherever possible enhance, the natural environment. Natural England is a statutory consultee for environmental assessment processes (including Environmental Impact Assessment) and many development proposals including those of Nationally Significant Infrastructure Projects.

1.3.3 The statutory purpose of Natural England is set out in the Natural Environment and Rural Communities Act 2006, which states that:

1.3.4 "Natural England's general 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".

1.3.5 Section 2 (2) of the Act outlines the five general purposes of Natural England, which includes;

- promoting nature conservation and protecting biodiversity;

- conserving and enhancing the landscape;
- securing the provision and improvement of facilities for the study, understanding and enjoyment of the natural environment;
- promoting access to the countryside and open spaces and encouraging open air recreation; and
- contributing in other ways to social and economic well-being through management of the natural environment.

1.3.6 Collectively SZC Co. and Natural England are referred to as 'the parties'.

1.3.7 Natural England and SZC Co. meeting bi-weekly to discuss matters relevant to this SoCG as well as other matters.

1.4 Structure of this Statement of Common Ground

1.4.1 Chapter 2 provides schedules which detail the matters of concern to Natural England and SZC Co.'s response. It also identifies where discussions are ongoing.

1.4.2 **Appendix A** provides a summary of engagement undertaken to establish this SoCG. This will be provided in the next iteration.

CHAPTER 2 – SUMMARY TABLE

Statement of Common Ground (SoCG) between EDF Energy and Natural England

A	B	C	D	E	F	G	H	I
Natural England key issue reference	**Topic**	**Issue summary** **(C) Impacts during construction** **(O) Impacts during operation**	**Natural England commentary on the issue**	**Natural England comment on the mechanism for securing mitigation/ compensation measures in the DCO**	**Natural England risk rating at Relevant Reps (Sep 2020)**	**Natural England risk rating at Written Reps (May 2021)**	**EDF commentary on the issue**	**EDF comment on the mechanism for securing mitigation/ compensation measures in the DCO**
Overarching issues for the project (MDS and AD sites)								
1	**ECOLOGY:** Project-wide impacts on internationally designated sites ▪ 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	Groundwater and surface water 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>Context and background</u>** Eco-hydrological modelling (groundwater modelling and hydro-ecological conceptual modelling (HCM)) is needed to inform the impact assessment to these sites through this pathway. It is essential in properly assessing the risk of any changes to water levels from the proposals to the habitats and species for which these sites are notified, and to inform any necessary mitigation/ compensation. This should incorporate the AD sites as well as the MDS to properly assess these impacts from the project as a whole at the catchment level; wetland habitat biodiversity, functionality and sustainability is dependent not just on the hydrology within, for example, protected site boundaries, but the hydrology of the catchment that the wetland is sited within. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** <u>MDS impacts:</u> We advise that there is unlikely to be significant hydrological impacts on the following sites:	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.			Agreed	

	▪ Minsmere-Walberswick Ramsar site ▪ Stour and Orwell Estuaries SPA ▪ Stour and Orwell Estuaries Ramsar site		▪ Minsmere to Walberswick Heath and Marshes SAC ▪ Minsmere- Walberswick SPA ▪ Minsmere- Walberswick Ramsar site Drawdown during the construction phase is limited to the very southern edge of the site adjacent to the platform and is temporary in nature. The drainage strategy and code of construction practice will mitigate against issues of increased discharge or run-off from the MDS during construction and operation. This also applies to the Sizewell Link Road. However, there is an important assumption here that the Drainage Strategy and Code of Construction Practice will be rigorously implemented. We recommend that these mitigation measures are secured in the requirements of the DCO. The SSSI crossing option proposed is the least desirable in term of land take, habitat loss and fragmentation. However, provided the culvert and channel are appropriately designed, this will not result in significant hydrological impacts on Minsmere-Walberswick Changes in flows to the Leiston Drain could potentially be altered by construction and operation phases (dewatering and groundwater movement impediment respectively) and by manipulations of water level within Sizewell Marshes. However, impacts on water levels in the Leiston Drain (determined largely by the Minsmere Sluice) are unlikely to be significant. Changes in flows in Leiston Drain will not be of an order that could challenge the receiving capacity of the Minsmere Sluice South Chamber. Consequently, knock on effects for other parts of the Minsmere drainage system would be very unlikely. <u>AD site impacts:</u> We advise that there is unlikely to be significant hydrological impacts on the following sites: ▪ Alde-Ore and Butley Estuaries SAC ▪ Alde-Ore Estuary SPA ▪ Alde-Ore Estuary Ramsar site ▪ Stour and Orwell Estuaries SPA					

			▪ Stour and Orwell Estuaries Ramsar site No significant impacts hydrological impacts are anticipated for the International Sites listed above from the associated development Northern Park and Ride, Two Village Bypass, Sizewell Link Road, Yoxford Roundabout, Freight Handling Facility or rail works. These risks can be adequately mitigated through the provisions of Outline Drainage Strategy and Code of Construction Practice. However, **there is clearly a dependency that mitigation set out in the Outline Drainage Strategy and Code of Construction Practice will be rigorously implemented and maintained.** <u>Sustainable drainage systems</u> We welcome the commitment of providing Sustainable Drainage Systems (SuDS) into the development proposals, including through the water management zones (WMZs) to ensure that surface water run-off can be attenuated and, if required, treated prior to discharge to either watercourses or to the ground. It is important that these are adequately designed so that they do not overtop and take water and sediment down into the ditch/drain system of Sizewell Marshes and Minsmere. They should also be designed such that the hydrological functioning of any adjacent water-dependant habitats are maintained or enhanced. **<u>Further comments on the DCO application, May 2021</u>** No further comments				
2	**ECOLOGY:** Project-wide impacts on internationally designated sites ▪ Minsmere to Walberswick Heath and Marshes SAC ▪ Minsmere-Walberswick SPA	Foul water impacts from a number of project elements, and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar	**<u>Context and background</u>** We understand that the development will need a new foul water drainage network served by a dedicated sewage treatment plant in order to treat foul water arising from a number of sources (including the accommodation campus) before it is discharged to sea via a combined drainage outfall. Inadequate foul drainage arrangements could impact on these designated sites through waterborne pollution which could impact on habitats and species.	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.			Agreed	

	▪ Minsmere-Walberswick Ramsar site	sites) and their notified features. **(C) and (O)**	**<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further information required*** Foul water impacts from a number of project elements, and subsequent ecological effects on the SACs, SPAs and Ramsar sites and their notified features. Risks can be adequately mitigated through the provisions of the Outline Drainage Strategy and Code of Construction Practice. **There is clearly a dependency that mitigation set out in the Outline Drainage Strategy and Code of Construction Practice will be rigorously implemented and maintained.** **<u>Further comments on the DCO application, May 2021</u>** No further comments					
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>Context and background</u>** We understand that during the main construction phase, water demand is predicted to peak at approximately 4 Ml/dbetween 2.5Ml/d and 3.5Ml/d for a period of 20 months during tunnelling works and 2.5Ml/d and 3.5Ml/d for a period of 20 months during tunnelling works. Once the tunnelling works are complete forecast demand falls below 1.8Ml/d and then gradually decreases through the remainder of the construction period to around 0.5Ml/d. The demand during operation is expected to be significantly lower than that during construction, at approximately 0.5Ml/d. This needs be assessed in detail within the HRA (both from individual project elements, cumulatively with other project elements, cumulatively with other impact pathways (ground and surface water impacts (see issue ref 4), foul water impacts (see issue ref 5) and waterborne pollution impacts (see issue ref 7)) to properly assess such risks and inform any necessary mitigation or compensation measures. . An abstraction/ water use strategy, covering both the MDS and AD sites, which integrates any such measures is required.	**TBC**			Sizewell C's peak construction demand is estimated to be around 4 Ml/day and during the operational phase it would range between 2 Ml/day and 2.9 Ml/day depending upon whether both units are generating or one is in outage. With regard to potable water supply, a preferred scheme has been identified by Northumbrian Water Limited (Essex & Suffolk Water) to supply up to 4 Ml/day of potable water to Sizewell C from their Northern/Central Water Resource Zone. This is known as the Sizewell transfer main. This new main would involve the construction of approx. 30km of new mains and other associated infrastructure. A water Industry Environment Programme (WINEP) investigation is underway that will confirm what the sustainable abstraction would be in order to protect any local designated wetland sites. **June 2021 – Comments on Written Representations** SZC Co.'s assessment has identified 4 Ml/day as the peak demand for potable water for the Sizewell C Project during construction. Robust and reliable demand profiles for potable and non-potable water have been developed in SZC Co's assessment. This demand profile is included in, and underpins, the updated Water Supply Strategy for the	No further assessment required in respect of the Northumbrian Water Limited (Essex & Suffolk Water) proposals. ESW will consider the effects of their proposals within any relevant consent. A short HRA addendum was submitted to examination at Deadline 7 in respect of the desalination plant proposals.

	▪ ***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		We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008, working with the Environment Agency to provide complementary advice: • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraph 3.12); • Natural England's response to the Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019 (our ref: 272181, dated 29th March 2019, paragraph 4.5.35); We have further reiterated this advice through a number of pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. shadow HRA incomplete, abstraction/ water use strategy omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this were not therefore obtained before the application was submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further information required*** It is not clear that the concerns raised previously by Natural England have been addressed, in particular the sourcing of supply. This is pertinent given that the local Crag groundwater body is already at 'Poor Quantitative Status' i.e. is already over-abstracted. It is likely this is already having an impact e.g. on the discharge of groundwater from the Crag to headwater streams in the west of Sizewell Marshes				Sizewell C Project that is presently being finalised and is to be submitted at Deadline 5. This updated Water Supply Strategy will also take account of technical studies being carried out by Northumbrian Water Limited (NWL) to confirm the availability of a sustainable potable water supply from their Northern/Central Water Resource Zone, and the means of transfer and delivery of this supply to the Sizewell C Project (the proposed Sizewell Transfer Main). These studies are due to finish in June 2021 and willtherefore be available in time to inform the updated Water Supply Strategy. There would be no abstraction from the local Blyth Water Resource Zone. **September 2021** The programme for the delivery of the above proposals means that there will be a shortfall in the first few years of construction Sizewell C. This shortfall will be provided by a small desalination plant on site at Sizewell C, which is now formally included in the formal Sizewell C proposals. The potential impacts will be limited and no adverse effects on integrity are predicted on the European sites listed. An ES Addendum and a short HRA addendum were submitted to examination at Deadline 7. Discussions ongoing.	

			SSSI. Natural England has previously requested an abstraction/ water use strategy. This does not appear to have been addressed within the DCO documents as submitted and reviewed at this stage. **<u>Further comments on the DCO application, May 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 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 EDF Energy in sufficient detail and are still seeking key information in this regard. **August 2021** ***Further Information Required*** We understand that a revised water supply strategy will be submitted into the examination at deadline 7. Having seen a first draft of this document we have the following comments. We note that the SZC Water Supply Strategy has identified additional capacity within the Northern/Central Suffolk WRZ to supply the water required by this project. However, we hold concerns over the lack of information and detail within the strategy of how and where this water will be sourced from by the water company.				

			We would expect further information to be provided by the applicant and/or water company with definitive identification of sources of supply and the environmental implications of these to assess, understand and potentially mitigate the impacts this demand will have upon protected sites and the water environment within the Northern/Central WRZ. Similarly, we would expect a similar level of scrutiny on the impacts of utilising other sources of water supply as mentioned in the Water Strategy document. Without such evidence, Natural England is unable to advise on whether or not this key element of the project proposals may have impacts on wider European sites in the Northern/Central WRZ which are not currently listed in column B. Consideration should also be given to the impacts to wider European sites (again, some of which may not be listed in column B) from any pipeline works and other associated infrastructure required to get the water to the proposal site. The proposed desalination plant and any associated discharge presents a risk of highly saline water being discharged into coastal and marine habitats which may negatively impact species, habitats and environmental conditions. We would expect assessment of this risk and appropriate mitigation for this proposal. Additionally, we would welcome commitments to offset the carbon cost of the water supply within the project. We would expect the mitigation to make a positive contribution to the wider environmental objectives and provide benefits to support the delivery of targets within the Government's 25 Year Environment Plan, the upcoming Environment Bill, and Nature Recovery. For example, the right tree in the right place. We would hope the transfer of treated foul water via a pressurised pipeline would have sufficient measures in place for the containment of any potential leaks to prevent chlorinated water from entering the environment and to ensure the highest possible standards of water efficiency and water savings are utilised. We welcome the proposed storage of water during periods of low demand in the winter for the intended purpose of supply during high demand in the summer to alleviate pressure upon the water environment during this time.				

			We welcome the inclusion of water reduction and recycling measures for both potable and non-potable water. We would welcome greater ambition and commitments to reduce water consumption by the workforce, both on site and within accommodation, to well below national averages through the installation of water-efficient and water saving appliances, fixtures and fittings within offices and accommodation. The Northern/Central WRZ is subject to WINEP investigations with the conclusions then informing the Water Resource Management Plan process. The outcome of these investigations may be a determining factor on where the water will be sourced from. Thus, the availability of piped water from Essex & Suffolk Water is uncertain, with regards to timing, location, and quantity. In regard to the recent change consultation, it is disappointing for such a major change with potentially far reaching implications in terms of our remit to be introduced at this late stage within the Examination. This change has the potential to alter the existing environmental impact assessments and/or add to the potential impact pathways for a number of other outstanding issues that are we are currently advising on and which are covered in this SoCG. While the consultation document outlines a number of potential impacts arising from the change proposal and finds no significant effects requiring mitigation, we advise that further assessment and supporting documentation is required to confirm this, as set out in our response to the Applicant's Sizewell C Consultation on Proposed Changes (August 2021) (our ref: 363033, dated 25th August 2021) including on: • Additional air quality impacts on relevant internationally and nationally designated sites caused by increased Heavy Good Vehicle (HGV) movements; • Additional air quality impacts on relevant internationally and nationally designated sites caused by additional diesel generators; • Impacts of installation of pipes on the England Coast Path; • Impacts of installation/drilling of pipes, intakes and outfalls on relevant internationally and nationally designated sites; • Impacts from chlorine and other bio-fouling				

			treatments on relevant internationally and nationally designated sites; • Impacts of hypersaline water on relevant internationally and nationally designated sites; • Effects of dredging on relevant internationally and nationally designated sites; • Impacts of discharge into the marine environment on relevant internationally and nationally designated sites; • Additional landscape impacts to the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) associated with the construction and siting of a containerised desalination module; • Impacts from additional marine noise created by vessel traffic, dredging and drilling on relevant internationally and nationally designated sites; • Effect of intake and outfall headworks on coastal processes and any additional impacts to relevant internationally and nationally designated sites. • Impacts on designated sites from water abstraction for tankered water supply (which again may affect wider European sites that those listed in column B; we understand that the source of this supply is currently unknown) We would also like to draw your attention to previous work submitted by SZC Co in January 2021 which discounted desalination as an option for the following reasons: *"This option has been discounted in favour of alternative options, due to concerns with power consumption, sustainability, cost, and wastewater discharge. The desalination process is typically energy intensive, and the discharge of brine water as a result of desalination may not be suitable for discharge through the combined drainage outfall (CDO)."* (Table 1.2 in 6.14 Environmental Addendum Appendices, Chapter 2 Main Development Site, Appendix 2.2D. Water Supply Strategy, January 2021). Clearly there is potential for a number of impacts from the proposed change and it is therefore essential that these impacts are fully assessed (or revisited in the context of your previous concerns as highlighted in Table 1.2),and made available within the Examination as soon as possible so they can be examined fully.					

			We understand that the currently anticipated worst case is that the desalination plant would be in use for the entire construction phase, and advise that further extension into the operational phase would require further detailed assessment given the potential for the additional cumulative/in combination impacts this would present with regards to the operational infrastructure, in particular to the relevant internationally and nationally designated sites.					
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>Context and background</u>** Bearing in mind the close proximity of the proposed development to highly sensitive designated sites, a robust schedule of waterborne pollution prevention measures are required (oil separators and filters remove hydrocarbons etc.) to ensure that proposals to not lead to adverse effects in this regard. This should include all elements of the proposals but in particular the construction of the main power station platform, SSSI crossing, drain realignment, insertion of sheet piling and cut-off wall, de-watering operations, electricity supply cable route and wider built MDS and AD elements. It should also include the potential for acidic leachate reaching the designated sites as a result of backfilling any borrow pits. This needs be assessed in detail within the HRA (both from individual project elements, cumulatively with other project elements, cumulatively with other impact pathways (ground and surface water impacts (see issue ref 1), foul water impacts (see issue ref 2) and water use impacts (see issue ref 3)) to properly assess such risks and inform any necessary mitigation or compensation measures. A waterborne pollution prevention strategy, covering both the MDS and AD sites during construction and operation, which integrates any such measures is also required. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008, working with the Environment Agency to provide complementary advice: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for*	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.			Agreed. Robust pollution prevention measures to protect the water environment are included within the CoCP and through the provisions of the Outline Drainage Strategy. The measures within the CoCP are assumed within the assessment and no further assessment is proposed beyond that presented in the Shadow HRA. The Shadow HRA assesses the potential effects of water-borne pollution on the Minsmere-Walberswick SPA and Minsmere-Walberswick Ramsar site from all elements of the Sizewell C Project, including mitigation (Outline Drainage Strategy and Code of Construction Practice). To supplement the assessment reported in the Shadow HRA, further within-Project in-combination assessment has been undertaken within the sHRA addendum to support the conclusions drawn in the Shadow HRA. This further assessment provides additional analysis of the potential for the various pathways for effect on European sites to interact or combine. No adverse effects in integrity are identified. Of relevance to waterborne pollution, the pathways relevant to the assessment of potential in-combination effect are 'water quality effects – terrestrial environment' and 'alteration of local hydrology and hydrogeology'. For water quality effects, as noted above, it is expected that mitigation measures will avoid any significant effect on the European site. The predicted effect on groundwater is expected to be confined to a very small area of the site and is predicted to be a short-term and reversible effect (it is noted that Natural England comment on this effect in issue 1). Any potential effects due to these pathways are, therefore, very localised,	Robust pollution prevention measures to protect the water environment are included within the CoCP.

			Sizewell C Proposed Nuclear Development (our ref: 71859, dated 6th February 2013, paragraph 3.5); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraph 3.10); • Natural England's response to the Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019 (our ref: 272181, dated 29th March 2019, paragraphs 4.5.31 and 4.5.38 – 4.5.39, 4.6.2.16, 4.6.2.19, 4.6.7.3, 4.6.11.4 (MDS) and 4.7.1.3 (SLR), 4.8.1.3 (green rail route) and 4.8.3.2 (Theberton Bypass)); We have further reiterated this advice through a number of pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. shadow HRA incomplete, CoCP omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this were not therefore obtained before the application was submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further information required*** Whilst there are clearly pollution risks associated with a number of the project elements, it is reasonable to expect that these risks can be adequately mitigated through the provisions of the Outline Drainage Strategy and Code of Construction Practice. However, we would expect more detail to be included in relation to pollution prevention measures.				and small-scale or can be effectively mitigated and, consequently, there is to realistic potential for significant in-combination effects. No adverse effects in integrity are identified.	

			In particular we would welcome more specifics in relation to the CDO. Natural England cannot comment on the potential water quality issues and mitigation until the discharge permitting process has been completed and the impacts to WFD waterbodies assessed and considered within the HRA. We would expect all mitigation within the permit to be secured in the DCO. Borrow pits should be filled with material in line with Contaminated Land: Applications in Real Environments (CL:AIRE) and this recommendation should be included in the Code of Construction Practice and secured in the DCO **<u>Further comments on the DCO application, May 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.					
5	**ECOLOGY:** Project-wide impacts on internationally designated sites ▪ Alde-Ore and Butley Estuaries SAC ▪ Alde-Ore Estuary Ramsar site ▪ Minsmere to Walberswick Heath and Marshes SAC ▪ Minsmere-Walberswick Ramsar site	Airborne 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>Context and background</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. For those sites listed which are further from the MDS, there could potentially 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	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**			Robust measures to protect air quality are included within the CoCP and the Outline Dust Management Plan. These measures are assumed within the assessment and no further assessment is proposed beyond that presented in the Shadow HRA and the SHRA Addendum summarised below. Potential air quality effects are assessed in the Shadow HRA (noting that Staverton Park and the Thicks, Wantisden SAC was screened out due to distance of the qualifying habitat from the Sizewell C Project). To supplement the assessment reported in the Shadow HRA, further within-Project in-combination assessment has been undertaken within the sHRA addendum to support the conclusions drawn in the Shadow HRA. This further assessment provides additional analysis of the potential for the various pathways for effect on European sites to interact or combine.	Robust pollution prevention measures to protect air quality are included within the CoCP and the Outline Dust Management Plan.

			the structure and function of a designated or supporting habitat. Impacts from these impact pathways must be considered for the project alone and cumulatively (i.e. across MDS and AD sites project elements) and in combination with other plans and projects, MDS and AD sites to properly assess such risks and inform any necessary mitigation or compensation measures. Consistency with HRA case law (e.g. Wealden Judgement, Dutch Nitrogen case etc.) also needs to be ensured. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008, working with the Environment Agency to provide complementary advice: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, in Annex 2 (see comments under 4.7.15); • Natural England's response to the Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019 (our ref: 272181, dated 29th March 2019, paragraphs 4.5.52 – 4.5.54); We have further reiterated this advice through a number of pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. shadow HRA incomplete, Dust Management Plan, ES Chapter 12: Air quality and CoCP omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this were not therefore obtained before the application was				The potential effect of dust will be managed in line with the Outline Dust Management Plan, which is reflected in the mitigation reported in the Shadow HRA. With respect to operational combustion, the current system of nitrogen and acid critical loads assume decades of continuous exposure and, therefore, the interpretation of the air quality modelling can legitimately focus on the routine operation scenario rather than the commissioning scenario. If there is no continuous supply of elevated nitrogen, then over time (potentially a short period of time if elevated deposition rates have only been for a matter of months) nitrogen levels in the soil will deplete and the vegetation should recover. Taking the above into consideration, the routine operation scenario better reflects the long-term effect on vegetation and the long-term effect is the most relevant when nitrogen and acid deposition are being considered. For this scenario, the modelling assumed one generator run continuously through the year, indefinitely. However, routine testing is anticipated to be carried out for 60 hours per year for each of the 12 diesel generators, with an aggregated total of 720 operation hours per year. The assessment is therefore highly precautionary. With regard to nutrient nitrogen and acid deposition, although coastal vegetated sand dunes and heathland have been modelled, the former habitat is not a reason for SAC designation and the latter habitat is not present within the affected area. No further assessment is proposed or required. **June 2021 – Comments on Written Representations** To screen out a Process Contribution (PC) for any substance (i.e. to confirm that no further assessment is needed), the PC must meet both of the following criteria: • the short-term (daily) PC is less than 10% of the short-term environmental standard; and • the long-term (annual) PC is less than 1% of the long-term environmental standard.	

			submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further information required*** **Dust and Particulates** Dust and particulate matter falling onto plants can physically smother leaves affecting photosynthesis, respiration, transpiration and leaf temperature. There 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. To minimise and control dust we recommend the following mitigation measures; locate machinery and dust causing activities away from sensitive receptors, erect physical barriers such as screening around the site boundary, vehicle wheel washing, covering vehicle loads skips and stock piles using enclosed chutes and water is a dust suppressant. We welcome the commitment to producing and implementing an Air quality Management Plan. Required monitoring and mitigation should be included in this plan and secured through DCO requirements. **Combustion** Further information is required to determine the impact of increased acid deposition, particularly at Minsmere - Walberswick (and Sizewell Marshes SSSI). Whilst we understand that background levels have been identified as in exceedance of critical load at both sites, we suggest that the impact of additional increase in terms of species composition and impacts to interest features are considered in more detail. We understand that the modelling of combustion emission from diesel generators has predicted a likely significant effect				If the above requirements are not met, the predicted environmental concentration (PEC) (the PC plus the background concentration of the substance already present in the environment) needs to be compared to the environmental standard. The PEC does not need to be calculated for short-term targets; but if the short-term PC exceeds the screening criteria, further detailed assessment is required. If the long-term PC is greater than 1% but the PEC is less than 70% of the long-term environmental standard, the emissions are considered to be insignificant and do not need to be assessed further. If the PEC is greater than 70% of the long-term environmental standard, further assessment is required. **Annual NOx** For annual NOx, a conclusion of no adverse effect can be drawn because for all receptors either the PC is less than 1% of the Critical Level or the PEC is less than 100% of the Critical Level (noting that the 70% of the Critical Level threshold has no ecological significance and is simply a trigger for detailed dispersion modelling, which was undertaken as part of the air quality assessment that informed the Shadow HRA (and EIA)). **24-hour NOx** Critical Levels for air pollutants are not habitat specific (unlike Critical Loads) and have been defined to cover broad vegetation types (e.g. forest, arable, semi-natural). However, consideration of the European sites referred to by Natural England as requiring further information with respect to NOx is provided below. **Alde-Ore and Butley Estuaries SAC (all features) and Alde-Ore Estuary Ramsar site (all features)** For daily NOx at these European sites, a conclusion of no adverse effect can be drawn because for all receptors either the PC is less than 10% of the Critical Level (the threshold of insignificance) and/or the PEC is below the Critical Level.	

			to the interest features of Minsmere-Walberswick and Sizewell Marshes. It is explained that any potential change in nutrient nitrogen has the potential to impact 3% of the designated site resulting in a low magnitude of impact. Exceedance of these critical values for air pollutants may modify the chemical status of its substrate, accelerating or damaging plant growth, altering its vegetation structure and composition and causing the loss of sensitive typical species associated with it. We recommend that further consideration is given to the potential impacts to interest features and how nitrogen deposition may impact species composition and features of interest. **<u>Further comments on the DCO application, May 2021</u>** ***Further information required*** **Dust and particulates** 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. 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				**Staverton Park and the Thicks, Wantisden SAC (Old acidophilous oak woods with Quercus robur on sandy plains)** The Site Improvement Plan (SIP) for the Staverton Park and the Thicks, Wantisden SAC identified the impact of atmospheric nitrogen deposition as a pressure to the qualifying feature of the SAC. However, the SAC is located 17km from the main development site and does not have the potential to be affected by emissions from operational combustion (the screening distance detailed in the Environment Agency's risk assessment guidance is 10km for internationally designated sites). **Minsmere to Walberswick Heaths and Marshes SAC (European dry heaths)** As noted in the Shadow HRA Report, the European dry heaths qualifying feature is not present within the area of predicted exceedance of the daily Critical Level. It is for this reason (together with the highly conservative nature of the modelling scenario and the fact that longer term NOx concentrations have greater potential to affect vegetation than short-term exceedances) that the Shadow HRA Report concludes that there would not be an adverse effect on the integrity of the qualifying feature due to daily NOx exceedance of the Critical Level. **Minsmere-Walberswick Ramsar site (all features)** The qualifying features of the Ramsar site (as summarised in Natural England's Designated Sites View) are: • Mosaic of marine, freshwater, marshland and associated habitats.• Wetland invertebrate and plant assemblage. • Wetland breeding bird assemblage (associated with marshland and reedbeds). Natural England has not developed specific conservation advice for the Minsmere-Walberswick Ramsar site. Natural England's Designated Sites View notes that it considers the conservation advice packages for the overlapping European Marine Site designations are, in most cases, sufficient to support the management of the Ramsar interests.	

			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. **August 2021** We are in the process of reviewing the latest information which has been provided by the applicant at in Comments on the Written Representations at Deadline 3. However, we are also waiting to see updated assessments associated with proposed changes associated with a new water supply strategy and desalination plant. We are therefore unable to provide our updated position at this time but will use best endeavours to provide this as soon as we can.				In light of the above, reference has been made to the SIP for the Minsmere to Walberswick Heaths and Marshes. The SIP covers the Minsmere to Walberswick Heaths and Marshes SAC and the Minsmere-Walberswick SPA. The SIP does not make reference to NOx itself (i.e. direct toxicity) being a pressure or a threat; rather it refers to the impact of atmospheric nitrogen deposition, with the SPA qualifying features potentially affected by nitrogen deposition being breeding and non-breeding gadwall, shoveler and avocet, breeding nightjar, non-breeding white-fronted goose (noting that the Ramsar criteria only includes breeding wetland birds) and the SAC feature potentially affected being European dry heaths. Atmospheric nitrogen deposition is discussed separately below. It should be noted, moreover, that in most freshwater wetlands phosphorus is often the principal growth limiting nutrient rather than nitrogen. Phosphorus does not come from atmosphere and will not be contributed by the Sizewell C Project. The area of predicted exceedance of daily NOx Critical Level within the Ramsar site largely coincides with the southern part of unit 112 of the Minsmere-Walberswick Heaths and Marshes SSSI. Natural England's Designated Sites View describes the main habitat within unit 112 as supralittoral sediment and the unit is in favourable condition. The condition assessment further describes the habitat as a shingle beach backed by sand dune vegetation, comprising some mobile dune community of marram grass and fixed dune grassland behind. Shingle vegetation is reported as being sparse within the unit due to coastal process/erosion of the beach with limited annual species. As per paragraph 12.6.65 of Volume 2, Chapter 12 (Air Quality) of the ES [APP-212], it is reasonable to consider that the short-term (24 hour) mean for NOx is of less importance than the annual mean, as vegetation exposed to levels of NOx above the Critical Level will be more likely to recover from that exposure if the exceedance is for a short duration. Authors from the Centre for Ecology and Hydrology in a recent book on nitrogen, NOx concentrations and vegetation, states that "UN/ECE Working Group on	

							Effects strongly recommended the use of the annual mean value, as the long-term effects of NOx are thought to be more significant than the short term effects". In addition to the above, it is important to consider the number of exceedances as well as the degree to which the 24hr Critical Level will be exceeded. With regard to the exceedances in Table 1.9 of the Plants and Habitats Synthesis Report (Volume 2, Appendix 14B.1 of the ES [APP- 250] (a maximum PC of 405% of the daily mean Critical Level for receptor E2 (Minsmere)) calculations indicate that the daily mean NOx Critical Load would only be exceeded up to 8 times per year based on the worst-case meteorological data. Critical Levels for air pollutants are not habitat specific (unlike Critical Loads) and have been defined to cover broad vegetation types (e.g. forest, arable, semi-natural). The area of predicted exceedance of daily NOx Critical Level is very localised and, consequently, there is a limited pathway for effect on the Ramsar qualifying features (i.e. restricted to the extreme southern section of the Ramsar site). Given the nature of the daily NOx predicted exceedances (i.e. very infrequent exceedances under worst-case conditions), it is reasonable to conclude that the vegetation within the area of the predicted exceedance of the daily NOx Critical Level would not experience any negative effects as a consequence of short-term increased in NOx. With regard to the breeding wetland bird species of the Ramsar site, the core area of importance for these species is further north of the area of predicted exceedance of the daily Critical Level and, therefore, there is no potential for the populations of the breeding wetland bird species to be negatively affected due to potential effects on their supporting habitats. **i. Alde-Ore and Butley Estuaries SAC (all features) and Alde-Ore Estuary Ramsar site (all features)** The habitat types modelled within the Alde-Ore and Butley Estuaries SAC and Alde-Ore Estuary Ramsar site are predicted to experience increases in nitrogen deposition of less than 1% of the lower value of the Critical Load range	

							for that habitat. It is concluded that nitrogen deposition will have an insignificant effect on these European sites. **ii. Minsmere to Walberswick Heaths and Marshes SAC (European dry heaths)** With regard to the Minsmere to Walberswick Marshes SAC, the SIP for the SAC explicitly lists nitrogen deposition as a threat to the European dry heaths qualifying feature of the SAC. The European dry heaths qualifying feature, however, is not present within the area of concern (i.e. the area within the 0.1 kgN/ha/yr (1% of the Critical Load) contour line). It is for this reason that the Shadow HRA Report concludes that there would not be an adverse effect on the integrity of the qualifying feature due to nitrogen deposition. The same justification and conclusion can be drawn for acid deposition. **iii. Minsmere-Walberswick Ramsar site (all features)** As noted above, Natural England has not developed specific conservation advice for the Minsmere-Walberswick Ramsar site and, therefore, the SIP for the Minsmere to Walberswick Heaths and Marshes has been consulted. The SIP makes reference to atmospheric nitrogen deposition being a pressure or a threat to certain SPA qualifying features (some of which are Ramsar site features) and the European dry heaths feature of the SAC (which, as noted above, is not within the zone of potential impact of nitrogen or acid deposition). The area of predicted effect due to nitrogen deposition within the Ramsar site largely coincides with the southern part of unit 112 of the Minsmere- Walberswick Heaths and Marshes SSSI, which is primarily sand dune and sparsely vegetated shingle. The relevant Critical Load habitat class included in the air quality modelling is coastal stable dunes as this is the proxy Critical Load range provided on APIS for several littoral habitats including both sand dunes and coastal vegetated shingle. Note that in practice the lowest part of this range is highly precautionary because, as stated on APIS, in practice different types of sand dune and vegetated shingle may have sensitivities comparable to other habitats that have higher critical load ranges. The dose, however, is small (generally defined as less than 5%	

							of the Critical Load) and the total area of habitat affected by a dose of more than 0.08 µg/m3 (i.e. greater than imperceptible) is 2ha, which is only 5% of the approximately 43ha of vegetated sand dune in the underlying SSSI. In addition, the process contribution at this location is only just over the threshold of imperceptibility (1.6% of the Critical Load compared to an imperceptibility threshold of 1% of the Critical Load). With regard to acid deposition, the dose is small, with a process contribution that is only just over the threshold of imperceptibility (1.8% of the Critical Load). Moreover, APIS (http://www.apis.ac.uk/acid-deposition-dunesshingle-machair) states that "Soil acidification as a result of acid deposition has relatively little impact in UK dunes because sand dune soils are generally well-buffered, with the exception of the few acidic dune systems… The majority of dune systems in the UK are calcareous, well buffered and low in heavy metals so should be tolerant of acid deposition" and suggests that it is mainly the lower plants that may be affected. The SSSI citation does not indicate that lower plants are a significant part of the dune community in this area. Finally, the background deposition rate is so high that the additional dose due to the facility represents a change of only 1% (i.e. very slight difference). Although a small part (approximately 2ha) of a qualifying habitat within the Ramsar site would experience an increase in nitrogen and acid deposition above 1% of the lower value of the Critical Load range, the increase is just above the threshold of imperceptibility. The Ramsar site does not have an explicit 'restore' target for air quality effects (as is the case for SAC qualifying habitats). However, if such a target is assumed to apply for the Ramsar site, given the small part of the site affected and the precautionary nature of using the minimum part of the critical load range for stable dune grasslands as a reference threshold for the habitats, it can be concluded that the predicted effect would not compromise achievement of a 'restore' objective with respect to nitrogen and acid deposition and integrity of the Ramsar site would not be adversely affected. **September 2021**	

							Discussions ongoing.	
6	**ECOLOGY:** Project-wide impacts on internationally designated sites ▪ 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	Unintentional introduction or spread of invasive non-native species (INNS) 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>Context and background</u>** The proposals present a risk of unintentionally spreading INNS (via marine and terrestrial sources) to these sites which could have a detrimental effect their features through, for example, increased competition with habitats and species. This need be assessed in detail within the HRA to properly assess such risks and inform any necessary mitigation or compensation measures. Biosecurity control measures (e.g. within the CoCP) covering both the MDS and AD sites during construction and operation, are also required. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008, working with the Environment Agency to provide complementary advice: • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, in Annex 3 (see comments under 4.5.2); • Natural England's response to the Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019 (our ref: 272181, dated 29th March 2019, paragraph 4.5.55); We have further reiterated this advice through a number of pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. shadow HRA incomplete, CoCP omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this	The Code of Construction Practice must be rigorously implemented. We recommend that these mitigation measures are secured in the requirements of the DCO.			This matter is agreed This was not a potential effect pathway identified or agreed at the screening stage and has not therefore been assessed explicitly in the Shadow HRA. However, the Code of Construction Practice requires a biosecurity risk assessment to be undertaken to avoid potentially facilitating the spread of non-native species during construction. Given the inclusion of these measures in the CoCP, no further assessment is required. Given the securing mechanisms provided for the CoCP, Natural England has agreed that this matter is resolved.	Robust measures to prevent the introduction of INNS are included within the CoCP.

			were not therefore obtained before the application was submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further information required*** We advise that a non-native species management plan is created and submitted for Natural England for review. There are risks of introductions from non-native species with the development of the main site and associated infrastructure. The main development site is within close proximity to a number of protected sites and there is a risk of the introduction of non-native species and the potential to impact designated features of the sites. Further information would be required on the protocols in case the introduction of a non-native species is discovered, a full assessment of the potential impacts to any designated sites and a copy of the biosecurity risk assessments. Natural England would expect to be notified in the event of a non-native species being discovered within close proximity for a protected site, the applicant should also consider contacting other relevant parties such as the Environment Agency and the MMO dependant on what the non-native species is. **<u>Further comments on the DCO application, May 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	Physical interaction between species and project infrastructure from a number of project elements and	**<u>Context and background</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.	**TBC**			<u>Birds</u> It is acknowledged that this has raised before by NE and that it is not addressed in the HRA. EDF Energy has not identified a likely pathway for a material effect due to physical interaction (i.e. collisions) of birds with marine vessels or pylons and overground cables and no assessment has been undertaken.	No further assessment is proposed or required

	▪ Minsmere-Walberswick SPA ▪ Outer Thames Estuary SPA ▪ Southern North Sea SAC ▪ The Wash and North Norfolk Coast SAC	subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	Specific elements which may present particular risks include marine vessel activity, capital dredging, piling, and drilling works and pylons and associated over ground cables. This needs be assessed in detail within the HRA to properly assess such risks and inform any necessary mitigation measures. Collision avoidance measures covering both the MDS and AD sites during construction and operation, may be required. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008, working with the Environment Agency to provide complementary advice: • Natural England's response to the Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019 (our ref: 272181, dated 29th March 2019, paragraph 4.5.56); We have further reiterated this advice through a number of pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. shadow HRA incomplete) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this were not therefore obtained before the application was submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further information required*** This should be assessed for all notified species and prey species for these sites.				**June 2021 – Comments of Written Representations** In relation to SPAs, Natural England specify concerns for the Alde-Ore Estuary SPA, Minsmere-Walberswick SPA and Outer Thames Estuary SPA. The main element of concern that Natural England identify in relation to potential effects on the associated SPA bird populations is collision with new overhead powerlines. As stated in the Applicant's responses to Natural England's Relevant Representations, SZC Co. has not identified a likely pathway for a material effect due to collisions of birds with overhead powerlines. In relation to overhead powerlines, paragraph 14.12.15 of Volume 2, Chapter 14 (Terrestrial Ecology and Ornithology) of the ES [AS- 033] identifies that the development proposals require the repositioning of one existing overhead pylon and four new overhead gantries. This extent of change to the baseline situation is minimal in the context of the existing powerlines and cabling that are already in place within the complex and across the wider area and represents little potential for any additional effects on SPA bird populations. Furthermore, all new pylon and gantries would be located within the footprint of the main platform in areas that are likely to be avoided by birds because of the absence of suitable habitats in such locations and the presence of anthropogenic activities. The Natural England's comment also includes mention of collisions with marine vessels and infrastructure. Although no details are set out as to why Natural England consider this to represent a risk to SPA bird populations, it is assumed that they do (on the basis that they accept that there are no concerns in this regard for marine mammals and because they specify concerns in relation to the Outer Thames Estuary SPA, for which all qualifying features are marine bird species). The Applicant considers that there is no pathway to effect via collisions with marine vessels or infrastructure. Despite the high levels of marine vessel traffic and the extent of infrastructure occurring in many offshore areas of the UK (and elsewhere in the world) this is rarely identified to be an issue of concern for marine bird populations. The obvious	

			Harbour porpoise prey species would be lost in close proximity to intake tunnels and across the Greater Sizewell Bay, and harbour porpoise would have to move out of the area to feed. Conservation objectives for the sites include that the condition of supporting habitats and processes, and the availability of prey is maintained. As this will be a long term/permanent loss of foraging area within the SAC for the operational phase of the development Natural England advise that this would constitute an AEOI of this area of the SAC. NE advises that compensation for this loss of area be proposed. During construction and decommission prey species may be displaced due to works to the project infrastructure (e.g. dredging, vessels, CDO, FRR, hCDF, sCDF) and therefore red-throated diver may become displaced. As such, we advise that an LSE cannot be ruled out at this stage during construction, operation, or decommissioning. **<u>Further comments on the DCO application, May 2021</u>** ***Further information required*** **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. 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.				exception is in relation to collision risk with the rotating blades of turbines at offshore wind farms, but this is not comparable to the types of marine infrastructure which will be associated with the Sizewell C project (and it is also notable that collisions with the turbine bases in offshore wind farms is not a potential effect that is screened into the assessments for these developments). Evidence of notable levels of bird collisions with marine vessel traffic appears to be restricted to situations which are not typical of UK waters and involve species which are not associated with the SPAs of concern to the Sizewell C project (e.g. Merkel 2010). **September 2021** A briefing note on the potential for birds to collide with new overhead lines with Sizewell C was submitted to Examination at Deadline 6 and shared with Natural England. It is understood that this is under review by Natural England. <u>Marine mammals</u> • In relation to physical interaction between marine mammals and project infrastructure, a number of elements were assessed in the sHRA and updated in sHRA addendum as relevant, in relation to marine mammal species from designated sites, including: o Collision risk with vessels during construction, operation and decommissioning, which includes vessels associated with piling, dredging, deliveries, etc. o The risk of any physical or auditory injury as a result of the proposed piling and other underwater noise sources. o Potential for impingement, entrainment and entrapment of prey species. o There are no other potential physical interactions between marine mammals and project infrastructure, including any impingement of marine mammal species, or collision with project infrastructure. No further assessment is proposed in relation to marine mammals.	

			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 HRA and mitigation provided if necessary. We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail and we are still seeking key information in this regard. **Marine Mammals** Having reviewed the further information provided, Natural England have no further concerns regarding physical interaction between project infrastructure and marine mammals. **August 2021** We are in the process of reviewing the latest information which has been provided by the applicant at in Comments on the Written Submission to actions arising from ISH7 at Deadline 6 [REP6-002]. We are therefore unable to provide our updated position at this time but will use best endeavours to provide this as soon as we can. **Marine Ornithology** Natural England have no concerns regarding physical interaction between project infrastructure and marine birds. However, our concerns regarding displacement of overwintering Red-throated diver in the Outer Thames Estuary SPA remain, and are expanded on in Issue 27.				Discussions ongoing.	
8	**ECOLOGY:** Project-wide impacts on	Impediment to the management	**<u>Context and background</u>**	**TBC**			This matter is now agreed. SZC Co. will provide a written commitment to maintain access for the RSPB to continue management to the	SZC Co. have provided a written commitment to

	internationally designated sites ▪ Minsmere to Walberswick Heath and Marshes SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site	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)**	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.). There may also be similar risks to the wider sites listed as a result of the AD site proposals, in particular the proposed road and rail alterations This needs be assessed in detail within the HRA to properly assess such risks and inform any necessary mitigation or compensation measures. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008, working with the Environment Agency to provide complementary advice: • Natural England's response to the Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019 (our ref: 272181, dated 29th March 2019, paragraphs 4.7.3.2 and 4.8.2.2); We have further reiterated this advice through a number of pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this were not therefore obtained before the application was submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** Natural England reiterate the advice presented above and recommend that any aspects of the project that are likely to impede the management practices of designated sites should be assessed in detail within the HRA.				southern side of the Minsmere reserve. EDF commits to not impede the management practices required for the conservation of any European sites. This was not included as a pathway in the HRA screening matrices and was not identified by NE as an omission from the screening stage. **June 2021 – Comments on Written Representations** SZC Co. does not believe that there are any aspects of the proposed development that could lead to likely significant effects on European sites via this pathway. In relation to physical access for management, SZC Co. will provide a written commitment, including a plan, showing access routes to maintain access for the RSPB to continue management to the southern side of the Minsmere reserve (within the Minsmere-Walberswick SPA and Ramsar site and Minsmere to Walberswick Heaths and Marshes SAC) and also retained areas of Sizewell Marshes SSSI. SZC Co. commits not to impede the management practices required for the conservation of any European sites (or the retained areas of the Sizewell Marshes SSSI). SZC Co. will submit the above to the Examination and will share with stakeholders at Deadline 5. SZC Co. does not believe that the commitment referred to above constitutes mitigation that is intended to avoid or reduce an effect on European sites. The access route defined for southern side of the Minsmere reserve is the existing access route, lies outside the proposed order limits and will be unchanged. The commitment, therefore, will simply record and capture an aspect of construction planning. Groundwater management issues are dealt with under Issue 14, but increased water levels which might impede access are unlikely, since this is not predicted by modelling and noting the main concern of Natural England and other stakeholders is in relation to reductions in groundwater. August 2021	maintain access for the RSPB to continue management to the southern side of the Minsmere reserve and will formalize this with the RSPB in writing.

			Further comments on the DCO application, May 2021 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 below). 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 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. **August 2021** Having reviewed latest information which has been provided by the applicant at in Comments on the Written Submission to actions arising from ISH7 at Deadline 6 [REP6-002]. We are satisfied that if a form of words can be provided and agreed between the Applicant, RSPB and Natural England this issue can be agreed.				A statement and a plan demonstrating that the access to the southern side of the Minsmere reserve will not be compromised by the Sizewell C construction was provided to examination at Deadline 6 and shared with Natural England. The existing access route lies outside the proposed order limits. This is now an agreed matter.	
9	**ECOLOGY:** Project-wide impacts on internationally designated sites ▪ Alde-Ore and Butley Estuaries SAC	Cumulative and in-combination assessment of impacts and subsequent ecological effects on internationally designated sites	**Context and background** Natural England as a key SNCB on this issue has not been given the opportunity to review and provide advice on the applicant's final shadow HRA ahead of submission to ensure that, for those impact pathways to sites which have been correctly identified and included in the assessment, the conclusions are robust. This is in terms of impacts from the project alone (including consideration of different project	**TBC**			To supplement the assessment reported in the Shadow HRA, further within-Project in-combination assessment has been undertaken in the sHRA addendum to support the conclusions drawn in the Shadow HRA. This further assessment provides additional analysis of the potential for the various pathways for effect on European sites to interact or combine.	No further assessment is proposed or required

	▪ Alde-Ore Estuary SPA ▪ Alde-Ore Estuary Ramsar site ▪ Benacre to Easton Bavents SPA ▪ The Humber Estuary SAC ▪ Minsmere to Walberswick Heath and Marshes 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	(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)**	elements and impact pathways cumulatively) and in combination with other plans and projects. Some individual HRA topic areas have been discussed with Natural England through the applicant's pre-application engagement programme (e.g. hydrological impacts, recreational disturbance impacts, marsh harrier impacts etc.) in relation to specific elements of the project proposals but this has been far from exhaustive. Furthermore, none of these have specifically focussed on the cumulative or in combination assessment which is a crucial element of the HRA process. We consider these to be significant omissions which we have flagged a number of times throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.2, 4.12, 4.16); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.5 and 4.9); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, e.g. paragraphs 3.5 and 3.9.12); • Natural England's response to the *Sizewell C – Stage 4 Consultation: 18th July 2019 to 27th September 2019* (our ref: 289446, dated 26th September 2019, comment 6); We have further reiterated this advice throughout pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. shadow HRA incomplete) which we again				In summary, the outcome of the alone or in-combination assessment for each European site in the sHRA addendum is unchanged from that reported in the Shadow HRA for one or more of the following reasons: • The predicted effects are sufficiently localised in nature that different pathways do not combine to cause a larger effect on the qualifying interest feature in question. • Where effect pathways interact / combine and may influence the same qualifying interest feature, the scale of the predicted effect is sufficiently low that there is no realistic potential for an intra-Project effect to arise that could undermine the conservation objectives of the European site. • There is only one identified potential effect pathway for the qualifying interest feature in question (i.e. there is no potential for a within-Project in-combination effect on a particular feature). No further assessment is proposed or required. **August 2021** From Natural England's perspective, resolution of this issue requires all single site issues to be resolved and so it is dependent on other rows within this SoCG. Discussions ongoing.	

			flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this were not therefore obtained before the application was submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** 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. • Within a Habitat Regulations Assessment (HRA), the plan or project must be considered both alone and in combination with other plans or projects. Whilst some of the potential effects associated with the whole Sizewell C development might not impact upon designated / classified Natura interest features (ecological receptors might be protected species or undesignated populations found within the wider environment), and are thus considered from the perspective of an Environment Impact Assessment rather than HRA, splitting the assessment of the project into the Main Development Site and multiple Associated Developments conducted in separate volumes, fails to satisfactorily complete the alone test. The failure to complete a proper alone test dilutes the potential impact of the development by simply dividing it up into separate components. The scale of predicted effects for each Associated Development is not necessarily deemed to reach a threshold of significance, such that impact associated with the overall development is overlooked.				

			• The application for Sizewell B has been revised and resubmitted to the Local Planning Authority. Natural England have not yet had the opportunity to provide detailed comment on the revised application. We would expect the DCO to be updated with the details of the new application and any potential impacts considered. • As fisheries assessments are being undertaken at the North Sea SSB area level, Natural England question whether other plans or projects that may impact upon fisheries, such as other power stations are also being considered at this Zone of Influence scale? **<u>Further comments on the DCO application, May 2021</u>** Natural England reiterate the above comments provided in our Relevant Representations. We welcome the Applicant's continued engagement on the issues set out in this Statement of Common Ground. However, we would require all individual issues relating to European protected sites to be resolved before we can agree to there being no cumulative/in-combination effects. **August 2021** Natural England reiterate the above comments provided in our Relevant Representations. We welcome the Applicant's continued engagement on the issues set out in this Statement of Common Ground. However, we would require all individual issues relating to European protected sites to be resolved before we can agree to there being no cumulative/in-combination effects.					
10	**ECOLOGY:** Project-wide impacts on protected species ▪ Bats	Protected species' mitigation, compensation and licencing approach for the	**<u>Context and background</u>** Natural England was not given the opportunity to review the complete up-to-date survey information for each of these species at the pre-application stage alongside the respective	**TBC**			Draft licenses and / or method statements were submitted as part of the DCO application. Further surveys were undertaken for all of the listed species in 2020 and the draft licenses and draft mitigation strategies	Protected Species Licensing process

	▪ GCN ▪ Natterjack toads ▪ Otters ▪ Reptiles ▪ Water voles ▪ Badgers ▪ Deptford Pink ▪ Breeding birds	project as a whole **(C) and (O)**	mitigation strategies. It has not therefore been possible for us to provide extensive comments on protected species mitigation to date. Protected species licences from Natural England are required for any development activity which carries the risk of significant disturbance or injury to these species which have long been known to be potentially impacted by the development proposals. We therefore consider these to be significant omissions which we have flagged a number of times throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.8, 4.3 (iii) and 4.4 (iii and iv)); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.19 and throughout Annex 2 (see comments under 4.3, 4.4 and Annex 3 (see comments under 7.4.78, 7.4.84, 7.5.3, 7.5.58 – 7.5.60, 7.5.65, 7.8.6, 7.9.6, Table 9.3 and Table 10.3); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, paragraphs 3.9.16 – 3.9.20, 4.5.18 – 4.5.26, 4.5.44, 4.5.48 – 4.5.51 and 4.6.2.21 – 4.6.2.27 (MDS), 4.6.16.3 (Two Village Bypass), 4.6.19.3 – 4.6.19.4 (Park and Rides), 4.6.20.2 (Highway improvements), 4.7.1.5 (SLR), 4.7.2.4 (FMF), 4.8.1.4 – 4.8.1.6 (green rail route), 4.8.2.3 (rail improvements), 4.8.3.4 (Theberton Bypass); We have further reiterated this advice through a number of pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process*				have been subsequently updated and included as appendices to the ES addendum as relevant. Monitoring for these species during construction and the early years of operation is defined in the Terrestrial Ecology Monitoring and Mitigation Plan (TEMMP), shared with Natural England in February 2021. The TEMMP will be submitted to examination in May 2021 and will be secured by requirement. EDF Energy has continued to maintain dialogue with Natural England's licensing team on all relevant protected species throughout 2020, with bilateral and multi-agency meetings and this has been maintained during 2021, with further surveys (bat roosts, great crested newt population) undertaken to inform final licence applications with the intention of securing LoNI during the examination in 2021. **September 2021** Sizewell C Co. is progressing protected species licenses in accordance with Natural England's position provided in their written representation. All draft licenses that are likely to be required have been submitted to Natural England Where licences are not required, non-licensable method statements have been produced and are appended to the CoCP. Whilst Natural England has requested not to be issued with these, they will be available and accessible to Natural England if they wish to review at any point. Each of the draft licenses and updated method statements have now been submitted to the examining authority. Offers have been made to consult with Natural England and the specific species licensing specialists through dedicated meetings but SZC Co. understands that Natural England's resources are limited in this area. Subsequently, all draft licenses are to be submitted to the generic licensing mailbox as instructed by Natural England. A tranche of updated draft licences for the MDS were submitted to Natural England in July 2021 and all remaining	

			(draft DCO submission) did not reflect our previous advice in this regard (i.e. Natterjack Mitigation Strategy, Reptile Mitigation Strategy, Water Vole Mitigation Strategy, Appendix: Amphibians, Appendix: Reptiles, Appendix: Ornithology, Appendix: Bats, Appendix: Terrestrial Mammals within ES Chapter 14: Terrestrial Ecology Ornithology omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further information required*** At pre-application, we strongly advised EDF Energy that, for each necessary species, they obtain additional pre-licensing species advice from Natural England prior to the application submission to further reduce uncertainty and risk of delay at the formal application stage. The ideal situation would be for Natural England to review draft/ghost protected species licence applications and (if agreed) provide Letters of No Impediment (LoNI) ideally with or shortly after (which is sometimes the case) the application is made to ensure the ExA has the required certainty. Indeed, Natural England created the LoNI process for this purpose and to de-risk the application for developers. The advice given by the Consents Service Unit (CSU)[1] states that "*It is worth noting where developers choose to apply for non-planning consent later in the process, it may be difficult to provide the Examining Authority with reassurances about the likelihood of obtaining them*" (page 5) and Annex 2 on page 8 includes examples of how the CSU has helped support developers in understanding the risks of not undertaking this process. We therefore reiterate that advice at this stage. **<u>Further comments on the DCO application, May 2021</u>**			updated draft licences have now been submitted. The updated reptile mitigation strategy is submitted to examination at Deadline 8. Once Natural England have reviewed all of the updated licenses and the related material, it is suggested that new commentary is provided and SZC Co. can respond accordingly. SZC Co has suggested to Natural England that they advise ExA, prior to examination close, whether there are any fundamental reason why the relevant licences would not be granted, even if formal LoNI are not available in this period. Discussions ongoing.	

[1] https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2015/07/CSU-Prospectus.pdf

			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. **August 2021** As outlined in our response to the ISH7 in July [REP5-160]. *"It is our understanding that for the proposed project this includes water voles, natterjack toads, bats, otters, great crested newts, badgers and Deptford Pink.* *As set out in our Relevant [RR-0878] and Written Representations [REP2-153], we advised the Applicant throughout pre-application that final draft licences for all relevant protected species should be submitted by them with or shortly after the submission of their Development Consent Order (DCO) application in May 2020. This was to ensure that the Examining Authority (ExA) has the certainty that is required in terms of Natural England reviewing each licence application and providing letters of no impediment (LoNIs) before any consent might be granted. We specifically created the LoNI process for this purpose to de-risk applications for developers in this regard. The advice given by the PINS Consents Service Unit in their Prospectus for developers document (page 8, Annex 2), which support developers in*				

understanding the risks of not undertaking this process, states that "It is worth noting where developers choose to apply for non-planning consent later in the process, it may be difficult to provide the Examining Authority with reassurances about the likelihood of obtaining them".

As outlined in our oral submission at ISH 7, Natural England started receiving the final draft protected species licence applications from the Applicant on the 9th July 2021 (water voles, Deptford Pink), and have also received an outline of when the Applicant intends on submitting the remaining applications to Natural England and the ExA as below:

Licence Title	***Proposed Submission Date to Natural England***	***Submission to ExA***
Water Vole Method Statement: Main Development Site	*9th July (issued)*	*Deadline 5*
Natterjack Toad: Main Development Site	*20th July*	*Deadline 5*
Badger: Main Development Site	*16th July*	*Deadline 5*
Deptford Pink: Main Development Site	*9th July (issued)*	*Deadline 5*
Otter: Main Development Site	*21st July*	*Deadline 5*
Water Vole: Two Village Bypass	*16th July*	*Deadline 5*
Badger: Two Village Bypass	*16th July*	*Deadline 5*
Great Crested Newt: Northern Park and Ride	*27th August*	*Deadline 7*

			<table><tr><td>*Great Crested Newt: Sizewell Link Road*</td><td>*27th August*</td><td>*Deadline 7*</td></tr><tr><td>*Great Crested Newt: Rail*</td><td>*27th August*</td><td>*Deadline 7*</td></tr><tr><td>*Bat*</td><td>*27th August*</td><td>*Deadline 7*</td></tr></table> *As such, we have not yet had time to review and come to a conclusion on any of the applications and are therefore not in a position to issue any LoNIs to the ExA at this time.* *We do not have a statutory response time on this element of our licencing work but ordinarily would aim for 30 working days, although staff are currently operating at 45+ working days due to resource constraints. Applications typically require multiple rounds of drafts being submitted per species before they reach a stage that they are considered satisfactory for Natural England to reach a conclusion. Without pre-judging the applications, given the scale and complexity of the Sizewell C project it may be that our response following initial review is to request further information for some or all of them, after which the review process is repeated.* *We therefore wish to highlight that our conclusions on each licence application, and subsequent issuing of LoNIs to the ExA (if a favourable conclusion is reached), may not occur until close to or after the end of the examination period as currently scheduled (14th October 2021). As outlined in our oral submission at ISH 7, the LoNIs themselves do not take much time to prepare and issue once a favourable conclusion has been reached."* **We note that we are still awaiting submissions for Great Crested Newts and Bats. But to the best of our knowledge have received all other licenses which are currently under review.**				
11	**ECOLOGY:** Project-wide impacts on nationally designated sites ▪ Alde-Ore Estuary SSSI	Groundwater and surface water impacts from a number of project elements, and subsequent	**<u>Context and background</u>** See comments under issue 1 above for a general summary of the impact pathway, risk to designated site features and the history of Natural England's previous advice to EDF Energy on this.	**TBC**			A Monitoring and Response Strategy was appended to the Groundwater and Surface Water assessment in the ES in May 2020 and was updated as version 2 in the January 2021 submission to PINS. This is allied to Draft DCO Requirement 7. The normal EA permitting regime will deal with the operation of construction related activities such as dewatering.	Water Monitoring Plan (DCO Draft Requirement 7)

	▪ Leiston-Aldeburgh SSSI ▪ Minsmere – Walberswick Heath and Marshes SSSI ▪ Orwell Estuary SSSI ▪ Sizewell Marshes SSSI	ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	The impact assessments (including eco-hydrological modelling, FRA etc.) and any mitigation included within the groundwater and surface water strategies must also consider impacts on these SSSIs. We do not consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **Comment of the DCO application - Relevant Representations, September 2020** ***Further information required*** <u>MDS impacts</u> • **Sizewell Marshes SSSI** The principle remaining hydrological concerns relate to impacts of the MDS on Sizewell Marshes SSSI as follows: i) **Long term impact of cut-off wall on groundwater flow**: The DCO application presents an inconsistent account of the long term impacts of the cut off wall on ground water flow to Sizewell Marshes SSSI and requires further clarification. It is proposed that these impacts would be managed through engineered mitigation and /or drain maintenance. No specifics are provided. Further clarification is needed of how the long term impact of the cut-off wall has been assessed. The modelling work should address this question directly. ii) **Impacts on surface water flow regime during the construction phase:** The application presents a confusing picture of the potential for construction to impact on water levels in Sizewell Marshes and modify flows leaving the site via the Leiston drain. Further clarification of this issue is needed. The assessment conclusions that				Sizewell Drain would be diverted north, parallel to the base of the platform slope, provided in Appendix 19C of the ES. At its northern extent, it would discharge to the Leiston Drain upstream of the SSSI crossing. In addition, revised water level management may be required for the drainage units and watercourses adjacent to the construction site. This would require the inclusion of water level control structures along the realigned Sizewell Drain and the revised operation of other existing structures. The enhanced water level control would allow for fine tuning of the management regime over time. The control structures will act to prevent any detrimental impacts on groundwater from the Sizewell Drain. The specific position, nature and operational parameters of the control structures will be determined in conjunction with stakeholders, forming part of the design required to support the associated permit or licence. Updated botanical surveys have been undertaken of the SSSI in 2020 (Ref) to provide a basis for botanical monitoring of those parts of the Sizewell Marshes which have the potential to be affected by small reductions in groundwater level, associated with dewatering. The approach to botanical monitoring in the SSSI is defined in the Terrestrial Ecology Monitoring and Mitigation Plan. The TEMMP was submitted to examination in June 2021 and will be secured by requirement. It was updated further at Deadline 8. **June 2021 – Comments on Written Representations** A Water Monitoring and Response Strategy will be available for review and will be issued as part of the Deadline 5 submission. Further consideration of Pakenham Meadows SSSI is provided under Issues 49-50 in Section 11.39 of EN10012-005469-D3- Comments on WRs. **August 2021**	Code of Construction Practice (Requirement) Terrestrial Ecology Monitoring and Mitigation Plan (Requirement)

			hydrological impacts are “not significant” rely strongly on an assumption that the mitigation scheme, <u>which is yet to be determined</u>, will be effective. iii) **Impacts of water level drawdown during the construction phase:** Dewatering during the construction phase is substantially mitigated by the proposed cut-off wall. However, Natural England’s view is that a residual predicted water level drawdown in the order of up to 10 cm is ecologically significant and so is the impact of reduced groundwater inflow from the Crag. Water level management is proposed to mitigate dewatering effects in Sizewell Marshes, yet the method of water level manipulation has not been determined. Further information is required to demonstrate to suitability of mitigation**.** <u>AD site impacts</u> (Northern Park and Ride, Two Village Bypass, Sizewell Link Road, Yoxford Roundabout, Freight Handling Facility, Rail proposals): • **Alde-Ore Estuary SSSI** • **Leiston-Aldeburgh SSSI** • **Minsmere – Walberswick Heath and Marshes SSSI** • **Orwell Estuary SSSI** No significant impacts hydrological impacts are anticipated for the SSSIs listed above from the associated development. Risks can be adequately mitigated through the provisions of Outline Drainage Strategy and Code of Construction Practice. **However, there is clearly a dependency that mitigation set out in the Outline Drainage Strategy and Code of Construction Practice will be rigorously implemented and maintained to ensure that groundwater and surface water impacts from the AD sites do not occur. We recommend that these mitigation measures are secured in the requirements of the DCO.** **<u>Further comments on the DCO application, May 2021</u>**				Evidence has been provided to examination which demonstrates that water level reductions during construction are limited to about 10cm in winter, are local and reduce after a few years. Summer drawdowns, which are the main factor in determining vegetation response, are much smaller (only several cm) and are not predicted to impact the fen meadow communities, low growing species or the rarer species. A Water Monitoring Plan was submitted to examination at Deadline 7 and will be secured by requirement. It is anticipated that once Natural England have reviewed his document, the groundwater and surface water impacts can be an agreed matter. Discussions ongoing.	

			Further Information Required – MDS Impacts to Sizewell Marshes SSSI 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 TEMMP, the response relationship between plant communities and groundwater levels can take decades to be reflected by monitoring. 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. 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. As it remains outstanding, we do not consider that this issue has yet been addressed by EDF Energy in sufficient detail and we are still seeking key information in this regard. Further advice on this issue will be presented within our Written Representations at Deadline 2. **August 2021** We currently waiting for further information to be submitted by the applicant in the form of a Water Levels Management Plan which we understand will be provided at Deadline 7. We are therefore unable to provide our updated position at this time but will use best endeavours to provide this as soon as we can.				
12	**ECOLOGY:** Project-wide impacts on nationally designated sites ▪ Leiston-Aldeburgh SSSI	Foul water impacts from a number of project elements, and subsequent ecological effects on	**<u>Context and background</u>** See comments under issue 2 above for a general summary of the impact pathway, risk to designated site features and the history of Natural England's previous advice to EDF Energy on this.	The Drainage Strategy and Code of Construction Practice must be rigorously implemented. We recommend that			Agreed Noted, see right	Monitoring Plan (DCO Draft Requirement 7) Code of Construction Practice (Requirement)

	▪ Minsmere – Walberswick Heath and Marshes SSSI ▪ Sizewell Marshes SSSI	nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	**<u>Comment of the DCO application - Relevant Representations, September 2020</u>** Natural England has no further comment to make on this. These issues are adequately addressed in the approaches outlined for management of Foul Drainage which should be secured through the DCO requirements. **<u>Further comments on the DCO application, May 2021</u>** No further comments	these mitigation measures are secured in the requirements of the DCO.				
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 supply scheme	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>Context and background</u>** See comments under issue 3 above for a general summary of the impact pathway, risk to designated site features and the history of Natural England's previous advice to EDF Energy on this. The impact assessments and any mitigation included within the abstraction/ water use strategy must also consider impacts on these SSSIs. We do not consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further information required*** See our comments under issue 3 above which also apply here **<u>Further comments on the DCO application, May 2021</u>** ***Further information required***	**TBC**			Please refer to Issue 3	Please refer to Issue 3

			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. We do not therefore consider that this issue has been addressed by EDF Energy in sufficient detail and are still seeking key information in this regard. **August 2021** See our comments under issue 3 which also apply here					
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	**<u>Context and background</u>** See comments under issue 4 above for a general summary of the impact pathway, risk to designated site features and the history of Natural England's previous advice to EDF Energy on this. The impact assessments and any mitigation included within the waterborne pollution prevention strategy must also consider impacts on these SSSIs. We do not consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>**	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.			Agreed Robust pollution prevention measures to protect the water environment are included within the CoCP and through the provisions of the Outline Drainage Strategy. The measures within the CoCP are assumed within the ecological assessment in the ES which assesses the potential effects of water-borne pollution on relevant sites from all elements of the Sizewell C Project. As for issue 3	As for issue 4 above

		their notified features. **(C) and (O)**	See our comments under issue 4 above which also apply here **<u>Further comments on the DCO application, May 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.					
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>Context and background</u>** See comments under issue 5 above for a general summary of the impact pathway, risk to designated site features and the history of Natural England's previous advice to EDF Energy on this. The impact assessments and any mitigation included within the airborne pollution prevention strategy must also consider impacts on these SSSIs. We do not consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** See our comments under issue 5 above which also apply here **<u>Further comments on the DCO application, May 2021</u>** ***Further information required*** **Dust and particulates** 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	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**			Robust measures to protect air quality are included within the CoCP and the Outline Dust Management Plan. These measures are assumed within the assessment and no further assessment is proposed beyond that presented in the ES and ES Addendum. The potential effect of dust will be managed in line with the Outline Dust Management Plan, which is reflected in the mitigation reported in the ES. With respect to operational combustion, the current system of nitrogen and acid critical loads assume decades of continuous exposure and, therefore, the interpretation of the air quality modelling can legitimately focus on the routine operation scenario rather than the commissioning scenario. If there is no continuous supply of elevated nitrogen, then over time (potentially a short period of time if elevated deposition rates have only been for a matter of months) nitrogen levels in the soil will deplete and the vegetation should recover. Taking the above into consideration, the routine operation scenario better reflects the long-term effect on vegetation and the long-term effect is the most relevant when nitrogen and acid deposition are being considered. For this scenario, the modelling assumed one generator run continuously through the year, indefinitely. However, routine testing is anticipated to be carried out for 60 hours per year for each of the 12 diesel generators, with an aggregated total of 720 operation hours per year. The assessment is therefore highly precautionary.	As for issue 5 above

			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				No further assessment is proposed or required. Discussions ongoing.	

			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. **August 2021** We are in the process of reviewing the latest information which has been provided by the applicant in Comments on the Written Representations at Deadline 3 [REP3-042]. However, we are also waiting to see updated assessments associated with proposed changes associated with a new water supply strategy and desalination plant. We are therefore unable to provide our updated position at this time but will use best endeavours to provide this as soon as we can.					
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>Context and background</u>** See comments under issue 6 above for a general summary of the impact pathway, risk to designated site features and the history of Natural England's previous advice to EDF Energy on this. The impact assessments and any mitigation included within the biosecurity control measures (e.g. within the CoCP) must also consider impacts on these SSSIs. We do not consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>**	The Code of Construction Practice must be rigorously implemented. We recommend that these mitigation measures are secured in the requirements of the DCO.			Agreed. The Code of Construction Practice requires a biosecurity risk assessment to be undertaken to avoid potentially facilitating the spread of non-native species during construction. These measures are assumed to be in place in the ES. Given the inclusion of these measures in the CoCP, no further assessment is required.	As for issue 6 above

			See our comments under issue 6 above which also apply here **<u>Further comments on the DCO application, May 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.					
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>Context and background</u>** See comments under issue 7 above for a general summary of the impact pathway, risk to designated site features and the history of Natural England's previous advice to EDF Energy on this. The impact assessments and any mitigation included within any collision avoidance measures must also consider impacts on these SSSIs. We do not consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** See our comments under issue 7 above which also apply here **<u>Further comments on the DCO application, May 2021</u>** ***Further information required*** 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	**TBC**			**<u>September 2021</u>** EDF Energy has not identified a likely pathway for a material effect due to physical interaction (i.e. collisions) of birds or other species (see Issue 7 for marine mammals) with marine vessels or pylons and overground cables and no detailed assessment has been undertaken in the ES. No further assessment is proposed or required. See Issue 7 for an update in response to birds and overhead lines which is also relevant here in relation to European sites. It is understood that Natural England is reviewing this matter and may offer an updated position shortly. Discussions ongoing.	As for issue 7 above

			to the existing National Grid powerlines. Powerlines can impact birds through electrocution, displacement and collision. 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 EDF Energy in sufficient detail and we are still seeking key information in this regard. **August 2021** We are in the process of reviewing the latest information which has been provided by the applicant at in Comments on the Written Submission to actions arising from ISH7 at Deadline 6 [REP6-002]. We are therefore unable to provide our updated position at this time but will use best endeavours to provide this as soon as we can.					
18	**ECOLOGY:** Project-wide impacts on nationally designated sites: ▪ Minsmere – Walberswick	Impediment to the management practices required for conservation of any designated	**<u>Context and background</u>** See comments under issue 8 above for a general summary of the impact pathway, risk to designated site features and the history of Natural England's previous advice to EDF Energy on this.	TBC			EDF Energy will provide a written commitment to maintain access for the RSPB to continue management to the southern side of the Minsmere reserve. EDF commits to not impede the management practices required for the conservation of any European sites (see also issue 8). This has been addressed in full under Issue 8.	Written undertakings as described left

	Heath and Marshes SSSI ▪ Sizewell Marshes SSSI	site from a number of project elements and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	The impact assessments and any mitigation for this issue must also consider impacts on these SSSIs. We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** See our comments under issue 8 above which also apply here **<u>Further comments on the DCO application, May 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: 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. **August 2021**				EDF Energy will also provide a written commitment, with appropriate plans, to maintain access for relevant parties to continue management to the retained areas of Sizewell Marshes SSSI, out with the order limits. EDF Energy commits to not impede the management practices required for the conservation of any retained parts of the SSSI. A plan has been prepared showing how access to the retained areas of Sizewell Marshes SSSI will be maintained during construction and this is submitted to Examination at Deadline 8. There will be no impediment to the management practices required for the conservation of any retained parts of the SSSI No further assessment is proposed or required. Discussions ongoing. It is anticipated that this can be an agreed matter.	

			We understand new information will be submitted to the examination for review at Deadline 7. We are therefore unable to provide our updated position at this time but will use best endeavours to provide this as soon as we can.					
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>Context and background</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. Some individual SSSI impact topic areas relating to specific elements of the project proposals (e.g. Sizewell Marshes SSSI compensation approach for direct habitat loss, crossing design, hydrological impacts, recreational disturbance etc.) were discussed with Natural England through the applicant's pre-application workshop programme, but this was not exhaustive with regards to impacts on SSSIs. Furthermore, none of these workshops specifically focussed on the cumulative assessment for SSSI impacts and we consider this to be a significant omission. We have flagged this omission a number of times throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 2.2, 3.2, 3.5, 4.3, 4.10, 4.11 and 5.8); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.4, 3.5, 3.8 – 3.12, 4.1 – 4.5, 4.13 and throughout Annex 3 on specific elements of the project); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March*	TBC			Both project-wide and cumulative assessments were included in the ES and have been supplemented in the ES Addendum. Whilst a number of IEFs were considered within these assessments, for example farmland birds, no impacts which could act cumulatively were identified for the SSSIs listed (but see also sHRA above for the European site context). No further assessment is proposed or required. As for Issue 9, from Natural England's perspective, resolution of this issue requires all single site issues to be resolved and so it is dependent on other rows within this SoCG. Discussions ongoing.	N/A

			2019 (our ref: 272181, dated 29th March 2019, e.g. paragraphs 3.5, 3.6, 3.9.13 – 3.9.15 and throughout Annex 4 on specific elements of the project); • Natural England's response to the *Sizewell C – Stage 4 Consultation: 18th July 2019 to 27th September 2019* (our ref: 289446, dated 26th September 2019, comment 6); We have further reiterated this advice through a number of pre-application workshops and document reviews facilitated by EDF Energy and so have provided a large amount of advice on this issue to EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** On the basis of the information submitted at this stage, we do not consider that a suitably robust assessment has been undertaken on cumulative impacts from all project elements on the listed SSSIs and their notified features. This is a crucial element of the SSSI impact assessment process and therefore needs to be agreed before the project is consented. **<u>Further comments on the DCO application, May 2021</u>** Natural England reiterate the above comments provided in our Relevant Representations. We welcome the Applicant's continued engagement on the issues set out in this Statement of Common Ground. However, we would require all individual issues relating to					

			SSSIs to be resolved before we can agree to there being no cumulative effects. **<u>Further comments on the DCO application, May 2021</u>** Natural England reiterate the above comments provided in our Relevant Representations. We welcome the Applicant's continued engagement on the issues set out in this Statement of Common Ground. However, we would require all individual issues relating to SSSIs to be resolved before we can agree to there being no cumulative effects.					
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>Context and background</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, The Landscape and Visual Impact Assessment (LVIA) for the project should assess these impacts alone and cumulatively within the project and also between other projects in and around the AONB. Only then case full assessment of impacts and adequacy of mitigation/ compensation measures be determined. We have flagged this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 2.2 (iii),	**TBC**			**<u>Context and background</u>** Natural England formed one of the key LVIA consultees and have participated in a number of workshops, site visits and meetings to discuss the approach to the LVIAs for all aspects of the SZC Project. These meetings are set out in detail in Volume 2, Appendix 13H of the ES (Doc Ref 6.3) and covered the scope and approach to the LVIAs, including the methodology to be used; the location of representative and illustrative viewpoints; the selection of viewpoints for the preparation of visualisations; and baseline references to be used in the assessments. SZC Co. reviewed responses from Natural England following all stages of consultation and ensured that both the design of the main development site and associated development sites, and the LVIAs responded to comments raised as far as practicable. The main points raised in the Natural England consultation responses are considered in more detail below. Full LVIAs form part of the DCO submission and can be found in the following locations: • Main Development Site – Volume 2, Chapter 13 [<u>APP-216</u>] • Northern Park and Ride – Volume 3, Chapter 6 [<u>APP-360</u>] • Southern Park and Ride – Volume 4, Chapter 6 [<u>APP-390</u>] • Two Village Bypass – Volume 5, Chapter 6 [<u>APP-421</u>]	Design and Access Statement [APP-585 to 587] Code of Construction Practice [<u>AS-273</u>] DCO Article 3 (Scheme design) Section 106 Agreement (Implementation Plan) Requirement 14 (MDS: Landscape works)

			3.3, 3.6, 4.3 (v) and throughout Annex 2 (see comments under sections 4.3, 5.3, 5.5 and 5.8); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.13 – 3.15, 4.5 – 4.7, 4.10 – 4.12 and throughout Annex 3 (see comments under 7.4.6, 7.4.8, 7.4.14, 7.4.23 – 7.4.25, 7.4.26, Figures 7.12 – 7.18, 7.4.65, 7.4.72 – 7.4.78, 7.5.15 – 7.5.16, 7.5.35, 7.5.61, 7.6.41 – 7.6.44, 7.9.7 and 7.9.10)); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, e.g. paragraphs 3.6, 3.9.21 – 3.9.28, 3.9.37 – 3.9.40 and 4.5.58 – 4.5.61, 4.6.2.28 – 4.6.2.29, 4.6.4.11 – 4.6.4.12, 4.6.5.10, 4.6.6.2, 4.6.7.6 – 4.6.7.8, 4.6.8.5, 4.6.9.3, 4.6.10.3, 4.6.11.5 – 4.6.11.6, 4.6.13.2, 4.6.14.4, 4.7.1.8, 4.7.2.7, 4.8.1.8, 4.8.3.7); • Natural England's response to the *Sizewell C – Stage 4 Consultation: 18th July 2019 to 27th September 2019* (our ref: 289446, dated 26th September 2019, comment 3, 5 and 11); We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy and so have provided a large amount of advice on this issue to EDF Energy. Despite this, the incomplete draft ES Chapter which considers AONB impacts and which were included in the *Sizewell C – Stakeholder Review Process (draft DCO submission)* documents did not reflect our previous advice (i.e. the final LVIA with full supporting information, Lighting Management Plan and OLEMP were omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **Comment of the DCO application - Relevant Representations, September 2020**			• Sizewell Link Road – Volume 6, Chapter 6 [APP-457] • Yoxford Roundabout and Other Highway Improvements – Volume 7, Chapter 6 [APP-490] • Freight Management Facility – Volume 8, Chapter 6 [APP-520] • Rail – Volume 9, Chapter 6 [APP-551] In addition, assessment of both the 'Project-wide effects' and 'Cumulative effects with other projects' are provided in Volume 10 of the ES (Doc Ref. 6.11).	

			Overview of our landscape advice 1. In relation to landscape effects Natural England's advice is focused on the Suffolk Coast and Heaths AONB designation and its statutory purpose. Because our focus is the AONB our assessment and comments relate to the main development site and those parts of the scheme located outside the AONB but within its immediate setting. We are not able to comment on how the development could affect the wider non-designated landscape. 2. Siting a nuclear power station within a nationally designated landscape will adversely affect the delivery of its statutory purpose despite what mitigation measures are applied. The question is how extensive a significant effect would be. A development of this type is certainly not conducive with a statutory purpose to conserve and enhance the area's natural beauty. The National Policy Statement for Nuclear Power Generation (EN-6) recognises the risks to the AONB. Specifically in relation to the Sizewell C proposal it states: *In assessing this site the Government has considered the purpose of the AONB, which is of conserving and enhancing the natural beauty of the area of outstanding natural beauty. The Appraisal of Sustainability identified that there is the potential for some long lasting adverse direct and indirect effects on landscape character and visual impacts on the Suffolk Coast and Heaths AONB, with limited potential for mitigation given that the site is wholly within the AONB. This could have an effect on the purpose of the designation…….....* 3. The developer and their consultants judge that significant effects on landscape character and visual resources would be localised with no significant effect on the AONB more widely. Our advice is intended to help the examination to decide whether this is the case or whether the power station would have more far reaching consequences for the AONB in terms of its designation and statutory purpose. Should permission be granted for Sizewell C, Natural England's priority is to ensure that the statutory purpose of the AONB is upheld as far as possible throughout the construction and operational phases. The challenge of doing so in this case is made more complicated by the presence of two existing				**Comment of the DCO application - Relevant Representations, September 2020** Overview of our landscape advice 1. SZC Co. note this point. 2. The assessment defines the extent of landscape and visual effects and this is based on an agreed baseline understanding of the AONB's natural beauty and special qualities. The extent, nature and detail of mitigation is identified and illustrated in the DAS. The project design for the MDS is comprehensive, recognising the importance of good design in minimising effects of the proposal on the AONB. 3. SZC Co. note this point.	

			nuclear power stations, two substations and associated energy infrastructure all within a narrow neck of the AONB. 4. Our advice is formulated and presented principally in relation to the overall effect of the development as a whole on the AONB, both during its construction and operational phases. This is appropriate for Natural England, as the national landscape agency and designating authority for AONBs. We are in any case not able to carry out further site visits at this time to review each viewpoint and receptor based conclusion of the Landscape and Visual Impact Assessment (LVIA) or to assess the plans for individual components of the scheme in the field. We hope however, that our generally higher level advice relating to the designation and statutory purpose will complement any more detailed advice and observations that the local planning authorities, the AONB Partnership and others may wish to offer. Our comments on individual components of the scheme are therefore limited but do highlight important observations and issues in relation to some elements. 5. To help understand the implications for the area's statutory purpose we have reviewed the Landscape and Visual (chapter 13 of the ES), together with the Main Development Site Design and Access Statement (8.1), the Outline Landscape and Ecological Management Plan (8.2) and other relevant documents. Our advice is also guided by national policy. This includes the National Policy Statement for Energy (EN-1) which does not expect that the visual impact of a nuclear power station can be eliminated but does expect mitigation to reduce the visual impact as far as reasonably possible. We have also taken into account that the operational footprint of the development would be much smaller than the construction phase footprint. <u>The vulnerability of the AONB and its statutory purpose to the development</u> 6. The proposed development is a challenge to the highly sensitive and nationally important landscape of the Suffolk Coast and Heaths AONB, and to the Heritage Coast. The AONB's statutory purpose is to conserve and enhance the area's natural beauty. The AONB designation recognises the Suffolk Coast and Heaths as one of the nation's finest landscapes, and its landscape and scenic beauty is afforded the highest level of protection by national planning policy.				4. SZC Co. note this point. 5. SZC Co. note this point. <u>The vulnerability of the AONB and its statutory purpose to the development</u> 6. The AONB natural beauty and special qualities document has been produced in agreement with SCHAONB, SCC and ESC and has been used to inform the assessment of the effects of the project on the SCHAONB. An assessment on AONB is provided in the ES (Doc Ref 6.3) and the significance of effects are identified. 7. Sizewell A and Sizewell B power stations plus the Galloper and Greater Gabbard substations and high voltage transmission lines, as well as existing offshore wind development, are all considered as part of the existing baseline environment within Volume 2, Chapter 13 of the	

			7. Cumulative effects are a major concern. The new power station would be sited in a narrow part of the AONB which already accommodates the Sizewell A and Sizewell B power stations plus the Galloper and Greater Gabbard substations and high voltage transmission lines. 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. <u>Observations on the receiving landscape</u> 8. The character of the receiving landscape would both help and hinder the accommodation of the power station. The relevant National Character Area and the more detailed				ES. The landscape and visual effects, as well as effects on the natural beauty and special qualities of the SCHAONB, as a result of the proximity of these existing developments to the Sizewell C Project main development site are noted where relevant. SZC Co. note that the AONB designated area forms part of a wider area of countryside immediately outside the AONB that remains intact, 'buffering' the AONB. Section 4.7 of Volume 10 of the ES (Doc Ref. 6.11) considers the potential cumulative landscape and visual effects of the Sizewell C Project with other proposed projects. This includes the East Anglia ONE North Offshore Windfarm and the East Anglia TWO Offshore Windfarm; in particular the onshore elements of these projects. Other proposed projects at a much earlier stage in their development were identified but not assessed in detail due to the level of information available on what the proposals would entail. Those schemes of potential relevance to the SCHAONB were: • Nautilus Interconnector. • Eurolink Interconnector. • Greater Gabbard extension. • Galloper Extension offshore windfarm. SZC Co. reviewed the information available for each potential cumulative scheme at the time of the ES and continue to review any proposed changes as they come forward. This included any mitigation measures proposed for potential cumulative schemes and how they could combine with the main development site proposals to enhance the overall mitigation effects. The clear pressure from development that exists within Sizewell Gap resulted in design changes such as the removal of the outage car park from this area. SZC Co. consider that the local planning authority (ESC) have had regard to each project as it has come forward. <u>Observations on the receiving landscape</u> 8. SZC Co. note that Natural England consider the landscape character of the area 'both helps and hinders' the integration of the project. SZC Co. agree that the existing character of the Sandlands landscape supports the integration of the proposals and that the existing woodland areas provide good screening and offer opportunities for integration, referring the behaviour of the existing power	

			Landscape Character Assessment present the area as characterised by expansive views (except where enclosed by woodland), a mainly flat or gently rolling topography, and a largely unsettled landscape. The Estate Sandlands and Coastal Levels are the landscape types principally affected. In Natural England's view: • A nuclear power station (in either its construction or operational phases) cannot be hidden within long, low lying and open views, 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 and 16). • 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. Para 13.4.99 of the LVIA notes that views of the existing power stations are constrained by woods, tree lines and embankments and we can confirm this from our own site visits. We would however highlight that occasional, repeated and sequential views of the new construction site or operational power station could produce a strong awareness of the development in the landscape. That would be amplified by the cumulative effect of the three power stations and other energy infrastructure. <u>Seascape and the Heritage Coast</u> 9. The purposes of the Heritage Coast includes conserving, protecting and enhancing the natural beauty of the coastline. This is not a statutory designation and the statutory purpose of the AONB and policies to protect its landscape and scenic beauty provide the principle basis for planning decisions. The				stations in the landscape. SZC Co. note the NE response that distance, combined with few if any higher vantage points, and intermediate vegetation diminish visual impacts as one moves inland, which is recorded in the main development site LVIA. SZC Co. acknowledge that there are long views along the coast but do not consider that this hinders integration of the proposals. The existing views include the existing power station structures which are seen along the coastline and in the context of the woodland cover of the Estate Sandlands and Coastal Levels landscape with the expansive coastal landscape and seascape dominating the views within which the proposed development would be seen. The proposals respond to the landscape character with behaviours that are similar to the existing A and B station structures namely: they are similar in scale, there is no apparent human activity, there are limited views from the landside across the countryside revealing occasional glimpses of taller elements of the power stations apart from in close proximity; and there are views of substantial built structures strung along the coast in a distinct area framed by gently rising land and tree cover to the north and south. Occasional, repeated and sequential views of the new construction site would be apparent but substantially characterised by taller elements, notably cranes. With regard to the operational power station, it is acknowledged that there would be occasional views of taller elements but these are not considered to be especially 'repeated' or 'sequential' apart from along the immediate coastline. There would be an awareness of the development in the landscape and in the context of Sizewell A and B station with views inland being of reduced significance of effect. <u>Seascape and the Heritage Coast</u> 9. SZC Co. has given careful consideration to the design of the Sizewell C proposals within the AONB and Heritage Coast, has sought to minimise and mitigate landscape and visual effects and effects on the natural beauty and special qualities of the AONB, address the conservation, protection and enhancement of the natural beauty of the Heritage Coast through an iterative design process and to retain a natural appearance to the coastline. The design of the sea defence and northern mound would have a natural character, similar in appearance to the Sizewell B sea	

			Heritage Coast does however highlight the qualities of this coastline which also contribute to the AONB designation. The A and B stations were present when the Heritage Coast was designated but the addition of a third nuclear power station on the coast is but the addition of a third nuclear power station on the coast is a challenge to 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. 10. LVIA para 13.6.154: recognises that '……. *long-term effects on the purposes of designation of the Heritage Coast would be large scale in the localised area north and south of the main development site area extending along the coast including offshore areas up to 2km from the site. These effects would be of high–medium magnitude,* ***major (significant)*** *and adverse'*. 11. 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. 12. 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 effected are primarily from the north along the coast path, from Dunwich and near the Minsmere Sluice. We consider the effect on these views in more detail later in this advice, but there would be a notable extension to and massing of industrial development in these views.				defence, which is a substantially man-made feature deliberately designed as a 'natural' feature of the coastal dunes and shingle ridges landscape character type. SZC Co do not consider that the addition of SZC represents the 'industrialisation' of the coastline, with the expansive coastal setting of the Sizewell C site remaining dominant and the landscape character prevailing. 10. SZC Co. acknowledge this point. 11. Volume 2, Chapter 13 of the ES includes an assessment of the effects of the main development site on seascape character, alongside the assessment of landscape and visual effects (including offshore receptors) and the effects on designated /defined landscape and seascape. SZC Co do not consider that the addition of SZC represents the 'industrialisation' of the coastline, with the expansive coastal setting of the Sizewell C site remaining dominant and the landscape and seascape character prevailing. 12. SZC Co. have provided embedded mitigation as set out in Volume 2, Chapter 13 of the ES and the Design and Access Statement (Doc Ref. 8.1), to reduce adverse effects and ensure that the 'behaviour' of the power station in the landscape is aligned with that of the existing A and B station buildings and support the integration of the power station into the coastal landscape. We do not consider that the addition of Sizewell C represents the industrialisation of the local landscape of the AONB with the expansive coastal setting remaining dominant and the landscape and seascape character prevailing. Design mitigation measures include: - Careful design of the proposed turbine halls including alignment of principle structures on the same axis and building envelope - Careful design of proposed sea defences as naturalistic dune features similar to those on the coast in the immediate area	

							- Removal of substantial elements of the temporary beach landing facility during the operational phase when the facility is not in use The proposals include provision of screening of a substantial amount of lower level development on the main nuclear island reducing visual effects and are sympathetic to the character of the coastline, combined with a focus on the design and appearance of turbine halls as the primary structures that respond to the existing A and B stations along a common alignment. The significance of effects is recorded in (Volume 2, Chapter 13 of the ES). SZC Co. consider the effects to have been controlled to the extent that is reasonably practicable and aligned with NPS EN1 and EN6. SZC Co. acknowledge that the present context of Sizewell B will alter with the proposed development and as a result will be viewed in a different context, especially from the north. While Sizewell B's appearance in views along the coast will alter, it will remain visible, sitting in a sequence of three periods of nuclear power generation. The design principles described in the Design and Access Statement [APP-585 to 587] identify the importance of securing the alignment of each power station's major structures on a common axis to allow each to be read as separate objects without distorting their legibility through changes in orientation. This design discipline will be apparent in views along the coast from the north. <u>The Landscape and Visual Impact Assessment</u> 13. SZC Co. note the agreement of NE to the LVIA methodology, ZTV and viewpoints. With reference to noise and vibration, these matters do not form part of the agreed LVIA methodology. Reference to lack of consideration of noise and vibration effects (13.1.3) is not material to the landscape and visual judgements. Noise and vibration is considered as part of the effects on amenity and recreation Volume 2, Chapter 15 of the ES (Doc. Ref. 6.3)] which considers these two matters in conjunction with other effects including landscape and visual matters (LVIA). 14. Regarding the effects on the AONB designation these are recorded in Volume 2, Chapter 13 of the ES (Doc Ref 6.3) for both construction and operation. Natural England	
			<u>The Landscape and Visual Impact Assessment</u> 13. We are content with the LVIA methodology including the Zone of Theoretical Visibility (ZTV) and the viewpoints selected. We do note however, that at para 13.1.3 there is no reference to the Noise and Vibration chapter of the ES as a source of data for the LVIA. Whilst however, the methodology is sound it is reliant on the application of					

			‘professional judgement’ to provide the final assessment of effects and overall conclusions. Those assessments and conclusions are therefore open to challenge where they may underplay the effects of a proposed development scheme. 14. The LVIA’s recognition of significant adverse impacts remaining after mitigation on landscape character at the development site and on visual resources in views from the north along the coast is welcome. NE, however, is not persuaded that the power station would not, during its long construction phase and operationally in combination with the existing power stations and other energy infrastructure, have a significant effect on the wider designated area and delivery of the AONB’s statutory purpose.				note they are not persuaded that combined effects of each with the existing power stations and other energy infrastructure would not lead to significant effects on the wider designated area and delivery of the AONB’s statutory purpose. The assessment identifies effects on the local and wider area. The effects on the local extents of the designated area are identified in construction and operational phases and are considered significant in a defined area. The overall judgement of the effects on the AONB in terms of landscape matters as they relate to natural beauty and special qualities, are recorded in Volume 2, Chapter 13 of the ES (Doc Ref 6.3) and the effects are not considered to be significant for the AONB as a whole We note that NE does not state what defines the ‘wider area’ for the purposes of their judgement nor the nature of the effects. SZC Co. recognise that during the construction phase the landscape and visual effects would impact a very localised area within the 403 km2 designated area. However, the effects would be short term and reduce in extent and scale in the operational phase. SZC Co do not consider that the AONB’s statutory purposes will be substantially affected during the operational phase and that the mitigation proposed in the Deed of Obligation addresses residual impacts.	
			<u>Special Qualities, Natural Beauty Indicators and the statutory purpose</u> 15. The LVIA’s assessment of effects on the area’s defined Natural Beauty Indicators and Special Qualities is helpful. The defined special qualities and natural beauty indicators of the AONB illustrate and articulate why the area has been designated as an AONB and what makes it distinctive in terms of its intrinsic character and high quality. Development				<u>Special Qualities, Natural Beauty Indicators and the statutory purpose</u> 15. SZC Co. note that NE recognise that the LVIA’s assessment of effects on the area’s defined natural beauty indicators and special qualities of the AONB is ‘helpful’ and they do not dispute the assessment.	

			which has a significant adverse effect on special qualities and / or natural beauty indicators will therefore be expected to directly affect delivery of the AONB's statutory purpose. LVIA Table 13.14 identifies effects on AONB natural beauty indicators and special qualities during construction as follows: • **Landscape quality** - *High: construction work is likely to affect the intactness and condition of the landscape, introduce incongruous visually intrusive elements, harm the physical integrity of characteristic elements and detrimentally affect the uncluttered and simple appearance of the existing power station/s - but physical condition of remaining wider landscape context remains intact*. • **Scenic quality** - *High: construction work is likely to impact on sense of place (character); striking landform (including views along and towards the coast); visual interest (by altering the pattern and composition of the landscape) and appeal to the senses (by bringing views of construction, artificial light and noise)*. • Also 'High' for Relative wildness and Relative tranquillity. 13.6.149 *In conclusion, there would be significant effects from construction on the natural beauty indicators and special qualities of the AONB over a limited extent of the designation. However, the overall integrity and resilience of the wider designated landscape would not be compromised and the wider countryside especially west of the construction area, would continue to support the AONB's general countryside characteristics*. . 13.6.150 *Taking the above into consideration, the overall effect on the wider AONB would be medium scale across a limited extent of the designation, leading to effects that are low magnitude,* ***slight (not significant)*** *and adverse*. 16. The LVIA therefore considers these effects to be 'limited'. Nonetheless a high adverse impact on characteristics as fundamental to the AONB (or any designated landscape) as landscape quality, scenic quality, wildness and tranquillity suggests that the capacity of this area to continue to deliver the AONB's statutory purpose would be compromised,				16. SZC Co. do not agree with NE's conclusion that when identifying significant adverse effects on the AONB during the construction phase, that this implicitly means that the proposal 'directly affects the delivery of the AONB's statutory purpose' and that the area has a limited capacity to deliver 'the AONB's stated purposes'/ that they would 'be compromised potentially to a significant degree'. Whilst significant effects are identified, the AONB will continue to perform its statutory purpose as part of a larger designation area and is reinforced by the wider landscape immediately outside the AONB that remains intact, 'buffering' the AONB. These matters are responded to in SZC Co.'s comments on Natural England's Written Representations (section 11 of SZC Co.'s Responses to Written Representations [Ref]. Other LVIA conclusions	

			potentially to a significant degree, at least by the long-term duration of the construction phase. <u>Other LVIA conclusions</u> 17. We cannot provide a detailed analysis of the LVIA to confirm or challenge all of its conclusions regarding all individual receptors and viewpoints. The local planning authorities and the AONB Partnership may wish to comment in detail on those. Natural England has considered the LVIA's overall findings and related those to our knowledge of the development site and its wider landscape setting in considering the effects of the scheme on the AONB and its statutory purpose. 18. The LVIA identifies significant adverse effects from the scheme both during the construction and operational phases. However, those significant effects are deemed by the LVIA to be localised and there would not 'overall' be a significant effect on the AONB designation or the Heritage Coast. Natural England, however, is concerned that the development may, both in its construction and operational phases, compromise to a significant degree the AONB's statutory purpose, notably by affecting how this part of the AONB relates and contributes to the designated area as a whole.				17. SZC Co. note this point. 18. SZC Co. note NE's concern that the development may during construction and operation, 'compromise to a significant degree the AONB's statutory purpose, affecting how this part of AONB relates and contributes to the designated area as a whole.' SZC Co.'s assessment (Doc Ref 6.3) has concluded that local effects on the AONB will not result in any widespread effect on the AONB such that it becomes 'detached' from the whole designated area. It is noted that NPS EN-6 recognises "the potential for long-term effects on visual amenity" (para 3.10.3) and that "the scope for visual mitigation will be quite limited" (para 3.10.8). SZC Co. have deployed extensive mitigation as part of the embedded design for operation and construction phases to reduce adverse effects. SZC Co. do not agree that during construction the effect on the designated area in its entirety, would be significant. SZC Co. note that nuclear infrastructure has been a feature of the AONB since its designation with Sizewell A being in place before the AONB itself was designated. As such energy infrastructure has and will continue to be, a feature of this part of the AONB but not be overwhelmed by it and that the landscape character of the AONB will prevail. SZC Co. recognise that the project will affect the performance of the immediate AONB during construction as recorded in the LVIA (Doc Ref 6.3), but that reasonable mitigation measures have been put in place to minimise effects. In addition, SZC Co. note that the AONB is 'supported' by wider expanses of non-designated open countryside which forms a recognised setting to the AONB (see NE comments on campus). SZC Co. do not agree that the effect of the power station during operation, would compromise the immediate area of AONB and its relationship and contribution to the designated area as a whole. Our response to items 28-33 below outlines the design response and controls that have been embedded in the operational design to control the appearance of the power station in the immediate area. The LVIA explores and identifies the extent of visual effects of the new power station. Beyond this extent the effects on the AONB are considered to be more perceptual and not	

			19. As the national landscape agency and designating authority for the AONB we are especially concerned with the importance of the designation, its statutory purpose, the need to uphold that purpose and the vulnerability of the AONB to development of this sort. Based on this we are not convinced that a significant effect on the development on the AONB would be as containable and geographically limited as the LVIA concludes. <u>Issues for the examining authority to address</u> **a. Upholding the AONB's statutory purpose** 20. To help determine to what extent the Sizewell C proposal would compromise the delivery of the AONB's statutory purpose we recommend that the following issues are addressed:				material to the landscape judgements including those that relate to natural beauty and special qualities of the designated landscape. 19. SZC Co. note NE's view of the 'vulnerability of the AONB to development of this sort' and note they are 'not convinced that a significant effect… would be containable and geographically limited as the LVIA concludes.' SZC Co. disagree and note that NE have not reviewed the LVIA in its entirety in preparing their response. The LVIA is clear in its methodology and analysis which demonstrates that with distance from the proposal, the effect on receptors reduces and that the geographic extent of physical and visual effects is limited to a defined area that represents a small portion of the overall designated area. <u>Issues for the examining authority to address</u> **a. Upholding the AONB's statutory purpose** 20. SZC Co. note these points and respond in detail against the detailed points made below.	

			• This area is a narrow neck of the AONB which already accommodates two nuclear power stations and other energy infrastructure. The cumulative effect of three nuclear power stations lined up along the coast with a collective significant land take from the designated area and strong (locally dominant) presence could associate this area primarily with power generation and transmission, rather than natural beauty. • If the landscape character and perceptual qualities of this narrow section of the designated area are adversely affected (so that it is no longer making an effective contribution to the designation purpose and isn't perceived or valued as part of the AONB), that change could functionally sever the more extensive parts of the AONB north and south. Hence the whole of the AONB would be significantly affected. • Whether specifically the scale and long duration of the construction phase will permanently alter how this part of the AONB is viewed, used, and plays its part in the designated area as a whole. • The extent to which the effects of the operational power station would be mitigated by the embedded (design) mitigation, screening measures and landscape enhancements provided through the Landscape and Ecology Management Plan. These points are explored in more detail below. **b. The construction phase and mitigation**. 21. The LVIA and ES anticipate significant adverse construction phase effects on landscape and visual resources being contained locally to the site. There would be no significant effect on the AONB overall. Natural England, however, is concerned that the combined extent of the construction area, construction activities and a very long (9 to 12 years) construction phase could permanently alter how this part of the AONB is viewed, used, and enjoyed. The effect on those seeking to enjoy the AONB could be long lasting and profound because the area will be associated with major construction for that very long period. 22. A Sizewell C visitor survey (Volume 2, Chapter 15 of the ES and summarised in table 13.14 of the LVIA) found that approximately 30% of people surveyed said that they would be displaced elsewhere to avoid disturbance during			**b. The construction phase and mitigation**. 21. See response to item no. 27. 22. SZC Co. recognise that the project will affect the performance of the immediate AONB during construction as recorded in the LVIA (Doc Ref 6.3), but that reasonable mitigation measures have been put in place to minimise effects. Natural England refer to the results of visitor surveys undertaken for Sizewell C where approximately 30% of people surveyed said that they would be displaced elsewhere. The detailed survey results are presented in Volume 2, Chapter 15, Appendix 15A (Doc. Ref. 6.3) where, at paragraph 4.1.17, it is recorded that "some 65% of the 514 respondents said that they would not stop using the area around Sizewell C during construction, 29% said that they would and 2.5% said that they were not sure." The majority of people therefore said that they would not be displaced countering Natural England's concern that the survey results indicate how this part of the AONB could fall below general expectations of what qualities and experiences it should offer. In addition, SZC Co. note that the AONB is 'supported' by wider expanses of non-designated open countryside which forms a setting to the AONB, much of which is not impacted during construction. The Sizewell C visitor surveys were undertaken in 2014 when the extent of mitigation and enhancements to	

			construction. That sizeable percentage is indicative of how this part of the AONB could fall below general expectations of what qualities and experiences it should offer. We are concerned that the actual scale of the construction phase, when encountered, could significantly increase the amount of displacement and provide a clear marker that the area is not delivering the conservation or enhancement of natural beauty. 23. In terms of landscape character the extensive area needed for construction works will, as the LVIA recognises, be entirely changed (with the exception of some individual landscape features) i.e. stripped, excavated and re-profiled. 24. We note the intention to provide temporary bunds and fences to visually contain the construction site. We also 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				recreational resources was not known. Recreational mitigation and enhancements that are now committed to as part of the Sizewell C Project, that respondents in 2014 would not have been aware of, include the provision of approximately 29 hectares of new Open Access land where dogs can be exercised off-lead and a new car park, a Public Right of Way and informal footpaths at Aldhurst Farm, improvements to Kenton Hills car park and the fact that the Coast Path will now be kept open during the construction phase except for potential short periods in rare circumstances. 23. SZC Co. note this point. 24. SZC Co. note NE's recognition that retained woodland 'could' provide screening and that analysis in the LVIA confirms the positive screening that retained woodland provides limiting views of the lower-level construction activity. SZC Co. also note that the majority of the low-level activity in the construction compound area will not be visible from local public vantage points/ rights of way during the construction phase and as such the extent of impact on existing landscape character and visual receptors will be generally as a result of views to taller elements above tree cover in the local area and in more distant views along the coast from elevated areas. 25. SZC Co. acknowledge this point. 26. SZC Co. note that the agreed Natural Beauty and Special Qualities Indicators make reference to a sense of relative tranquillity within the AONB. SZC Co. acknowledge in both Chapters 13 and 15 of Volume 2 of the ES that existing tranquillity currently experienced by recreational receptors in areas away from existing roads and close to parts of the main development site would be lost during the construction phase, largely due to changes to noise with construction sound dominating over natural sound.	

			as vehicle movements from vantage points to the north. (DAS 6.2.5) 25. 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. 26. However, no matter how well a construction site like this is screened and managed it will still communicate its presence to receptors who, seeking a strong sense of tranquillity from the AONB, will be highly sensitive to such activity. 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. 27. We therefore recommend that the examination carefully considers whether the scale and long duration of the construction phase could detract from the delivery of the area's statutory purpose and alter, perhaps permanently, how this part of the AONB is viewed, used and plays its part in the designated area as a whole.				27. SZC Co. does not agree with NE's suggestion that due to the location and duration of the construction phase, this could lead to functional severance of the AONB (north – south) therefore permanently affecting or altering how the immediate part of the AONB is viewed and used and the role it plays as part of the whole AONB and the performance of its statutory purpose. NE appear to evidence this by reference to the displacement projections recorded in Volume 2, Chapter 15, Appendix 15A (Doc. Ref. 6.3), based on the user surveys on the rights of way indicating a reduction in expectations. SZC Co. note that the Sizewell C visitor surveys were undertaken in 2014 when the extent of mitigation and enhancements to recreational resources was not known. Recreational mitigation and enhancements that are now committed to as part of the Sizewell C Project, that respondents in 2014 would not have been aware of, include the provision of approximately 29 hectares of new Open Access land where dogs can be exercised off-lead and a new car park, a Public Right of Way and informal footpaths at Aldhurst Farm, improvements to Kenton Hills car park and the fact that the Coast Path will now be kept open during the construction phase except for potential short periods in rare circumstances.	
			c. Operational phase and mitigation. <u>Design and other embedded mitigation</u>				**c. Operational phase and mitigation** <u>Design and other embedded mitigation</u> Mitigation and design matters are responded to in SZC Co.'s comments on Natural England's Written Representations (section 11 of SZC Co.'s Responses to Written Representations [Ref]. 28. SZC Co. note this point.	

			28. The NTS (section 6.1) describes the application of the design principles and what the designers have sought to achieve in terms of a set of structures which respond to their landscape setting and relate appropriately to the existing power stations. 29. The LVIA (para 13.6.299) in presenting visual effects of the operational station refers to the '*extensive design process that underpins the final proposals which have sought to secure through Design Principles and other means, project design that is integrated and responds appropriately to context*'. We don't disagree that the design of the station has 'sought' that integration and to respond, 'appropriately to context'. 30. The design of the development is guided by a set of overarching and detailed design principles, and informed by important source documents, notably: the Suffolk County landscape character assessment, Suffolk Coast and Heaths AONB Management Plan and the AONBs Landscape Character Guidelines. We agree with the design principles established for the scheme and a unifying design approach. We note the work which has been done 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, etc. 31. 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 their outline with 'large, bold and simple forms', and the work to identify the best colour and surface finishes is welcome, although we are not able to confirm that the colour treatment is the most appropriate. 32. We also note the endorsement of the Design Council. DAS para 13.1.7 reports that *the design process has been*				29. SZC Co. note NE's agreement that the design of the station has sought to integrate the proposals in landscape and visual terms and to respond appropriately to context. 30. SZC Co. note NE's agreement with the design principles established to provide a unifying design approach; the work done to minimise land take for the main nuclear platform; retention of existing screening features; factoring in the 'rurality of the area' into the design of subsidiary structures and in addressing light spill. 31. SZC Co. note NE's acknowledgement of the embedded mitigation in terms of the axial alignment of built structures in relation to the A and B stations, the simplification of their outline and work to identify the best colour and finishes which are noted as welcome. 32. SZC Co. note NE's recognition of the Design Council's review and note they do not dispute their conclusions.	

			the subject of design review by the Design Council, who have noted: "The extension of the Sizewell Nuclear Facility to create Sizewell C is a significant intervention in a sensitive and remarkable landscape. Extensive steps are being taken by the project team to carefully integrate the Sizewell C site into its historic, coastal setting. Overall, we think the proposal is being approached with great care and attention across architecture, engineering, landscape design and ecology." 33. We therefore recognise and appreciate what the design and orientation of the new structures is seeking to achieve. This constitutes essential mitigation. Design measures are however limited in what they can achieve given the nature of the development, the primacy of operational safety of the nuclear facility and the high sensitivity of this landscape. We question whether there is clear enough acceptance in the ES and supporting documents that the design of the power station can only respond to a very limited extent to its sensitive landscape setting. For example: • the architectural merits of the Sizewell C structure in relation to the A and B power stations will not mitigate for the massing effect of the existing and new power stations in close and some more distant views; and • the use of large bold and simple forms and neutral finishes to produce a clean lined profile 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. <u>Screening vegetation</u> 34. We agree 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				33. NE question whether there is a clear enough acceptance in the ES and supporting documents that the proposal can only respond to a very limited extent to its sensitive landscape setting. SZC Co. note that the DAS outlines the substantial design measures undertaken to minimise landscape and visual effects. SZC Co. accept there are limits to what can be done (although SZC Co consider this to be greater than 'very limited') but has explored areas where flexibility does exist in the EPR reactor design and maximised these opportunities. The project description upon which the assessments are based, sets out all embedded mitigation (Doc Ref 6.3). In addition, SZC Co. note that NPS EN-1 and EN-6 set out the government's position in national policy which indicates the test of 'reasonably practicable'. The following extracts from EN1/EN6 are relevant: EN-1 notes that the SZC project should 'aim to minimise harm providing reasonable mitigation where possible and appropriate' and EN-6 notes that 'mitigation [should be] designed to reduce the visual intrusion …as far as reasonably practicable' and acknowledges 'the level of impact will remain in relation to effect on the purposes of the designation'. EN-1 refers to 'principles of good design' and design principles have been developed as part of the design process for SZC to secure design governance. Justification has been provided for the proposals for connector cables carried on pylons. The least impactful option has been selected. SZC Co consider that the bold simple forms will dominate the composition. <u>Screening vegetation</u> 34. SZC Co note NE's agreement that the sea defences should screen lower parts of the power station. Growth rates provided in Volume 2, Chapter 13, paragraph 13.3.39 (Doc Ref 6.3) were informed by the land management team	

			views and more of the development in some longer views from inland. We cannot confirm that the growth rates for screening vegetation set out at para 13.3.39 are achievable. The expected growth rates on the restructured sea defences (13.3.40) could be confirmed by reference to the growth rates achieved by vegetation planted on the defences to help screen the Sizewell B station. 35. Natural England is not persuaded that these design and screening mitigation measures will, by themselves, overcome the cumulative effect of massing three nuclear power stations in this one area and in views along the coast from the north (see our comments below about effect on current views towards Sizewell B). We believe that careful consideration should be given to whether the new power station, in combination with the existing power stations and other energy infrastructure, would produce a fundamental shift in landscape character in this part of the AONB. That shift would move landscape character from one which features energy infrastructure to one in which energy generating and transmission infrastructure is a main defining characteristic. That would certainly affect the area's ability to contribute to the statutory purpose of the AONB and is not easily reconciled with the conservation and enhancement of natural beauty.				for the SZC Co. estate and are considered to be properly informed. 35. Reference is made to the mitigation measures not 'overcoming' the impact of the power stations. With reference to 'overcoming' SZC Co. has provided embedded mitigation as set out in Volume 2, Chapter 13 of the ES and the Design and Access Statement [APP-585 to 587], to reduce adverse effects and ensure that the 'behaviour' of the power station in the landscape is aligned with that of the existing A and B station buildings and support the integration of the power station into the coastal landscape. Design mitigation measures include: • Careful design of the proposed turbine halls including alignment of principle structures on the same axis and building envelope. • Careful design of proposed sea defences as naturalistic dune features similar to those on the coast in the immediate area. • Retention of existing woodland areas surrounding the site to secure screening of the proposal in the wider landscape. The proposals include provision of screening of a substantial amount of lower-level development on the main nuclear island reducing visual effects and are sympathetic to the character of the coastline, combined with a focus on the design and appearance of turbine halls as the primary structures that respond to the existing A and B stations along a common alignment. The significance of effects is recorded in (Volume 2, Chapter 13 of the ES). SZC Co. consider the effects to have been controlled to the extent that is reasonably practicable and aligned with NPS EN1 and EN6. Reference is made to consideration of whether the impact of the power stations including new and existing (in combination), would lead to a fundamental shift in landscape character in this part of the AONB, from a position of being considered as energy infrastructure being a 'feature' of the character to one where energy generation and transmission infrastructure are 'defining' the character	

							and therefore affecting the ability of the area to contribute to the statutory purposes of the AONB. SZC Co. do not agree that the proposals result in a fundamental shift from the energy infrastructure being a 'feature of' to 'defining' the character of this part of the AONB. The LVIA describes the character of the existing AONB including reference to the A and B stations and the presence of transmission infrastructure. Such elements are a feature of this landscape and are not new in this landscape. The Sizewell C power station 'behaves' in the landscape in the same manner as the A and B stations outlined in the Design and Access Statement [APP-585 to 587]. SZC Co. do not consider that the behaviour of the proposal is significantly different from the combined behaviour of the A and B stations, with a relationship to the coast including long views north and south, engagement in relatively close proximity in views from the beach and in views from the landscape to the west. It is not contested that the proposals increase the built volume of the energy infrastructure on the coast in this location, however the wider landscape remains intact providing a significant context within which the power stations sit and are viewed and as such the character of the landscape prevails albeit includes a greater built volume in certain views. In the context of the coast, the sea defences echo those that exist in the immediate area and as such reflect local character and limit the encroachment of the power station into the immediate coastal landscape. In the context of the character of the landside landscape, the extent of existing retained tree cover serves to limit views much as it does in views to the A and B stations. The appreciation of the character of the landscape (landward) will prevail. The impact of the proposal on the AONB is recorded in Volume 2, Chapter 13 and is based on a thorough understanding of the natural beauty and special qualities of the AONB. SZC Co. do not consider that the impact of the operational phase on this part of the AONB affects the purposes of the AONB to the extent that the area will not contribute to its purposes. NPS EN1 and EN6 recognises that effects on the AONB are inevitable. EDF Energy Estate and Landscape and Ecological Management Plan (DOC 8.2)	

			<u>EDF Energy Estate and Landscape and Ecological Management Plan (DOC 8.2)</u> 36. Crucial to the effective mitigation of the scheme is, we believe, the Estates Strategy and Landscape and Ecological Management Plan (LEMP). A much stronger role for the Estate Strategy and the LEMP in mitigating for the presence of the power station in this landscape could, we believe, be sought. 37. The current landscape narrative around the oLEMP is about reinstatement / restoration incorporating screening measures, rather than restoration and enhancement. Landscape is principally referred to in relation to landscape scale habitat creation. For example at para3.5.12 the LVIA says: *The establishment and management of the restored landscape areas and new habitats/vegetation, including areas of proposed and existing structural planting that provides screening of the proposed development and existing structures. This would be secured through the implementation of the oLEMP.*				36. SZC Co. has set out an ambitious vision for the future of the Sizewell Estate and acknowledge the important role of the estate-wide illustrative landscape masterplan and oLEMP, and future iterations of these, in mitigating the effects of SZC and also in enhancing the local landscape in regard to its character, ecology and amenity. The recognised importance of the Sizewell Estate is also shared by the Joint Local Authority Group (JLAG) which recorded in January 2014 that the "… future management of the EDF Sizewell Estate should be an environmental exemplar in order to mitigate long lasting adverse direct and indirect impacts on landscape character, cultural heritage and ecology…", adding that it would require "…an estate management strategy that balances the moderation of visual impacts, enhancement of natural and cultural heritage, strengthening of landscape character and improvement of public access both on and off the existing estate." The estate strategy is given an important role providing long term mitigation for the power station, establishing a naturalised setting for the power station and ensuring the long term retention of key screening woodland that support the integration of the power station. SZC Co. notes its importance to delivering mitigation measures beyond the design and related screening measures proposed for the built structures themselves. The LEMP will be prepared in general accordance with the measures set out in the oLEMP and secured by a requirement within Schedule 2 of the Draft DCO. Preparation of the LEMP will include further engagement with Natural England and other relevant stakeholder at the appropriate time to agree the detailed proposals. 37. The location of the Sizewell C site within the Suffolk Coast and Heaths AONB and in proximity to sensitive biodiversity, heritage and amenity assets and visitor destinations, has been a critical consideration from the outset in the planning and design of the proposed development and in the development of the illustrative masterplan and oLEMP. Several environmental disciplines have contributed to a detailed understanding of the site and its local and wider context and the opportunities that exist to mitigate the effects of the proposed development and	

							enhance the landscape of the EDF Estate in an orchestrated way. The vision for the landscape is founded on the concept of establishing a naturalised landscape, the Suffolk Coast and Heaths AONB landscape in microcosm, creating a mosaic of some of its most valued landscapes such as extensive Suffolk Sandlings grasslands, areas of farmland, mixed woodland, coastal dunes and shingle ridges and the open sea as well as an appropriate landscape setting for the existing and proposed power station structures, that reflects the way that the existing Sizewell A and Sizewell B station structures behave. The design also seeks to reflect a subtle transition from the organised farmland landscape to the west to the more open, expansive and natural coastline and adjacent seascape. The vision also responds to the principles for the management of the Sizewell Estate set out by the JLAG (January 2014) which states that "The creation of a mosaic of heathland, scrub, woodland and wetland, managed by a variety of methods that reflect the variety of habitats, within and around the estate is recommended by this group as a means of helping to compensate and mitigate the impacts of the development and an opportunity to sustainably enhance landscape character and ecological networks with areas adjoining the estate. Such a heterogeneous and sustainable mosaic of habitats is appropriate in the context of the surrounding landscape and wildlife networks. This approach would also maximise the capacity of our wildlife and landscape to cope with climate change in line with the recommendations of the Lawton Report (2010)" SZC Co. believe that the illustrative landscape masterplan presents a compelling future vision for the Sizewell Estate that does not simply re-establish/restore the current landscape of arable farmland and plantations but seeks to create a matrix of locally rare and threatened characteristic landscape types that will significantly enhance the ecological, landscape and amenity value of the area, complementing the landscapes to the north at Minsmere and south of the Sizewell Gap.	
			38. We believe that the LEMP should seek to lift, as far as is possible, 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. 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				38. The 'Sandlings' is a cultural, semi natural landscape. It is considered that full 're-wilding' is not appropriate within the estate and in this part of the SCHAONB. However, allowing natural processes to exert themselves through natural regeneration and habitat succession supported by	

			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. 39. 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.				the oLEMP, will be a feature of the future management regime creating an enhanced and naturalised landscape characterised by a diverse and evolving matrix of connected habitats that will provide a landscape that will support the integration of the power station. In response to engagement in 2019, the Design Council commented on the proposals and stated that "The design ambition for the landscape and its ecological stewardship is exemplary. The landscape character analysis across the masterplan and local area, and appreciation of the ecological merits and opportunities for enhancement is well demonstrated in the current proposal. This has resulted in a coherent design narrative and approach that factors in long-term landscape enhancements with short-term requirements for construction." SZC Co. is currently exploring the scope of the Deed of Obligation through the Environment Fund which has potential to make provision for significant enhancements to landscapes beyond the Sizewell Estate, within and outside the SCHAONB. In addition to the role of the Natural Environment Improvement Fund (Doc Ref. 8.17(D)) in the mitigation of residual landscape and visual effects, SZC Co. is committed to establishing an Environmental Trust, which will partner with other organisations. The Trust is likely to include long-term management of the estate but also deliver on other initiatives to enhance habitats in the vicinity, so that we do contribute to 'creating a true legacy landscape' within - and beyond - the red line boundary given and to 'make a major contribution to 'bigger, better, and more joined up' habitats in the area.' Further details will be shared in due course. 39. SZC Co. acknowledge the SCHAONB Management Plan, SCHAONB natural beauty and special qualities document and local landscape character assessments (and future iterations) will be important references in the development of the LEMP and its periodic review. SZC Co. have provided significant areas of detailed design for approval. The principles for the landscape design are defined in the DAS and SZC Co are committed to delivery of the Requirements in accordance with the Detailed Principles.	

			40. 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 on the site will not compromise that intention to create naturalistic landforms. <u>More general note of caution re. spoil</u> 41. There is a potential risk that the use of spoil to reinstate the construction area may produce an appreciable uplift in the height of the land, especially centrally to the construction area, plus steeper slopes than are characteristic of this part of the AONB. We note that Volume 2 Appendix 3B Materials Management Strategy1.8.4 states: *'It is estimated that there will be more excavation material available than required to backfill the main construction area and borrow pit area. It is anticipated that the additional material would be used to restore the temporary construction area. The landscaping requirements of the temporary construction area are detailed in the oLEMP'* 42. We understand the wish to use excess spoil on the site and the potential for some re-profiling of the area to help screen the training centre and access road. However, this also needs to be carried out very carefully to avoid creating a new topography which presents as highly artificial and/or contrasts significantly with the wider surrounding AONB. A naturalistic set of new landforms must be the clear outcome. **Cumulative effects**				40. SZC Co. note this point. <u>More general note of caution re. spoil</u> 41. SZC Co. note this point. 42. The illustrative proposals embodied with the DCO include the consideration of the quantity of spoil arising from the construction phase which forms the basis of the modelling and design of the proposed landforms. The approach taken has been to ensure the design principles provide an appropriate tie-in to the existing and proposed elements within the landscape including the proposed site access road, retained landscape/ vegetation, SSSI crossing point, Bridleway 19 and existing undisturbed land areas. The illustrative landform proposals are based on the principle of establishing gently undulating slopes characteristic of the local area. The proposed slope gradients are typically shallow and sit comfortably within the landscape such that they are neither dominating, nor have an engineered appearance. During detailed design, slope profiles would be further modified including creating specific topographical conditions for particular habitats / plant communities etc.	

			Cumulative effects with other schemes 43. 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.				Further details of the illustrative masterplan and profiling of local landform post construction are presented in section 8 of the DAS [Ref]. Cumulative effects with other schemes Matters related to cumulative effects with other schemes are responded to in SZC Co.'s comments on Natural England's Written Representations (section 11 of SZC Co.'s Responses to Written Representations [Ref]. 43. The EIA Regulations require that the ES includes consideration of cumulative effects. Schedule 4 of the Infrastructure Planning EIA Regulations and Schedule 3 of the Marine Works EIA Regulations state that the ES should provide a description of: "the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources". Accordingly, the ES considers: • 'Inter-relationships' that occur when the individual environmental effects of the proposed development combine together with one another and lead to significant effects on a single receptor (e.g. air quality and noise impacts occurring on the same receptor). • 'Project-wide effects' that occur when impacts of the main development site and associated developments combine. • 'Cumulative effects with other projects' that arise as a result of the proposed development in combination with other projects and/or development plans within the Zone of Influence (ZoI) of the proposed development. It is assumed that the potentially cumulative schemes will take place as per the descriptions made publicly available at the time of writing this ES, unless otherwise specified in the technical chapter. A staged process has been followed to assess cumulative impacts with other projects, plans and programmes which includes: • Stage 1: establishing a Zone of Influence (ZoI) and 'long list' of non-Sizewell C projects, plans and programmes. • Stage 2: selecting a short list of projects, plans and programmes for the assessment. • Stage 3: information gathering.	

			44. Our primary concern are the EA1 North and EA2 offshore wind energy schemes because these are 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. 45. 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, taking advantage of the narrowness of the AONB at this point. The cable trenching and drilling can be expected to have a significant effect (subject to full details of the proposal being assessed). A combination of this and the Sizewell C construction site raises the prospect of significant cumulative effects. 46. Reference Volume 10 Project-wide, Cumulative and Transboundary Effects Chapter 4 Assessment of Cumulative Effects with Other Plans, Projects and Programmes considers the effect of relevant proposals, including the EA1N and EA2 onshore cabling, on landscape and visual receptors. For the construction phase for the AONB and Heritage Coast it concludes: • Suffolk Coast and Heaths Area AONB – combined major adverse **significant** effects from the Sizewell C Project during construction. The addition of the other proposals would not result in an increase to the significance of the effects. • Suffolk Heritage Coast – combined major adverse **significant** effects from the Sizewell C Project during				• Stage 4: assessment. Volume 10 of the ES (Doc Ref. 6.11) sets out the cumulative and transboundary effects associated with the proposed development. 44. Section 4.7 of Volume 10 of the ES (Doc Ref. 6.11) considers the potential cumulative landscape and visual effects of the Sizewell C Project with other proposed projects. This includes the East Anglia ONE North Offshore Windfarm and the East Anglia TWO Offshore Windfarm; in particular the onshore elements of these projects. Other proposed projects at a much earlier stage in their development were identified but not assessed in detail due to the level of information available on what the proposals would entail. Those schemes of potential relevance to the SCHAONB were: • Nautilus Interconnector. • Eurolink Interconnector. • Greater Gabbard extension. • Galloper Extension offshore windfarm. 45. SZC Co. reviewed the information available on the proposed landfall and cable route for EA1 North and EA2 at the time of the ES and continue to review any proposed changes as they come forwards. This informed the assessment of effects in Volume 10 of the ES (Doc Ref. 6.11). 46. SZC Co. acknowledge this point.	

			construction. The addition of the other proposals would not result in an increase to the significance of the effects. 47. Of course if the effects (localised) of the power station's construction have already been deemed by the ES to be major adverse then the cumulative effect can't register as any higher on that scale. We would contend however, that the cumulative effect could nonetheless reinforce the effects of major construction on the AONB. Those seeking to enjoy the area's special qualities and natural beauty will not differentiate between the two construction sites but simply perceive them as a single and very major and intrusive development within and disrupting this part of the AONB, and reinforce an association of the area with ongoing, long-term and major construction. Of course how this cumulative effect would actually be expressed would depend on what part of the Sizewell project's nine to twelve years construction phase the cable route's construction (expected to take three years) would coincide with. 48. For the operational phase of the cabling route we don't anticipate any significant cumulative effects with the operational power station, assuming that the undergrounding scheme has been properly managed, and the landscape fully reinstated along the cable route. The proposed new sub-station at Friston would be sited well outside the AONB and we don't anticipate any cumulative construction or operational phase cumulative effects with the Sizewell C project. <u>Negating the design mitigation for the Sizewell B station</u> 49. We would like to highlight the impact of the Sizewell C scheme on how the Sizewell B station currently 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'.				47. SZC Co. note this point. 48. SZC Co. note that NE do not anticipate any significant cumulative effects from EA1N and EA2 onshore cabling with the operational power station. <u>Negating the design mitigation for the Sizewell B station</u> Matters related to negating the design mitigation for the Sizewell B station are addressed in SZC Co.'s comments on Natural England's Written Representations (section 11 of SZC Co.'s Responses to Written Representations [Ref]. 49. SZC Co. note this point. 50. Regarding the impact of SZC on SZB in views from the north and Coastguard Cottages (inc impact on the	

			50. 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. 52. The LVIA (para 13.6.302) identified a significant adverse effect across the Minsmere Coastal Levels and the southern edge of Dunwich Heath, recognising that *'the main platform would occupy the foreground in views from the north and partially obscure existing views of Sizewell A/B'*. That same bullet point also says that *'There would be a slight extension of built form further west in views from these locations'*. We believe that the actual perception would be of a visual massing of industrial development in that and other views				effectiveness of SZB embedded mitigation /design) altering how its perceived, SZC CO. acknowledges that the present context of SZB will alter with the proposed development and as a result will be viewed in a different context especially from the north. While SZB's appearance in views along the coast will alter, it will remain visible, sitting in a sequence of three periods of nuclear power generation. The design principles described in the Design and Access Statement [APP-585 to 587] identify the importance of securing the alignment of each power station's major structures on a common axis to allow each to be read as separate objects without distorting their legibility through changes in orientation. This design discipline will be apparent in views along the coast from the north. Regarding 'attempting to complement existing power stations in terms of: architectural style, merit and orientation' and regarding 'performing differently' including reference to 'greater massing and spread of industrial development…. Strongly conflicting with and detracting from the wider landscape', the proposals are 'of their time' responding to a different set of circumstances including by example, engineering design requirements, security context and building envelope considerations. The design works to an agreed set of design principles agreed with stakeholders, including NE. NE will be aware of the reasons why SZC cannot be designed to look like SZB and this is acknowledged by them in NE-66. SZC Co.'s design team are of the opinion that to mimic the design of SZB in evolving the design for SZC, would not be desirable in any event, in order to retain the integrity of the SZB design. The reasoning behind the design is outlined in the DAS which includes reference to the Design Council's positive opinion of the design approach. 52. SZC Co. do not agree that the proposal is strongly conflicting with and detracting from the surrounding landscape. The DAS describes the measures taken during the development of the design to respond to the existing landscape context and to design a landscape response that responds to the character [APP-585 to 587]. SZC Co. have already commented on the potential for industrialisation raised by NE in earlier responses above.	

			along the coast north of the power station visually strongly conflicting with and detracting from the wider landscape. **Comments on some individual components of the scheme** 53. As explained earlier our focus is on the implications of the development as a whole for the statutory purpose of the AONB. We believe that the local planning authorities and Suffolk Coast and Heaths AONB Partnership are better placed to provide more detail advice relating to individual elements of the development. However, we would like to provide some observations on some individual components of the scheme. <u>Main power station platform – turbine halls and reactor buildings</u> 54. 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. 55. 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. 56. The design mitigation measures identified are welcome. Without further site visits we do not wish to make any definitive comments about the chosen colour scheme. The potential mitigation benefits will however:				53. SZC Co. note this point. <u>Main power station platform – turbine halls and reactor buildings</u> 54. Natural's England's identification of the positive embedded mitigation measures is noted. 55. SZC Co. confirm that the domes cannot be clad. Detailed Built Development Design Principles 62 and 63, as set out in the Design and Access Statement [APP-585 to 587], identify how the finishes of the domes will be treated. Sections 6.11 and 6.16 of the DAS also provide detail on the treatment of proposed concrete buildings/structures such as the reactor domes, and section 7.5 of the DAS specifically covers the buildings relating to the nuclear island. 56. Regarding the three points raised: - the cumulative effect of all new and existing power station and transmission is assessed in the LVIA and the impact is recorded, including those on the AONB. The embedded	

			– not address a general cumulative effect of the power station with existing energy infrastructure on the landscape character of the AONB; – not alter the massing effect of the new and existing power stations on long coastal views from the north; and – be undermined by the proposal to carry electrical cables on pylons rather than, as initially proposed, undergrounding those connectors. The resulting visual clutter will detract from clean lines established for the main buildings.				mitigation does benefit the cumulative impact ensuring that the behaviour of the power stations is controlled. There is evident design control in place including alignment of the main structures, colour selection for the main elements, the extent of commitment to detail design in the submitted information and continuation of the coastal defences. - The effect on the long coastal views is recorded in the LVIA (Volume 2, Chapter 13 of the ES). The embedded mitigation does support the mitigation of the proposal in these views with the wider landscape context retained and dominating the context within which the new and existing buildings are viewed, the character of the coastal defences and retained woodland on the landside controlling the visibility of the proposal and in turn ensuring the character of the landscape prevails in these views. - With reference to the pylons 'undermining' the recognised 'decluttered design', SZC Co. note that the LVIA records the effects of this transmission infrastructure in Volume 2, Chapter 13 of the ES. The feasibility of undergrounding the overhead transmission lines has been explored following early consultation proposals. SZC Co.'s landscape advisors have been involved in the feasibility study and whilst acknowledging that a below ground option is preferrable from a landscape and design perspective, the feasibility of delivering below ground connection is considered to be impractical from an engineering perspective owing to the very constrained nature of the site. The pylon feasibility report has been the subject of a number of stakeholder sessions where the project engineering team have outlined the reasoning for overhead transmission and the option selection process and provided additional evidence for the reasoning. SZC Co. note that our landscape advisors (LDA Design) advised on the best above ground option which has been selected. The simple massing of the turbine halls of the new power station will replicate the behaviour of Sizewell A and B and will be the predominant characteristic of the new power station in the wider landscape and views.	
			<u>SSSI crossing</u> 57. Natural England's pre-application advice has consistently sought an option which best protects the ecological quality of the Sizewell Marshes SSSI. That is not to dismiss the need for a crossing structure designed to respect its AONB location, but to ensure that the SSSI can continue to flourish as a prominent and important landscape feature as well as a valuable habitat. We are therefore disappointed that a				<u>SSSI crossing</u> 57. SZC Co. note this point.	

			culverted causeway has been selected because we don't believe that this is the best option for maintaining the wetland SSSI. 58. The main mitigation measure if a causeway is constructed is an effective planting scheme on and in proximity to the crossing to maximise how the causeway is screened and blended into the landscape. We note a commitment to plant the margins with trees and shrubs to integrate the crossing into the local landscape and screen / filter views of moving vehicles. That will not compensate for any significant harm which arises to the SSSI, but it may reduce the visual impact of the causeway and its cumulative impact with any visual degradation of the wetland habitat. <u>Coastal and beach structures</u> 59. In relation to sea defences, beach frontage and impacts on the coastal zone we offer the following comments: • We welcome the intention to undertake and complete works to the sea defences, northern mound and beach landing facility and access road as early as possible in the programme in part to minimise impacts on amenity to 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. Volume 2 Chapter 3 Description of Construction 3.4.57 The BLF would extend up to approximately 37m seaward of the mean high water mark and approximately 70m seaward of the HCDF.				58. SZC Co. note NE's recognition of the benefits of planting at the margins of the SSSI crossing that will integrate the crossing into the local landscape and screen/filter views of moving vehicles. <u>Coastal and beach structures</u> 59. SZC Co. note NE's recognition of the benefits of the early delivery of the sea defences, northern mound, BLF and access road to minimise impacts on amenity of users of the coastline. SZC Co. also note NE's recognition of the effective screening of low level buildings and structures provided by the sea defences further reinforced by proposed planting and the benefits of the ability to dismantle the BLF when compared to a permanent jetty. SZC Co. recognise that the beach/coastline will be altered by the coastal defences but do not consider the assessment of effects has been 'underplayed' as implied by NE. (Doc Ref 6.3) The profile and treatment of the defences reflects the local 'dune' character of sea defences (including the blending of slope gradient, varied crest level and planting) that exist in the immediate area and whilst they are larger than the existing defences. SZC Co. do not consider that necessarily emphases their artificial nature or increases the contrast with the natural topography in the area. SZC Co. confirm that the proposed soil and sand profiles for the sea defences will adhere to underlying rock armour and that specialist advice has been sought is relation to how the profile is built up. SZC Co. note NE's concerns in relation to storm tides and the potential exposure of rock armour in the event sea defence material gets washed away. SZC Co. will commit to a management plan to monitor and protect the soft and hard coastal defences to maintain the character of the area. Ongoing management	

			Para 6.2.24 of the DAS says that the BLF is designed to allow the deck sections to be dismantled and stored when not in operational use, with pier supports remaining in-situ as permanent features. • 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. There is the prospect (if not likelihood) that storms and strong tides would frequently wash away that material leaving the rock armour exposed. If that exposure was very regular and perhaps finally permanent the rock armour would be a strong visual feature of this stretch of coastline.				responsibility will be carried out by the Shoreline Management Group.	

			Accommodation campus 60. 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. 61. 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; 62. 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. We would make two important points in relation to the DCO documents: • There does not seem to be an explanation in the DCO documents of any alternative and less sensitive sites that have been considered and rejected for the				Accommodation campus 60. SZC Co. do not agree that the worker campus will appear as contiguous with the main development construction site. Roadside planting along Eastbridge Road will provide eye level screening of the temporary construction area. SZC Co. acknowledge that the southern portion of the campus (the amenity buildings) will be viewed in association with the site entrance to the construction plaza area. 61. SZC Co. note this point. 62. SZC Co. note NE's recognition of the benefits of the design principles as applied to the campus and the proposed orientation of the accommodation units. SZC Co. also note the recognition of the location of the proposed sports facilities at Leiston, minimising impacts on the landscape adjoining the campus. In response to the feedback received for Deadline 2 to LI.1.41, the key design principles set out in Table A.1 [APP-587 to account for the accommodation campus. NE note that alternative locations for campus accommodation are not provided in the DCO submission. SZC Co. note that an alternative assessment for the	

			accommodation campus and the reasons for their rejection. • It would have been helpful to have some images showing how the campus would appear in the landscape. <u>New National Grid 44 kilovolts substation, with associated infrastructure including electrical connections (additional pylons)</u> 63. 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>Sizewell Link Road</u> 64. We note the construction and operational phase mitigation for the Link Road. Ref construction phase. Para 13.5.9 of the LVIA 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*. 65. Ref operational phase. Para 13.5.12 of the LVIA 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*. 66. Para 6.2.18 of the DAS also says that post construction phase the road would be reduced in width and the surrounding landscape re-profiled to create naturalistic landforms covered with Sandlings grassland and pockets of mixed scrub, heath and stands of trees. 67. We welcome the mitigation proposals for the permanent link road. We would however, like to caution against the risk				campus is presented within the alternatives and design evolution chapter found within Volume 2, Chapter 6 of the ES (Doc Ref 6.3). SZC Co note that Procedural Decision 4 made a request for visualisations of the workers campus. These have been provided. <u>New National Grid 44 kilovolts substation, with associated infrastructure including electrical connections (additional pylons)</u> 63. SZC Co. recognise that the proposed overhead transmission infrastructure 'will add visual 'clutter' and have provided a justification for the final proposals and reasoning for why the undergrounding of cables was not possible. SZC Co. do not however agree that the pylons and monopoles 'detract from any positive attributes (strong clean lines) that the reactor buildings may be able to achieve'. The positive attributes identified by NE remain effective as mitigation measures. This is confirmed in NE's response at items 29-33. <u>Sizewell Link Road</u> 64. SZC Co. note that in discussion with Natural England that items 64-67 relate to the access road within the main development site boundary, not the separate Sizewell link road assessed in Volume 6 of the ES. 65. SZC Co. note this point. 66. SZC Co. note this point. 67. SZC CO. note that NE welcome the mitigation proposals for the access road. SZC CO. note the importance that the road has a rural appearance and confirm that the design will be developed sympathetically to achieve that outcome. **June 2021 - Comments on Written Representations**	

			of creating a road for the operational phase which despite the promised mitigation, still presents as a suburbanising feature in a rural landscape. 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>Further comments on the DCO application, May 2021</u>** Natural England welcomes our continued engagement with EDF Energy on the issue of landscape and specifically the effect of this scheme on the Suffolk Coast and Heaths AONB and its statutory purpose. We wish to emphasise that we are formulating and presenting our advice as the national landscape agency and designating authority for AONBs in England. As such our advice is focused on the implications of this scheme for the statutory purpose of the AONB, which is to conserve and enhance the area's natural beauty. 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. 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. Our advice generally relates to how the development as a whole would affect the statutory purpose, rather than how individual elements would do so, although we will provide some commentary on some of those individual elements where we believe that it is helpful to do so. We have reviewed the applicant's LVIA. We are not able to comment on all aspects, for example in relation to each viewpoint. The local planning authority and the AONB				**i. The Applicant's Landscape and Visual Impact Assessment** As noted in the Initial Statement of Common Ground between SZC Co. and Natural England [REP2-071], Natural England has been a key consultee in developing the approach to the LVIA, details of which are provided in Volume 2, Appendix 13H of the ES [APP-217]. SZC Co. note the extent of the review Natural England has undertaken of the LVIA and note that the review is limited in specific aspects and that it defers to the local planning authority and AONB Partnership on these matters. SZC Co. can confirm that it is continuing to discuss the detailed findings and assessment judgements that Natural England have indicated they are not in a position to comment on due to the scope of their remit, with the Suffolk Coast and Heaths AONB Partnership, Suffolk County Council and East Suffolk Council. SZC Co. note Natural England's agreement to the LVIA methodology and baseline which form an important basis on which a robust assessment of the landscape and visual effects of the proposed development has been presented. **ii. Defined Special Qualities and Natural Beauty Indicators** SZC Co. is grateful for Natural England's comment that the approach to the assessment of the effects of the proposed development on the Suffolk coast and Heaths AONB, presented in the LVIA, is helpful. SZC Co. acknowledges that AONBs have been confirmed by Government as having the highest status of protection in relation to landscape and scenic beauty and it has given substantial weight to its statutory purpose throughout the project's development, design and assessment stages. As defined by S82(1) of the Countryside and Rights of Way Act 2000, the statutory purpose of the AONB designation is to conserve and enhance the natural beauty of the area. It follows that the assessment of effects of the Sizewell C project on the Suffolk Coast and Heaths AONB should therefore consider the characteristics, elements and features that contribute to its natural beauty.	

			Partnership may be able to comment on the viewpoints 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 the conclusions reached by the assessor 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. A combination of our perspective as the national landscape agency and our focus on the statutory purpose of the AONB has produced a different assessment about the effect of the scheme on the AONB than concluded by EDF Energy and its consultants. In short, we conclude that the effects would be significant with implications for the whole of this part of the AONB (and therefore for the designated area as a whole) and the applicant contends that any significant effects would be localised. We see no prospect for that fundamental difference to be overcome. We do recognise and welcome the work by the applicant to identify design and screening mitigation measures. These would help to accommodate the power station within this highly sensitive landscape but would not suffice to reduce its impact below a significant level. As we have previously advised, the long-term post-construction restoration of the MDS and surrounding area to semi-natural habitats through the Outline Landscape and Ecology Management Plan (oLEMP) and Natural Environment Fund will also 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. For this issue we will be outlining our detailed response in our written representations and will continue to engage with the applicant through the statement of common ground after these have been submitted.				As part of SZC Co's pre-application engagement, discussions between the Suffolk Coast and Heaths AONB Partnership, Suffolk County Council, Suffolk Coastal District Council (now East Suffolk Council) and SZC Co., were held in order to understand and document what constitutes the natural beauty and special qualities of the Suffolk Coast and Heaths AONB. This was to ensure that a comprehensive assessment and an informed design process would be possible. The final and agreed version of the Suffolk Coast and Heaths AONB Natural Beauty and Special Qualities Indicators document is presented at Volume 2, Appendix 13C of the ES [APP-217]. The landscape and visual impacts of Sizewell C during construction and operation are comprehensively assessed in the application, and the nature, extent and significance of effects of the proposals during construction and operation on the Suffolk Coast and Heaths AONB is described and is informed by a full appreciation of the AONB's documented natural beauty and special qualities. Natural England states that in its view, a high adverse impact on characteristics fundamental to the AONB would occur and that the capacity to deliver the AONB's statutory purpose would be "…significantly compromised and across a more than limited extent" (referencing in this regard the conclusion presented in the LVIA at paragraph 13.6.149). The landscape and visual assessment at Volume 2, Chapter 13 of the ES [APP-216] contains a comprehensive assessment of effects of the proposed development on the natural beauty and special qualities of the Suffolk Coast and Heaths AONB, but Natural England highlights only the overall summary paragraph at 13.6.149 of the ES which relates to nonsignificant effects relating to a limited extent of the wider AONB during construction. SZC Co. considers that the landscape and visual impact assessment clearly sets out and acknowledges and describes the geographic extent of significant effects on the AONB and a number of its special qualities and natural beauty indicators in the paragraphs proceeding this summary and updated by the ES Addendum at Volume 1, Chapter 2 [AS-181] and Volume 3, Appendix 2.8.A [AS-206].	

			August 2021 We have no further comment at this time. We are currently engaging with the Applicant on the issue of landscape and will update our position accordingly when presented with new information.				**iii. Design principles and mitigation** SZC Co. welcomes Natural England's acknowledgement of the efficacy of the proposed design and mitigation measures and notes that there are four specific areas where it qualifies this. With regards to the specification of the colour of the turbine halls, SZC Co. anticipates that the selection of final materials for the Turbine Halls and OSC will be agreed with ESC in consultation with relevant stakeholders (including the AONB Partnership), finalising colour and cladding design founded on the extensive level of detail and commitments already illustrated for approval in the Design and Access Statement [APP-585 to APP-587]. With regards to the axial alignment of the principal power station structures, SZC Co. notes Natural England's comment that this alignment is only relevant, in Natural England's view, in so far as it contributes to mitigating the effects of Sizewell C both individually and cumulatively with the existing power stations and that this is not relevant to the purpose of the AONB. With regards to the Design Council's engagement, the location of Sizewell C within the Suffolk Coast and Heaths AONB was highlighted as a key issue informing design and the Design Council's responses acknowledge this (refer to Appendix B of the Design and Access Statement [APP-587]). With regards to pylons, SZC Co. recognise that design solutions that minimise the visibility of pylons would be preferable and has selected a configuration that has the least visual impact from locations along the coast of the options considered. Power transmission lines are a standard feature of views of electricity generating stations, and form part of the baseline situation at Sizewell. At Sizewell, existing transmission lines traverse the Suffolk Coast and Heaths AONB to connect to Sizewell B power station. An important aspect of the proposed development is that no additional lines would be required to support the addition of Sizewell C – the pylons included in the proposals would simply connect Sizewell C to the end of	

							the existing transmission route. The four pylons required for this would all be located within the operational footprint of the proposed power station. In accordance with NPS EN-6, SZC Co. has sought to mitigate landscape and visual effects through design where practicable. As paragraph 3.10.8 of NPS EN-6 recognises, however, effects cannot be eliminated. SZC Co. has proposed a Natural Environment Improvement Fund (Doc Ref. 8.17(D)) as an effective approach to mitigating the residual landscape and visual effects of the proposed development, the scope and magnitude of which continues to be discussed with relevant parties. **iv. The construction phase** SZC Co. notes Natural England's comments regarding the various perceptual cues that it identifies as potentially arising across the wider landscape. The LVIA comprehensively assesses the landscape and visual effects of the proposed development and acknowledges the geographic extent over which views to construction phase activity may theoretically be possible. The extent of potential visibility of the construction phase is recognised in the application and illustrated on the Zone of Theoretical Visibility plan (Figure 13.6A [APP-220]). The visibility of construction phase parameters is presented on several photowire visualisations ([APP-222] and [APP-223]) and assessed. The LVIA (Volume 2, Chapter 13 of the ES [APP- 216]) records the scale and significance of effects on visual receptor groups for the full extent of the LVIA study area (which was agreed with LVIA consultees) to inform its judgements regarding the effects on the Suffolk Coast and Heaths AONB and Suffolk Heritage Coast during construction. It clearly states where those effects are assessed to be Major or Major- Moderate (Significant) and adverse and where effects would be below the threshold of significant. SZC Co. also considers the effects of the proposed development to have been controlled to the extent that is reasonably practicable and aligned with NPS EN-1 and EN-6.	

							v. The length of the construction phase and how this area is perceived,valued and used SZC Co. disagree with Natural England's comment that the combined scale and duration of the construction phase would permanently alter how this part of the AONB is viewed, used and plays its part in the area as a whole. The LVIA comprehensively assesses the landscape and visual effects of the proposed development and acknowledges the geographic extent over which views to construction phase activity may theoretically be possible. Once the construction phase is complete, the permanent effects would arise from the operational power station and the LVIA also comprehensively assesses these effects. SZC Co. would point to the presence of two existing power stations at Sizewell and that their effects arise from their physical presence and not their construction, albeit there would be memories of this amongst people who witnessed their construction and/or have seen representations of this in photographs or film. vi. The operational phase and cumulative effects Sizewell A, Sizewell B and other built elements present in the landscape at the time the assessment was undertaken (including the Greater Gabbard and Galloper offshore wind farm substations and pylons) form part of the documented baseline in the LVIA. As such the LVIA presents an assessment of the landscape and visual effects resulting from the construction and operation of Sizewell C within the context of these elements of energy infrastructure being present. vii. The capacity of the landscape to accommodate the development SZC Co. notes Natural England's comment that it would 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', and would refer to the LVIA which presents a comprehensive assessment,	

							supported by visualisations, of the nature of views to the operational power station and in the context of existing energy infrastructure. viii. The vulnerability of this narrow section of the AONB SZC Co. does not agree with Natural England's comment that Sizewell C could 'shift its [the narrow neck of the designated area linking more extensive areas north and south] landscape character from one of principally natural beauty to one which is primarily associated with energy infrastructure'. SZC Co. note that nuclear energy generation is a long established feature of this part of the Suffolk Coast and Heaths AONB and that the post construction restoration of the construction site would deliver positive gains to the AONB through the creation of characteristic Sandlings habitats, in part in areas currently characterised by farmland With regards to the construction phase, SZC Co. acknowledges that the area required to construct Sizewell C extends across the width of the designated area, from Sizewell Beach in the east up to and beyond the western boundary of the AONB in the west. SZC Co. has sought to minimise the land required to construct Sizewell C and to retain existing and established vegetation to screen as much of the construction phase activity as is practicable. SZC Co. would also note that the construction phase, whilst extending over 9 to 12 years is temporary and reversible. ix. The ability of the landscape outside the AONB to 'buffer' the effects of the scheme SZC Co. agrees that land within the setting of an AONB can play a supporting role to the designated area, as set out in Natural England's written response. SZC Co. considers that the area in the setting of the Suffolk Coast and Heaths AONB in the vicinity of the main development site complements the designated area, as supported by the AONB Partnership's acknowledgement in meetings that it is not possible to distinguish where the boundary of the AONB	

							lies. SZC Co. also considers that land within the setting of the Suffolk Coast and Heaths AONB would continue to play this supporting role during the construction and operation of the main development site, with the wider landscape immediately outside the AONB remaining largely intact. This is what was meant by the 'buffering' of the AONB in the SZC Co. responses included within the Initial Statement of Common Ground – Natural England [REP2-071] submitted at Deadline 2. SZC Co., has given careful consideration to development within the setting of the AONB. The SZC Co. response to ExA Q1 LI.1.2 submitted at Deadline 2 [REP2-100] sets out how effects on the AONB and its setting have been considered. In addition, the response to ExA Q1 LI.1.42 to be submitted by SZC Co. at Deadline 3 sets out how the design of the accommodation campus in particular has responded to its location on the western boundary of the AONB, including reducing landscape and visual impacts through siting; consideration of orientation, massing and height of buildings; siting of taller building towards the middle of the campus; retention of existing vegetation; careful siting of the proposed realigned bridleway 19; and consideration of the Suffolk Coast and Heaths AONB Guidance on the Selection and Use of Colour in Development document and material selection. x. Negating the design mitigation for the Sizewell B station SZC Co. notes Natural England's concern that Sizewell C would 'detract significantly from the effectiveness of Sizewell B's embedded mitigation'. SZC Co. acknowledges that the present context of Sizewell B will alter with the proposed development and as a result will be viewed in a different context, especially from the north. While Sizewell B's appearance in views along the coast will alter, it will remain visible, sitting in a sequence of three periods of nuclear power generation. The design principles described in the Design and Access Statement [APP-585 to APP-587] identify the importance of securing the alignment of each power station's major structures on a common axis to allow each to be read as separate objects without distorting their legibility through changes in	

							orientation. This design discipline will be apparent in views along the coast from the north. xi. Cumulative effects with other schemes SZC Co. notes Natural England's acknowledgement of the identification of significant effects between the Sizewell C Project during construction and the cabling for EA1 North and EA2. SZC Co. also notes Natural England's acknowledgement that other proposed NSIPs were not considered in detail in the cumulative assessment of effects resulting from the Sizewell C Project and other projects because they are at an early and more speculative stage of design In relation to the presence of existing and proposed offshore wind energy schemes in the marine setting of the wider AONB, SZC Co. assesses only the onshore aspects of proposed offshore wind energy schemes in Volume 10, Chapter 4 of the ES [APP-578], as updated by Volume 1, Chapter 10 of the ES Addendum [AS-189]. This is because of the substantial distance between the proposed turbines at EA1 North and EA2 and the coastline, with the closest proposed turbines over 30km from the main development site. At this distance, SZC Co. considers that there would be no significant landscape or visual effects from these proposals onshore. NNB Generation Company (SZC) Limited. Registered in England and Wales. Registered No. 6937084. Registered office: 90 Whitfield Street, London W1T 4EZ NOT PROTECTIVELY MARKED Comments on Written Representations | 143 xii. The beach, coastal landscape and seascape The Heritage Coast SZC Co. considers that the landscape and visual impact assessment clearly sets out and acknowledges the effects on the Suffolk Heritage Coast. SZC Co. notes Natural England's reference to one of the key characteristics the Suffolk Coast and Heaths National Character (NCA Profile: 82 Suffolk Coast and Heaths - NE491). SZC Co. notes that the key characteristics	

							described in the NCA profile do not necessarily apply to specific locations within the NCA, which extends between Great Yarmouth in the north to Harwich in the south. SZC Co. notes that there is specific reference to existing power stations at Sizewell in the preceding key characteristic to the one referenced by Natural England that records (in full): "Large commercial ports (Harwich and Felixstowe), Sizewell nuclear power station, the Cobra Mist transmitting station and the Orwell Bridge all contribute landmark diversity. Major transport infrastructure includes the A14 and A12 and the main East Coast rail line". SZC Co. does not consider that the addition of Sizewell C represents the 'industrialisation' of the coastline, with the expansive coastal setting of the Sizewell C site remaining dominant and the landscape and seascape character prevailing. Seascape and offshore views SZC Co. notes Natural England's concern regarding the impact of the development on onshore and longshore views that combine land, foreshore and sea, which are important to how people experience this part of the Suffolk Coast and Heaths AONB. SZC Co. acknowledge that there are views to the proposed development from locations along the coastline, and in particular from locations to the north of the proposed site. The visual impacts of the proposed development are presented in the LVIA, which includes reference to visualisations, including from locations along the coastline and offshore. The existing views include the existing power station structures which are seen along the coastline and in the context of the woodland cover of the Estate Sandlands and Coastal Levels landscape with the expansive coastal landscape and seascape dominating the views within which the proposed development would be seen. The proposals respond to the landscape character with behaviours that are similar to the existing Sizewell A and Sizewell B power station structures. SZC Co. has given careful consideration to the design of the Sizewell C proposals within the Suffolk Coast and Heaths AONB and Suffolk Heritage Coast, and has sought to minimise and mitigate landscape and visual effects and	

							effects on the natural beauty and special qualities of the AONB, and address the conservation, protection and enhancement of the natural beauty of the Heritage Coast through an iterative design process and to retain a natural appearance to the coastline. SZC Co. notes Natural England's concern regarding the impact of the development on onshore and longshore views that combine land, foreshore and sea, which are important to how people experience this part of the Suffolk Coast and Heaths AONB. The design of the sea defence and northern mound would have a natural character, similar in appearance to the Sizewell B sea defence, which is a substantially man-made feature deliberately designed as a 'natural' feature of the coastal dunes and shingle ridges landscape character type xiii. Sea defences and screening vegetation SZC Co. notes Natural England's agreement to the efficacy of the sea defences in screening lower parts of the power station and ground level views and its stated position that it is not persuaded that this and other mitigation will overcome the effect three nuclear power stations in views along the coast from the north. The residual landscape and visual effects are recorded in the LVIA and SZC Co. also highlight the role of the Natural Environment Improvement Fund in mitigating the residual landscape and visual effects of the proposed development. xiv. EDF Energy Estate and Landscape and Ecological Management Plan SZC Co. has set out an ambitious vision for the future of the Sizewell Estate and acknowledge the important role of the estate-wide illustrative landscape masterplan and oLEMP [REP2-010], and future iterations of these, in mitigating the effects of SZC and also in enhancing the local landscape in regard to its character, ecology and amenity. SZC Co. believes that these documents provide a compelling future vision for the Sizewell Estate that does not simply re-	

							establish/restore the current landscape of arable farmland and plantations but seeks to create a matrix of locally rare and threatened characteristic landscape types that will significantly enhance the ecological, landscape and amenity value of the area, complementing the landscapes to the north at Minsmere and south of the Sizewell Gap. With regard to the extent to which the oLEMP [REP2- 010] can provide an 'uplift' in terms of landscape character and quality, please refer to SZC Co response provided against issues 36-40 in the Initial Statement of Common Ground with Natural England [REP2-071]. SZC Co. notes Natural England's comments on the Landscape and Ecological Management Plan (LEMP) and its importance to delivering mitigation measures beyond the design and related screening measures proposed for the built structures themselves. The LEMP will be prepared in general accordance with the measures set out in the oLEMP [REP2-010] and secured by a requirement within Schedule 2 of the Draft DCO. Preparation of the LEMP will include further engagement with Natural England and other relevant stakeholder at the appropriate time to agree the detailed proposals. In addition to the role of the Natural Environment Improvement Fund (Doc Ref. 8.17(D)) in the mitigation of residual landscape and visual effects, SZC Co. is committed to establishing an Environmental Trust, which will partner with other organisations. The Trust is likely to include long-term management of the estate but also deliver on other initiatives to enhance habitats in the vicinity, so that we do contribute to 'creating a true legacy landscape' within - and beyond - the red line boundary given and to 'make a major contribution to 'bigger, better, and more joined up' habitats in the area.' Further details will be shared with Natural England in due course. xv. Some comments on individual components of the scheme Main power station platform – reactor buildings and turbine halls	

							SZC Co. note Natural England's comments. Outage Car Park SZC Co. note Natural England's comments. Coastal and beach structures SZC Co. notes Natural England's comments. With regards to the adherence of the landscape proposals to the underlying rock armour, SZC Co. will continue to engage with Natural England on this matter and provide an update within the next version of the Statement of Common Ground. Accommodation Campus SZC notes Natural England's comments. New National Grid 44 Kilovolts substation, with associated infrastructure including electrical connections (additional pylons) SZC Co. notes Natural England's comments and refer to its response above. Site access road and Sizewell Link Road SZC Co. appreciates Natural England's comments on mitigation measures associated with the site access road and Sizewell link road. The design of both the site access road and the Sizewell link road seek to minimise the use of features such as kerbs, lighting and signage, introducing them only where required to comply with highway standards, such as at roundabouts or junctions with main roads. This is as set out in the Design and Access Statement [APP-585 to APP 587] for the main development site and the Associated Development Design Principles [REP2-041], with the drainage strategy for the Sizewell link road relying on the use of roadside swales which would not work successfully if kerbs were present. SSSI Crossing	

							SZC Co. notes Natural England's comments **August 2021** Discussions ongoing between SZC Co. and Natural England.	
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 **(C) and (O)**	**<u>Context and background</u>** As set out in NPS EN – 1, "*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. The IPC should not grant development consent for any development that would result in its loss or deterioration unless the benefits (including need) of the development, in that location outweigh the loss of the woodland habitat*" (paragraph 5.3.1). 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; • ***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;	TBC			The only two areas of ancient woodland with the potential to be affected are on the Associated Development sites. There is no landtake to the ancient woodland blocks and buffers / offsets are being provided. Foxburrow Wood adjacent to the Two village bypass is the closest ancient woodland to any of the sites and has a minimum 15m offset from the excavation works areas. The Green Rail Route site boundary provides a 15m buffer with Buckles Wood. No further ancient woodlands have been identified within the extensive ecological surveys for the survey corridors associated with the EIA. All woodland areas are mapped on the relevant habitat maps for each site within the ES addendum and designated Ancient Woodlands are defined on relevant plans. The impacts to woodland are considered as IEFs for the sites as relevant within the ES and the ES addendum and mitigation measures set out. Where areas of woodland and hedgerow loss are required these are quantified. Woodland and hedgerow planting is proposed within all permanent elements of the scheme as defined within the relevant Landscape Masterplans and further defined on the OLEMPs for the main development site, the two village bypass, and the Sizewell Link Road. Once construction is complete and habitats are fully established, there will be net increases of both woodland and hedgerows on each of these three sites. **June 2021 – Comments on Written Representations** It is acknowledged that there is a typographical error in the documentation and Sizewell C Co. are aware that ancient woodland is a 'classification' not a 'designation'.	Landscape Masterplans / Design and Access Statement (Requirement) oLEMPs (Requirement)

			Comment of the DCO application - Relevant Representations, September 2020 1. **The approach to identifying Ancient Woodland, an irreplaceable habitat, within the entire proposal is insufficient and risks Ancient Woodland sites not being appropriately considered either directly or indirectly.** The Ancient Woodland Inventory in Suffolk is based upon the original inventory conducted in the 1980's. Subsequent revisions in other parts of England have shown that the current inventory is incomplete both due to errors but due to the application of GIS to identify sites and formalising the methodology (Ancient Woodland Inventory Handbook, 2018). We would advise that as a minimum, sites within the proposal boundaries relevant zones a review in line with Stage 1 of the Ancient Woodland Inventory Handbook Process to identify if there are any possible sites further stages should be undertaken. Reliance upon the Ancient Woodland Inventory in this case increases the risk of permanent loss of Ancient Woodland as well as not fully considering indirect impacts to these sites – such as a change in water table adversely impacting the ancient woodland or increase in Nitrogen deposition at these sites. Ideally, for a project of this scale and nature, a scoping exercise should be undertaken to identify potential ancient woodland not already on the inventory 2. **There is 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.** Appropriate consideration should be given to identifying and implementing appropriate avoidance and mitigation as covered in the standing advice for these features. They may have been considered in relation to associated protected species habitats but should be considered in their own right not just a supporting habitat but their value as a feature in their own right as within the landscape. This also includes mitigation for works not				Veteran Trees have only been identified along the route corridor of the Two village bypass and Sizewell link road. Of the trees within the boundary of the Two village bypass, one tree considered ancient, two trees considered veteran, and one tree considered notable are within the proposed vegetation removal zone. Of the trees within the boundary of the Sizewell link road, two trees considered veteran are within the proposed vegetation removal zone. These trees are the same as those identified by the Woodland Trust (see Chapter 19 of this report). Further surveys of these trees will be undertaken to inform appropriate replanting compensation packages where required. Ancient woodland has been identified in the relevant terrestrial ecology and ornithology chapters of the ES and ES Addendum. There will be no land take of ancient woodland at any location and a 15m buffer zone between the western edge of Foxburrow Wood and the excavations to create the cutting for the two village bypass to the west will be maintained at all times(refer to paragraph 5.6.7 of Volume 1, Chapter 5 of the ES Addendum[AS-184]) and detailed within Associated Development Design Principles [REP2-040]). The assessment of impacts on ancient woodland in the ES is appropriate and includes consideration of air quality impacts. There is no assessment of fragmentation and connectivity of ancient woodland because there will be no fragmentation of ancient woodland. Had an alternative Two village bypass east of Foxburrow Wood been chosen, there would have been a fragmentation effect. The ancient woodland of Foxburrow Wood is of high value but the existing small areas of (non-ancient) woodland and mature trees in the Farnham Hall area to which it would become linked have no special designation, either nationally or locally (it is not a County WildlifeSite (CWS)). **September 2021** Extensive recent discussion at the examination has focussed on the potential for impacts to ancient woodland and veteran trees and related mitigation measures. These can be summarised as follows:	

			just direct loss – i.e. root protections zones to avoid damage by heavy machinery, as well avoiding alterations to the water table that could adversely impact the trees. 3. **Ecological Mapping Figures such as Terrestrial Ecology and Ornithology should include ancient woodland and ancient and veteran tree locations.** We would advise that this is useful to do so that it can be clearly seen the connections with other habitats and landscape to help with consideration of indirect impacts and reducing fragmentation and severance. **<u>Further comments on the DCO application, May 2021</u>** 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 from the Two Village Bypass, see our advice under issue 53 below.				There is no change to the assessment of impacts to ancient woodlands defined in the ES and summarised above and there will be no landtake of ancient woodlands. Several third parties have suggested that several additional woodlands within or adjacent to the AD sites, such as Nuttery Belt or Little Nursery Wood, could be consider ancient but there is no evidence to support that position. Mitigation for the unavoidable loss of veteran trees is defined in the updated LEMPS submitted at Deadline 8. Discussions ongoing.	

			August 2021 ***Further Information Required*** Our previous comments on habitat fragmentation and severance relate to the wider habitat network, rather than direct woodland fragmentation. This may reduce functional habitat connectivity, and no attempt has been made to cover severance – this will impact negatively on species movement. The minimum 15m buffer at Foxburrow Wood, only accounts for direct tree root impacts and takes no account of other impacts, such as air pollution, where a negative impact has been demonstrated – the nature and scale of the development and its assessed impacts indicates that a significantly larger buffer zone is likely to be required to protect the ancient woodland. We are very disappointed that irreplaceable ancient and veteran trees are to be lost and await the detail of the compensatory package. For more detailed information on specific impacts to ancient woodland from the Two Village Bypass, see our advice under issue 53 below.					
22	**ECOLOGY:** Project-wide impacts onfor 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	Assessment of impacts from the project on wider biodiversity	**<u>Context and background</u>** The project proposals will also have significant impacts on 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). 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)	N/A			**Woodland** is covered above under Issue 21. The impacts to **floodplain grassland** on the Two Village Bypass were assessed in the ES and an updated assessment was included in the January 2021 ES addendum. A new commitment is provided which is secured in the landscape masterplan and the oLEMP, to enhance and existing area of low value MG 7 floodplain grassland and provide additional wetland channels to compensate for the landtake of a quantum of existing low value MG7 floodplain grassland. **Heathland** is covered below under the relevant CWS on the MDS (see below) Areas of open land with scattered trees which might potentially fulfil some definitions of **parkland** are present on the Sizewell Link Road, but as scattered trees within an arable landscape, it is considered that these are reasonably	

	ecological importance		▪ *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) ▪ *Buckle's Wood CWS* (green rail route) A large number of priority species will also likely to be impacted. For these habitats and species, 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 5.3.13 (regional and local sites) and 5.3.17 (priority habitats and species)). Priority habitats and species listed under section 41 of the NERC Act are, in the Secretary of State's opinion, of principal national importance for the purpose of conserving biodiversity. The avoidance-mitigation-compensation hierarchy should be clearly followed with respect to these habitats and species. The assessment should also include consideration of impacts on any agri-environment scheme which delivers benefits for wildlife, including priority species, and implications for the				addressed under Issue 21. We welcome further clarity from Natural England on the view that parkland habitats are present. The following comments are made in relation to the CWSs listed. The impacts to these sites are considered as relevant in the ES and as updated in the ES addendum. **Suffolk Shingle Beaches County Wildlife Site (CWS) (MDS):** An area of shingle habitat would be directly lost to the footprint of the proposed development. The current coastal frontage is of nationally high value for its vegetation communities and invertebrates. Sand and shingle substrates from the existing surface layers of the frontage would be stockpiled to preserve the seedbank of the coastal vegetation and would be incorporated into the final landscaping of the new sea defence to enable reinstatement of the coastal vegetation, as defined in the oLEMP (MDS). The Coastal Monitoring and Mitigation Plan for the operational phase following reinstatement was submitted at Deadline 5 (TBC) and will ensure, as far as possible, the maintenance of the extent of foreshore sediments covering the HCDF. **Southern Minsmere Levels CWS (MDS) and Sizewell Levels and Associated Areas CWS (MDS)** Landscape-scale restoration of the temporary construction area to summer parched grassland with scrub, a under the operational masterplan and as defined in the oLEMP and similar approaches more widely across the wider EDF Energy estate would provide long-term replacement for any losses of acid grassland and heathland. Leiston Common CWS (MDS) The ES states - there will be no direct habitat loss from this receptor. No potential impact pathways identified and therefore this feature has been scoped out however the following text from the ES states: 'The landscape restoration of the EDF Energy estate would convert existing arable land to be used for the temporary construction area into summer parched grassland characteristic of the Suffolk	

			agreement holder. Land within close proximity to the main development site is currently under Entry Level Stewardship (ELS) and Higher Level Stewardship (HLS), these areas include parts of Sizewell SSSI and are managed by both EDF Energy and the Suffolk Wildlife Trust. The Sizewell C proposal will impact various land areas under agreement which are being managed for wildlife in accordance with scheme prescriptions HK6 – species rich grassland and HK10 - Grassland for wintering waders. Loss of this habitat may result in direct land take or damage to land under agreement in addition to SSSI habitat. Any land removed from the HLS scheme may result in repayment of subsidies dating back to year 1 of the scheme, and with additional penalty. Construction and operational activities that pose an impact to agreement land in terms of water resources and quality of habitat and species, loss and fragmentation and disturbance (noise, light and visual) should be considered. Timing and dates of work should be considered to ensure that habitats retained can be sufficiently maintained. Required mitigation should be included with the Code of Construction practise and secured in the DCO. It should also be noted that any compulsory land purchases which are subject to Agri-environment schemes would also need to be repaid. Where impacts to these habitats cannot be avoided, mitigated or compensated for, their loss/damage should feed in to EDF Energy's biodiversity net gain (BNG) calculations (see issue 23 below). **<u>Further comments on the DCO application, May 2021</u>** As stated above and 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** 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,				Sandlings. This, together with existing habitat creation at Aldhurst Farm and the reptile receptor area, would create approximately 300ha of dry summer grassland and would link existing acid grassland at Leiston Common and Broom Covert and provide connectivity between heath and acid grassland within the Minsmere European Site to the north and Aldringham Walks to the south. Overall it is considered that this restoration would deliver biodiversity gain.' Sizewell Rigs CWS (MDS) Kittiwake (breeding) Sizewell Rigs CWS would not be impacted by the Sizewell C proposals and no mitigation is required. Buckle's Wood CWS (green rail route) Buckle's Wood CWS and surrounding blocks of broadleaved woodland would be retained in their entirety (see above). A Dust Management Plan would be developed and implemented across the site. This would minimise impacts to neighbouring habitats, such as Buckle's Wood CWS. Minimal groundwater abstraction, return of extracted water to the ground, standard pollution prevention control measures and implementation of CoCP and temporary SuDS to mitigate for changes in local hydrology and hydrogeology. **<u>September 2021</u>** We understand Natural England will not be making further representations on this matter.	

			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. **August 2021** Natural England are currently reviewing the updated fish ecology technical reports and appendices submitted by the Applicant at Deadlines 5 and 6. We cannot currently provide an updated position, but will make best endeavours to provide one as soon as possible.				
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>Context and background</u>** We welcome the inclusion of BNG in the DCO application. This is something we had pushed for in previous discussions and consultations with EDF Energy and are glad that they have embraced it in advance of it being a statutory requirement in the NPSs for NSIPs. 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, ideally using	TBC			We agree with Natural England that achieving net zero emissions globally is essential to meeting commitments under the Paris Agreement to hold the level of climate change to substantially less than 2 °C and pursue efforts to limit it to 1.5 °C above the pre-industrial average. We also agree that creation of semi-natural habitats can help mitigate climate change by adopting practices which promote carbon storage and reduce emissions. Delivering new sources of low-carbon energy will also be crucial to delivering on the net zero agenda.	oLEMPs (Requirements) Existing / updated management plans for the EDF Energy estate

			the recently released Defra biodiversity net gain metric 2.0, 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 %). The government recently announced in June 2019 that it would legislate for net zero greenhouse gas emissions by 2050. Achieving net zero emissions globally is essential to meeting commitments under the Paris Agreement to hold the level of climate change to substantially less than 2 °C and pursue efforts to limit it to 1.5 °C above the pre-industrial average. Creation of semi-natural habitats can help mitigate climate change by adopting practices which promote carbon storage and reduce emissions. In addition to enhancing the biodiversity value of the local area, semi natural habitats take up and store significant amounts of carbon in soils and vegetation and act as a 'Natural Climate Solution'. See Carbon storage by habitat: Review of the evidence of the impacts of management decisions and condition of carbon stores and sources (NERR043) for more information. 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. However, it is imperative that the project as a whole avoids, mitigates and/or compensates for impacts internationally designated sites (SACs, SPAs, Ramsar sites), nationally designated sites (SSSIs) and that the necessary measures are agreed and secured through the relevant statutory requirements (e.g. Habitats Regulations, Wildlife and Countryside Act etc.. **The BNG approach is therefore dependent on all relevant parties, including Natural England, agreeing that the project represents no 'biodiversity net loss' in these regards; this necessarily**				EDF Energy is committed to ensuring that measures to avoids, mitigate and/or compensated for impacts to internationally designated sites (SACs, SPAs, Ramsar sites), nationally designated sites (SSSIs) and that the necessary measures are agreed and secured through the relevant mechanisms. These impacts are considered in other rows and are fully assessed within the SHRA Report and sHRA addendum (Europeans sites) and the ES and ES addendum. **June 2021 – Comments on Written Representations** Updated Biodiversity Net Gain Reports were submitted at Deadline 1 [REP1-004 and REP1-017 to REP1-019]. Clarifications on the approach to BNG, including the exclusion of SSSI landtake and related compensatory habitats were provided in the responses to the ExA Question 1. Bio 1.260 onwards [REP2-100]. The assessment has followed the guidance and there is no inappropriate 'double-counting' of areas. For the two roads, the BNG assessments are entirely aligned with the relevant landscape masterplans and the Outline Landscape and Ecology Management Plans (oLEMPs). Therefore, SZC Co. can confirm that landscape and ecology considerations are integrated. SZC Co. notes Natural England's offer to discuss a bespoke approach for farmland birds and is prepared to work constructively to optimise the benefits of the proposals for this group. This is likely to be more viable at the main development site than on the off-site associated development sites where land cannot be obtained by compulsory acquisition solely to facilitate biodiversity net gain. However, SZC Co. is committed to maximising the biodiversity value of the required soft estate of the roads. **August 2021** The BNG assessments were discussed in a workshop in late 2020 which enabled clarifications of many of the assumptions, such as the exclusion of the SSSI and the compensatory habitats and these are recorded in the minutes. The BNG assessments were updated with further mapping and were shared with Natural England in March	

			requires all designated site issues within this table be classified as 'green' before the project is consented. However, none of these topic areas have been discussed with Natural England in detail through the applicant's pre-application workshop programme, although we have flagged these issues a number of times throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraph 4.2 and throughout Annex 2 (see comments under section 4.2)); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraph 3.5 and throughout Annex 3 (see comments under 7.4.14, 7.4.60 and 7.9.6)); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, e.g. paragraphs 3.5, 3.6, 3.9.29 – 3.9.41 and 4.5.1 – 4.5.57); • Natural England's response to the *Sizewell C – Stage 4 Consultation: 18th July 2019 to 27th September 2019* (our ref: 289446, dated 26th September 2019, comments 2 and 11); We have further reiterated this advice through a number of pre-application workshops and document reviews facilitated by EDF Energy and so have provided a large amount of advice on this issue to EDF Energy. Despite this, the information included in the *Sizewell C – Stakeholder Review Process (draft DCO submission)* documents did not reflect our previous advice (i.e. BNG assessment, Plants and Habitats Synthesis Report omitted from the review) which we again flagged in our response (our ref: 299823, dated 9th December 2019).				2021 although no major changes to the out turns are predicted. Further details of the assumptions made as discussed in the workshop were provided for all sites. The updated BNG assessment were submitted to examination at Deadline 1 and demonstrate that a net gain of 19% is predicted across the project. Recent responses to the examination have explained that whilst SSSSI landtake and related compensatory habitats are excluded from the BNG assessments, it is entirely legitimate to include other habitat areas which have been created (for example to support protected species strategies). The BNG of the MDS includes the wider EDF Energy estate, so includes the Aldhurst farm area (terrestrial), Studio Field complex, the marsh harrier habitat improvement area in the short term and in the longer term the creation of habitats across the temporary construction area. This represents a large switch from former arable to grassland, heathland, compared to the baseline and a net increase in scrub and woodland planting and which generates the predicted net gain. The recent release (July 2021) of BNG metric 3.0 is noted, but SZC Co will not be updating further the BNG assessments using the new metric. Once projects have commenced using one version of the metric, it is considered best practice to maintain the use of the same version of the metric. **<u>September 2021</u>** Given recent agreement, by ecological stakeholders, including Natural England and RSPB/SWT, via way of examination question answers, that NSIPs are not currently required to deliver BNG, **it is suggested that this issue is either deleted from this SoCG or coded green**, with appropriate annotation, to avoid the Examining Authority devoting further resources to this issue.	

			We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** Appendix 14E: Biodiversity Net Gain Report is unclear about where the distinction lies between what is being provided to mitigate SAC/SPA/SSSI adverse effects and impacts, and what is contributing to BNG, and the difference. There is brief reference (last para of 1.3) to the wetland elements of Aldhurst Farm and the fen meadow compensation sites not being included in the calculation to avoid double counting with SSSI mitigation, but there needs to be a clear comparable distinction and separation throughout of what is protected site mitigation or compensation, and what BNG is. Further clarification is required to show how biodiversity unit calculations have been provided for the associated developments. Further information is needed about the cumulative area of habitat loss across all development sites to demonstrate biodiversity net gain. If all areas of losses and gains could be mapped across both the main development site and associated developments, it might provide greater clarity to determine under what circumstances multiple objectives might be legitimately be delivered within a single parcel of land. While the inclusion of BNG calculations are very welcome, we had also discussed with EDF Energy, at pre-application stage, the potential for the project to contribute to creating a true legacy landscape within more of the red line boundary given its position within the Suffolk Coast and Heaths AONB surrounded by multiple designated wildlife sites. This would give EDF Energy the opportunity to contribute and showcase habitat creation, potential re-wilding, and nature recovery ambitions within the governments' 25 year environment plan. It would make a major contribution to 'bigger, better and more joined up' habitats in the area. It could and should be something exemplary that properly reflects a development of this magnitude and projected lifespan within the AONB, as part of a wider potential Suffolk Coast Nature Recovery Area.				

			As it stands, we cannot see any reference to this in the DCO and it appears that the BNG requirement as calculated is planned to be met almost entirely within existing commitments i.e. Aldhurst Farm. We advise that EDF Energy should recognise the magnitude of the proposal and its location, and properly reflect this in their ambitions to use their wider landholding to contribute to BNG. **<u>Further comments on the DCO application, May 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 this SoCG to first be classified as 'green'. We advise that there should be a clear distinction in the 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>Context and background</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). **<u>Further comments on the DCO application, May 2021</u>** ***No further comment*** Natural England will not be providing further detailed comments on this issue.	N/A			The impact of the proposal on the AONB is recorded in Volume 2, Chapter 13 and is based on a thorough understanding of the natural beauty and special qualities of the AONB. SZC Co. do not consider that the impact of the proposal on this part of the AONB affects the purposes of the AONB to the extent that the area will not contribute to its purposes. NPS EN1 and EN6 recognises that effects on the AONB are inevitable. **June 2021** The landscape and visual assessments of the Project contained within the ES (Volume 2, Chapter 13 [APP-216], Volume 3, Chapter 6 [APP-360], Volume 4, Chapter 6 [APP-390], Volume 5, Chapter 6 [APP-421], Volume 6, Chapter 6 [APP-457], Volume 7, Chapter 6 [APP-490], Volume 8, Chapter 6 [APP-520], and Volume 9, Chapter 6 [APP-551]) and the ES Addendum (Volume 1, Chapter 2 [AS-181], Volume 1, Volume 2, Chapter 4 [AS-183], Volume 1, Chapter 5 [AS-184], and Volume 1, Chapter 6 [AS-185]), covering the main development site and the associated developments, consider landscape and visual receptors across the full extent of the study areas agreed with Natural England and the other landscape and visual consultees. Landscape receptors considered within the assessments include areas designated as the Suffolk Coast and Heaths AONB, defined as the Suffolk Heritage Coast and areas which are not designated. Effects on landscape character are assessed across the whole of the relevant study areas, using the Suffolk County Council Landscape Character Assessment as the basis of assessment.	

							The landscape and visual assessments also include reference to areas that were locally designated as Special Landscape Areas at the time of the assessments. However, this designation was not retained in the East Suffolk Council - Suffolk Coastal Local Plan that was adopted in September 2020. The Special Landscape Areas, previously designated under Policy SSP38 – Special Landscape Areas of the Suffolk Coastal District Council Site Allocations and Area Specific Policies – Development Plan Document 2017, are now superseded. The assessment of effects on Special Landscape Areas as a local landscape designation within the ES is no longer required. However, historic parklands and gardens and rural river valleys, which were integral to the former Special Landscape Area designation and are now highlighted as important landscape elements in Suffolk Coastal Local Plan Policy SCLP10.4: Landscape Character. As such the rural river valleys and historic parklands and gardens that formed the former Special Landscape Area designation are considered to continue to be of higher 'local value' under the landscape and visual methodology. **<u>September 2021</u>** SZC Co. understands that Natural England will not be making further representations on this matter.	
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>Context and background</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 (which we call 'spreading room'). Natural England is currently working on the alignment of the Aldeburgh to Hopton on Sea ECP stretch which include the section of beach which fronts Sizewell A, B and C (as proposed) and is engaged in discussions with landowners, including EDF Energy and Magnox. Further information on timescales for the adoption of the ECP is given on our	TBC			SZC Co. note Natural England's concerns but would point to the extensive pre-application engagement on the interaction between the development and England Coast Path (ECP). SZC Co. sought to agree the location of the ECP with both Natural England and the Local Highways Authority. The future England Coast Path is described in Volume 2, Chapter 15 of the Environmental Statement, in a number of locations, and in greatest detail at section 15.4 c) i. where it is stated that Natural England is proposing that the ECP will follow the route of the Suffolk Coast Path past Sizewell C power station and through the main development site (para 15.4.47), and that "Effects on users of the future England Coast Path would be the same as users of the Suffolk	Access and Rights of Way Plans (Doc Ref 2.4), DCO schedule and COCP.

			website: https://www.gov.uk/government/collections/england-coast-path-improving-public-access-to-the-coast. 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. All land seaward of the main trail is part of the coastal margin and the landward edge of the landward side of the coastal margin is formed by the fences and walls associated with the seaward curtilage of the site. Those aspects of the project proposals which are likely to affect the ECP route, such as the use of the BLF, may require access mitigation (e.g. a banksman to facilitate access, provision of an alternative temporary diversion route during ECP closure etc.). We have flagged this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.7 and within Annex 2 (see comments under section 4.4); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.16 and within Annex 3 (see comments under 7.4.67, Figures 11.29 – 11.30 and 11.17.5) • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, paragraphs 3.9.42 – 3.9.45, 3.9.47 and 4.6.4.13 – 4.6.4.20); We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy and so have provided a large amount of advice on this issue				Coast Path and they are assessed together in section 15.6 and Appendix 15G of this chapter. In instances where effects on the Suffolk Coast Path are referred to, this should be read to also refer to effects on the England Coast Path, if it exists at the time the assessment is referring to." (Para 15.4.48.) (Doc. Ref. 6.3 [APP-267]). The ECP has been assessed of high value and high sensitivity at paragraph 15.6.6 of Volume 2, Chapter 15 (Doc Ref 6.3 [APP-267]), recognising that it will be a National Trail and run through the Suffolk Coast and Heaths AONB. It is therefore assessed to be of the highest possible value and sensitivity. The Suffolk Coast Path and Sandlings Walk are also assessed as high value and high sensitivity. Natural England's comment that "there is no distinction made between the status and value of this to users as distinct from the existing local and regional routes" is incorrect. A distinction is made but, in order to assess 'worst case', and present a realistic assessment of value and sensitivity, the Suffolk Coast Path, Sandlings Walk and future ECP are all assessed as the highest possible value and sensitivity. SZC Co. is surprised that Natural England is expressing concerns with this approach, because it contributes to assessment of greatest potential effects on users of these routes. SZC Co. note Natural England's concerns regarding the potential inland diversion of the ECP. Since the DCO submission in 2020 work has progressed to ensure that the Coast Path (comprising Public Right of Way (PRoW) E0323/021/0, the Suffolk Coast Path, Sandlings Walk and the future ECP) and foreshore are closed for as little as possible during construction and will continue to do so throughout the pre-construction and construction phases. Further detailed design work included in the Additional Submission in January 2021 has identified that the Coast Path would now be kept open at all times except in rare circumstances where it is considered unsafe to do so, which is a substantial improvement from the position in the DCO submission in 2020 where it was assumed that it would need to be closed for longer periods. As noted in Volume 1 Chapter 2 of the Additional Submission (AS-181): • Further detailed design work, which has been carried out since the submission of the Application, has	

			to EDF Energy. Despite this, the incomplete draft ES Chapter which considers ECP impacts and which were included in the *Sizewell C – Stakeholder Review Process (draft DCO submission)* documents did not reflect our previous advice (i.e. access and recreation strategy omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **Comment of the DCO application - Relevant Representations, September 2020** We reiterate the advice presented in the background section above. Natural England would welcome recognition that it has proposed the route of the new England Coast Path National Trail which if approved by the Secretary of State would form a further recreational route within the project area. Natural England believe this is important to the context of the project, as a National Trail is designated by government and managed to a set of quality standards that set them above other recreational routes identified within the plan. National Trails are intended to offer walkers the very highest quality walking experiences through the best landscapes in the UK, and it is in this context that the impact of the project needs to be assessed. The England Coast Path National Trail will run around the entire coast of England, so impacts on users of the trail both on and beyond the frontage of the proposed project need to be considered. The amenity and recreation report (page 50) acknowledges the proposed route of the England Coast Path, which if approved by the Secretary of State would form a further recreational route within the study. However as mentioned above there is no distinction made between the status and value of this to users as distinct from the existing local and regional routes. National Trails are intended to offer walkers the highest quality walking experiences through the best				identified measures which would enable the Coast Path to remain open during construction of the permanent BLF, except in rare circumstances where it is considered unsafe to do so. It would therefore now be assumed to remain open for substantially more of the construction period than in the submitted Application. However, shorter term temporary closures remain possible. (Paragraph 2.10.38.) • Further detailed design work since the submission of the Application has also identified measures which would enable the Coast Path to remain open at all times during use of the permanent BLF. This is an improvement to the proposals presented in the Application which stated that closure of the Coast Path would be unavoidable at times due to the sea-borne delivery of exceptionally large and heavy materials. (Paragraph 2.10.40.) • The Coast Path would be kept open during construction of the temporary BLF, except in rare circumstances where it is considered unsafe to do so and would be kept open during operation of the temporary BLF. (Paragraph 2.10.54.) The Coast Path would be kept open during the construction of the sea defences except in rare circumstances where it is considered unsafe to do so. SZC Co. Is therefore committed to minimising use of the inland diversion and will provide monitoring and, if necessary, mitigation at this section of Eastbridge Road during Coast Path closures. SZC Co. do not intend to provide an off-road footpath or bridleway route from the campus north into Eastbridge. Use of this section of Eastbridge Road by construction workers in cars is likely to be low. Any construction workers residing north or west of Blythburgh would be required to use the Park and Ride and not drive directly to the main development site. A small number of construction workers may live in Eastbridge. Any workers living in other nearby villages such as Westleton and Theberton would be expected to use the B1122 and not travel via Eastbridge. Eastbridge Road is also not a permitted route for HGV deliveries and so there would be no increase in HGV numbers.	

			landscapes in the UK, and it is in this context that the impact of the project needs to be assessed. The England Coast Path National Trail will run around the entire coast of England, so impacts on users of the trail both on and beyond the frontage of the proposed project need to be considered. Natural England welcomes the provision of an inland alternative route for use by walkers when the beach and proposed main route of the England Coast Path would be closed for the construction of the sea defences, the construction of the beach landing facility and also the use of the beach landing facility during the 10 year build programme. However we note that regrettably the route proposed is much longer and of poorer amenity because it runs alongside busy roads, crosses roads at various points and through the edge of the EDF workers campus site. Natural England are particularly concerned that within this route there is a section which requires walkers to walk within the Eastbridge Road. This is a narrow, hedged road with no verges or steps offs, which the EDF visitor surveyors described as 'risky for walkers.' In addition to this it's accepted that construction workers are likely to use it as well as public traffic. Natural England feels this would be unsafe for walkers and requests that EDF secures an alternative route for the England Coast Path at Eastbridge which is off road. Natural England also requests that EDF employ a banksman at the Beach Landing Facility (BLF) to ferry people across to the other side when it is in use and the beach is closed as it did during construction of Sizewell B. This would: • Avoid interruption to a (about to be proposed) National Trail • Retain an asset valued by the local community and particularly local dog-walkers • Reduce potential recreational displacement impacts on other sensitive sites • Avoid a long and in places unpleasant, diversion • Reduce the safety risk to walkers who on this diversion are forced to cross the road at several points				If the Coast Path needs to be temporarily closed and the inland diversion is required during the construction phase it would follow the route shown on Figure 15I.4 of Volume 2 Chapter 15 Appendix 15.I (APP-270). This route is off-road except at road crossings and approximately 470m length on Eastbridge Road between the northern end of the proposed off-road bridleway north of the accommodation campus and Eastbridge. During operation of the permanent BLF and temporary BLF the Coast Path would remain open and it would be unnecessary to employ a banksman to ferry people across either BLFs. SZC Co. is in discussion with Natural England and SCC on the specification of the Coast Path through the main development site, and will continue to do so, so that this can be agreed. SZC Co. would monitor the coastline and implement beach recharging of the soft coastal defence feature as necessary to protect the Coast Path from erosion by the sea, during the construction and operational phases. We note Natural England's comment that EDF's proposed route of the Coast Path east of the hard coastal defence is more scenic for walkers, because they would be screened from the power station by the sea defence mound, and agree with this. We note Natural England's concern that exposed rock armour is not likely to provide a suitable surface for walkers should the Coast Path be eroded by the sea. This has potential to occur during the lifetime of the Sizewell C Project but remains unlikely. SZC Co, would commit to measures to minimise the likelihood of this occurring such as monitoring and, if necessary, recharging of the soft coastal defence to protect the Coast Path. Also, as noted in paragraph 1.2.151 of Volume 2 Appendix 15G of the ES [APP-270] "… people would be able to walk on the higher part of the hard sea defence, through the coastal habitat landscape [part of the coastal margin], should the [coast] path become eroded …", and a walking route along the coast through the main development site would be	

			• Retain a route for walkers only, so that people are not forced into close proximity with other user types Once the sea defences are built but whilst the Sizewell C site is being built, the temporary alignment for the England Coast Path is propose along a slightly seaward alignment of the landscaped corridor which would be composed of shingle. Raw shingle is difficult for less able bodied walker to negotiate and is an impediment to walkers with pushchairs or wheelchair users. As the path might follow this alignment for a number of years Natural England would like to see EDF liaise with ourselves and Suffolk County Council at establishment stage to identify an appropriate easy to use surface and ensure that this is provided here. Natural England note that the proposed final alignment for the England Coast Path is along a landscaped corridor seaward of the main sea defence mound. We understand this is expected to erode over time and that when this happens the underlying rock armour and hard defence is likely to be revealed. Natural England recognise that whilst EDF's proposed route is more scenic for walkers in the short term, because they would be screened from the power station by the sea defence mound, however exposed rock armour is not likely to provide a suitable surface for walkers. The route will therefore need to be monitored carefully, with EDF making good the surface as necessary. If in the longer term this route is no longer viable, EDF will need to liaise with Natural England and Suffolk Country Council to discuss a potential realignment through a variation order. **<u>Further comments on the DCO application, May 2021</u>** ***Further information required*** Whilst the ECP has been identified as a National Trail in the report, Natural England maintains that the report makes 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.				maintained. However, the loss of the formal route of the Coast Path would be temporary until the surface is re-established. SZC Co. would discuss potential temporary diversions due to temporary path erosion with Natural England and SCC if this becomes necessary. **June 2021 – Comments on Written Representations** SZC Co. is pleased that Natural England welcomes the proposals and commitments noted in their Written Representation. SZC Co. notes Natural England's concern about walkers using Eastbridge Road [we assume that Natural England is referring to Eastbridge rather than Eastleigh Road]. SCC has expressed the same concern. SZC Co.'s response to this is addressed at Issue 2 of the Local Impact Report (see Chapter 17 of SZC Co.'s Comments on the Local Impact Report (Doc Ref. 9.29)). *"b) Issue 2 Potential diversion of the Coast Path on to Eastbridge* *Road* *There is likely to be a reduction in pedestrian use of Eastbridge Road between the northern end of the Accommodation Campus and Eastbridge during the construction phase, due to the construction of the Sizewell C Project. A proportion of existing walkers on Eastbridge Road are likely to stop using it and walk elsewhere during construction given the proximity of construction activity.* *Sandlings Walk currently runs along this section of Eastbridge Road. For the duration of the construction phase (except when the Coast Path within the main development site is temporarily closed) Sandlings Walk would be* *diverted northwards along the coast north of the main development site and west along PRoW E-363/020/0 to Eastbridge, avoiding this section of Eastbridge Road north of the campus, as shown on Figure 15I.1 in Volume 2, Chapter 15, Appendix 15I of the ES [APP-270]. This is also likely to lead to a reduction of walkers on this section of Eastbridge Road for the majority of the construction phase.*	

			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 and that a banksman will not be required. We also welcome the commitment to continued liaison with Natural England and Suffolk CC 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 very much welcome the progress made on this issue and, although there are a few outstanding issues remaining, we foresee these being surmountable by the applicant through the provision of this further information. **August 2021** We are currently reviewing new information submitted at Deadline 3 in the Comments on the WRs [REP3-042]. We are therefore unable to provide our updated position at this time but will use best endeavours to provide this as soon as we can.				*In the rare occasion that the Coast Path needs to be temporarily closed and the inland diversion is required during the construction phase it would follow the route shown on Figure 15I.4 of the updated Rights of Way and Access Strategy [REP2-035]. This route is off-road except at road crossings and approximately 470m length on Eastbridge Road between the northern end of the proposed off-road bridleway (Bridleway 19 diversion) north of the accommodation campus and Eastbridge.* *SZC Co. agrees to monitor pedestrian use to identify if temporary closures of the Coast Path during construction lead to increase in walkers on Eastbridge Road, and if this leads to risks to pedestrian and vehicle safety, and to implement mitigation measures (to be agreed with SCC) which would be put in place should this occur."*	

26	**ACCESS:** Project-wide impacts on access and recreation: ▪ Wider public access	Impacts from the project on wider public access and amenity	**<u>Context and background</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. Consideration should be given during all stages of the proposal to ensuring no net loss of public access and amenity as outlined in NPS EN – 1 (see paragraphs 5.10.24). EDF Energy should look for opportunities to enhance access and enjoyment, especially of Suffolk Coast and Heaths AONB and Suffolk Heritage Coast, in a manner consistent with conservation of their natural beauty and the needs of agriculture, forestry and other uses. We have flagged this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, Annex 2 (see comments under section 4.4); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.17 – 3.18) • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, paragraphs 3.9.46 – 3.9.47); We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the incomplete draft ES Chapter which considers ECP impacts and which were included in the *Sizewell C – Stakeholder Review Process (draft DCO submission)* documents did not reflect our previous advice (i.e. access and recreation strategy omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019).	N/A			SZC note that all stages of the proposals, with the exception of decommissioning, have been assessed in the Environmental Statement (Doc Ref 6.3). The Rights of Way and Access Strategy (Appendix 15I of Chapter 2 of the ES) sets out a detailed mitigation package SZC Co. has sought to minimise temporary closures of the PRoW E-363/021/0 and Coast Path, and will continue to do so throughout the pre-construction and construction phases. Further detailed design work included in the Additional Submission in January 2021 has identified that PRoW E-363/021/0 and the Coast Path would be kept open at all times except in rare circumstances where it is considered unsafe to do so, as noted in paragraphs 2.10.38, 2.10.40 and 2.10.54 of Volume 1, Chapter 2 of the ES Addendum [AS-181]. If the Coast Path needs to be temporarily closed for short periods and the inland diversion of the Suffolk Coast Path, Sandlings Walk and future England Coast Path is required during the construction phase it would follow the route shown on Figure 15I.4 of Volume 2 Chapter 15 Appendix 15.I (updated Rights of Way and Access Strategy) of the ES (Doc Ref. 6.3 15I(A)). In addition, SZC Co. is providing a wide range of improvements on the edge of or immediately adjacent to the AONB during the construction phase, including: • A new approximately 4.5km long off-road bridleway from Sizewell Gap in the south to the accommodation campus in the north (paragraphs 1.2.15 and 1.2.36). Part of this would accommodate the Bridleway 19 diversion. • A new bridleway link between the above off-road bridleway in the south-east field of Aldhurst Farm and Valley Road (paragraphs 1.2.19 and 1.2.36), providing west-east connectivity within the AONB. • A new footpath connection between the off-road bridleway within the northern field in Aldhurst Farm and Bridleway 19 and the permissive footpath network in Kenton Hills from approximately the second year of the construction phase (paragraphs 1.2.20 and 1.2.36). This would be dedicated as a PRoW (bridleway) on the commencement of the operational phase. This is Change 15 described at section	Access and Rights of Way Plans (Doc Ref 2.4) and DCO schedule.

			Further comments on the DCO application, May 2021 ***No further comment*** Natural England will not be providing further detailed comments on this issue.				b) xii) of Volume 1, Chapter 2 (Main Development Site) of the ES Addendum [AS181], and shown on Figure 2.2.32 of Volume 2, Chapter 2 (Main Development Site) of the ES Addendum [AS-190]. • A new informal car park, a surfaced footpath, and approximately 27 hectares of new Open Access land, including areas where dogs will be allowed to be exercised off-lead (paragraphs 1.2.26 and 1.2.38). This car park would be increased to 20 spaces early in the construction phase to allow for additional users of the recreational access network, and funding provision for this is to be included in the Deed of Obligation. • Improvements to Kenton Hills car park including additional spaces, management of vegetation and signage (paragraphs 1.2.24 and 1.2.39). This would provide up to •15 additional parking spaces allowing for greater use of the recreational access network including the permissive footpath network in Kenton Hills. • a permanent new footpath north of Leiston connecting two existing PRoW and Abbey Lane Following construction, temporarily closed linear routes would be restored to their existing or new agreed alignments, and the 'coastal margin' would be defined along the coast including on the sea defences (exact area inland of the England Coast Path will be agreed with Natural England) (paragraph 1.2.34). A permanent loss would be short sections of east-west aligned permissive footpath within Goose Hill, with an alternative east-west aligned permissive footpath provided (paragraph 1.2.32). Loss of access during the construction phase has been minimised and alternative and additional routes and areas provided. In addition, a Public Rights of Way Deed of Obligation fund will look to enhance the local network and provide benefits to the surrounding area, both during construction and operation. **September 2021** SZC Co. understands Natural England will not be making further representations on this matter.	

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 impacts 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:				**June 2021 – Comments on Written Representations** SZC Co. note Natural England's comments regarding Best and Most Versatile (BMV) land. In relation to the areas stated in the chapters as compared to the areas presented in Volume 10, the figures presented do not show discrepancies. The tables show the total area of BMV land affected (i.e. land required permanently, and areas required temporarily for the construction phase) and then present the actual split between the land required permanently and temporarily so it is clear what land is being returned by the end of the construction phase. However, SZC Co. note these tables do not show the split across all grades and will provide this summary for Deadline 5. It is recognised that handling soils has the potential to cause damage to soil structure, and that long-term storage can exacerbate this and result in further changes to soil characteristics. The Outline Soil Management Plan (SMP) (Volume 2, Appendix 17C) (refer to Doc Ref. 6.3 17C(A)) has been designed to follow published guidance and ensure the methodologies used for soil handling and the restoration of the soil profile (and associated characteristics) required for the designed end use (e.g. return to agriculture, landscape planting or habitat creation) can be achieved. With regard to how BMV land was considered within site selection, Planning Statement Appendix 8.4A of the Site Selection Report [APP- 591] provides further information on how the schemes were selected and design has evolved through consultation. It is noted that the overall conclusions regarding BMV land are agreed with Natural England. SZC Co. notes Natural England's comments on the ALC methodology and provide responses to the specific queries raised as set out below: • The assessments were all carried out by competent experts as explained in the Statement of Competence [APP-161]. The approach to the ALC surveys, in line with guidance, has been to dig a small number of soil pits as determined by the surveyor as representative soil	

			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.				types. Some of these soil profile descriptions are presented in Appendix 17a of Volume 2. Some soil pit descriptions have, however, been presented as auger descriptions. • Soil samples were collected for laboratory assessment of soil particle size data as determined by the surveyor, either as being representative of a particular area or where there was some uncertainty as to the exact particle size class. SZC Co. fully recognise the importance of the correct implementation of the SMP with the appropriately skilled and qualified personnel involved in its delivery. The points raised by Natural England are noted in relation to the Outline Soil Management Plan (OSMP), a further iteration of which has been submitted at Deadline 3 (refer to Doc Ref. 6.3 17C(A)). The points raised by Natural England will be responded to with changes in the OSMP to: • ensure it is clear what competencies/qualifications are required to advise on and supervise soil handling and restoration; • ensure the requirement to restore agricultural land to its original quality is clearly stated; • clearly state the requirement to ensure the restored soil profiles and their associated characteristics are suitable for the planned end use (for example associated with the delivery of the Outline Landscape and Ecological Management Plan). The OSMP has been developed in accordance with the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites. Details of the plant which will be used to handle the various soil types (based on their resilience to structural damage as a result of handling) will be set out in the updated Soil Management Plan by the contractor. In relation to stockpile heights and storage situation, stockpile heights will be limited where the soil resources are required to be returned to the preconstruction agricultural use. The maximum soil heights have not been detailed in the OSMP but will be set out in the final SMP. It is likely that the maximum height proposed will be set based on the soil texture and the resilience this gives the soil to structural damage as a result of soil handling.	

			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. **August 2021** ***Further Information Required*** The Outline SMP has been updated following the consultation responses from Natural England and the NFU. Natural England welcomes that the temporary and permanent agricultural land take area will be provided for Deadline 5, identifying the area of each ALC grade for each element of the development. At present, data inconsistencies appear to remain: Table 17.6 'permanent and temporary loss of agricultural land' presents data for the Main Development Site (MDS) only (Volume 2 Chapter 17 Soils & Agriculture Soils and Ag Chapter), and states that 157.7 ha of the MDS is non-agricultural, leaving 213.9 ha of agricultural land (of which 22.2 ha is BMV). Of this agricultural land, 205.2 ha will undergo temporary				Soil materials will also be stored on like for like where restoration to agricultural use is required. However, to deliver the Outline Landscape and Ecological Management Plan (OLEMP) the soil resources available will need to be adapted to be suitable for the proposed habitat types. This may, for example, require the mixing of topsoil and subsoil resources to reduce the fertility of the restored profile. Where these resources are coarse textured it may be necessary and appropriate to stockpile the materials higher. **<u>September 2021</u>** SZC Co. understands Natural England will not be making further representations on this matter.	

			development and 8.5 ha will undergo permanent development (of which 16.4 and 5.6 ha is BMV, respectively). Table 3.10 'Summary of potential project-wide cumulative effects – loss of agricultural land during the early years of construction' (Volume 10 Chapter 3 Project Wide Effects), states 358.32 ha of agricultural land will be temporarily lost from the MDS. Although Table 3.8 'Summary of potential temporary project wide impacts on BMV' identifies 22.2 ha of BMV in the main development area which is consistent to the value presented in Chapter 17. Therefore, it appears that non-agricultural land has been included into the MSD area. It is noted that following Stage 4 Consultation, the extent of land take required for the construction and operation of the Bypass and Link road was reduced by 37.53 ha (15 and 22.53 ha, respectively). However, it is not stated as to whether the refinement of the construction footprint considered BMV agricultural land or not (i.e. minimising BMV land take) within Appendix 8.4A of the Site Selection Report [APP- 591]. Consideration has also been given to the size of the Northern and Southern Park & Ride to allow on-site topsoil and sub-soil storage to facilitate site restoration, following cessation of use of the park and ride facility. Natural England appreciates the link to the Statement of Competence [APP-161] and clarification on the ALC Methodology in the June - Comments on Written Representations. The clarification on the ALC Methodology should have also been presented in the revision of the outline SMP, including which survey points were soil auger cores and which were soil profile pits; and which topsoil samples were subject to particle size distribution analysis (Appendix A). The commitment to undertake detailed ALC surveys across the full site is welcomed, this should include soil profile pits, lab analysis for particle size distribution and nutrient status (where appropriate). It is noted from Section 3 (OSMP), that following the completion of detailed ALC surveys across the full site (1 per hectare, supplemented by soil profile pits), the final collation of all available information will be made available to inform the development of the detailed Soil Management Plan and Soil Resource Plans (SRPs). This record of ALC information should include the clarification on the ALC Methodology and the identification of soil auger				

			cores and soil profile pits; samples subject to soil laboratory analysis and soil nutrient assessment, alongside the pre condition ALC Map, sample location, borehole characteristics and lab data. The Outline SMP update is stated to include clarification of land restoration to the pre-construction ALC grade and the soil specific soil handling requirements. However, soil specific requirements are not specifically referred to, instead reference is made to the detailed SMP and SRPs being prepared pre-construction which will identify the soil specific soil handling requirements and set out the target specification for the proposed end uses. The target specification for the restored soils should be based on pre-construction ALC grade. On land undergoing cut and fill earthworks or temporary roadways involving compacting basal layers and the application of tarmac, paving etc, greater justification is required as to how the soil will be restored back to its original quality post development. NE welcomes the requirement for a Contractors Soil Scientist and the Clients Soil Scientist with specified competencies to advise on, and supervise, soil handling activities. It is acknowledged that prior to any soil stripping works commencing, the outline SMP will be updated by the Contractor and detailed Soil Resources Plans (SRP) will be produced for each part of the Sizewell C Project to provide the required detail. The proposed content of the SRPs presented in Section 1.2.6 is deemed appropriate. In addition to the target specification, a monitoring and aftercare plan should be detailed to confirm the target ALC grade is achieved to ensure no loss of BMV land. Section 5: degradation of soil can also lead to the inability to restore land to pre-construction ALC Grade, and thus potentially constitute a loss of BMV land. Monitoring in section 5.2 ‘Outline Soil Protection Measures’ should acknowledge the importance of identifying when soils are suitably dry to be handled. Section 5.3 ‘Wet weather working and cessation of works’ and Section 6.6 ‘Soil Storage’. All soils should only be handled in a dry and friable condition, and it is expected that soil handling would be confined to the drier summer period to minimise risk of soil damage (April through September). This would minimise the				

			need to recondition soils, which requires additional space and time. This is particularly important for land to be restored to agricultural use. This approach is suggested in Appendix F '… soil handling operations shall be carried out when soil is non-plastic in consistency.' There needs to be consistency with regards to this approach throughout the Outline SMP. Although it is sensible to include the reconditioning methodology and the separate handling and storage methodology of soils which may be plastic, every effort should be made to avoid this scenario. Section 6.2 and 6.3 discusses soil handling required for land to be restored to agricultural use; however, these methods (stripping and stockpiling topsoil and subsoil separately (and any different topsoil or subsoil types)) is required for all soils. The 'bulk excavation' of the soil and subsequent stockpiling proposed for soils for non-agricultural purposes should not be undertaken, as this would constitute a loss of the soil resource. Section 6.2 'soil recovery and storage'. Depth of topsoil strip should be informed by the detailed ALC survey and monitored by the Soil Specialist during excavation works. Section 6.6: topsoil and subsoil resources should not be mixed. Section 7 'Soil restoration methods'. It should be emphasized that the criteria for land being restored to agricultural use will be informed through the pre-construction ALC and soil survey. Maps should be provided to illustrate the areas intended for restoration. Section 8 'Monitoring'. Soils should be monitored for up to 5 years following restoration to ensure the correct ALC criteria has been reached (on land restored to agricultural use) and the habitats created are in a suitable condition. Appendices Appendix B: 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 restored. Defra's Good Practice Guide for Handling Soils provides detailed advice on the choice of machinery and method of their use for handling soils at various phases. We would advise the adoption of "Loose-				

			handling" methods (as described by Sheets 1-4 of the Guide), to minimise damage to soil structure and to facilitate good restoration. Reference should be made to Sheet 15 where low ground pressure bulldozers are to be used during topsoil replacement. Appendix F 'Placement of soil layers'. Soil depths should be informed by the pre-construction ALC survey and checked by the Site soil Scientist. The main objective for the reinstatement of agricultural land is to restore the land to its original (pre-development) agricultural quality, as determined by ALC grade and soil characteristics obtained during the pre-construction survey. This is primarily achieved by ensuring that the full soil profile is reinstated in the correct sequence of horizons to the right depths, and in a state where good soil profile drainage and plant root development are achieved; and by ensuring that the reinstatement works cause minimum damage to soil structure. Prior to topsoil placement, subsoil decompaction will be required. The use of a LGP bulldozer fitted with winged subsoiler tines is recommended. For the decompaction to be effective, the moisture content of the soil must be below the lower plastic limit, so that the soil is dry enough to shatter and for fissures to be created. Where land is returned to agricultural use, the quality of the soil reinstatement will need to be verified through monitoring and aftercare. The aftercare should commence after soil characteristics required to achieve the reinstatement standard have been achieved. For the land in agricultural use before construction this means that the land is brought as close as practically possible to the physical state it was before construction. An Aftercare and Monitoring section should be included in the SRPs. A soil survey should be carried out to record the 'after' statement of physical characteristics of the reinstated soils. This will allow the post-construction/reinstatement condition of the soils and land to be judged against/compared with their pre-construction condition, as determined through the detailed pre-construction soil surveys Aftercare: Depending on the land-use, agricultural activities, site-specific conditions, and site-specific construction				

			activities, the aftercare may include treatments such as: cultivation (e.g. subsoiling), installation of underdrainage, seeding, liming, and/or fertilising. The Defra 2009 guidance suggests aftercare between 1 and 5 years post construction, with the aftercare deemed complete when the reinstatement standard has been achieved. The period of aftercare should be stated in the site specific SRPs. Appendix H 'Soil stockpile/Windrow Inspection checklist'. The soil storage works should be inspected to certify that the soil stockpiles are correctly labelled with the footprint, location, volume and nature clearly recorded. Ensure consistency between Appendix I and Section 2 'Roles and Responsibilities' Section 1.2.2 and 1.2.3 mention imported topsoil and subsoil and the associated BS standards, however a soil deficit and need to import soil is not discussed elsewhere in the Outline SMP. In fact, a potential soil surplus is mentioned in Section 4.1.4. A soil balance needs to be determined for each element of works and specified in the detailed SMP and SRPs. If a soil deficit is identified, the criteria for imported soils needs to be specified.					
MAIN DEVELOPMENT SITE								
27	**ECOLOGY:** Impacts on internationally designated sites: ▪ Alde-Ore Estuary SPA ▪ Alde-Ore Estuary Ramsar site ▪ Benacre to Easton Bavents SPA	Impacts from noise, light, and visual disturbance from a number of the MDS project elements, and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar	**<u>Context and background</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) and marine mammals. 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. Where works are within the zone of influence (ZoI) where such disturbance is possible, full survey data covering all relevant species are needed in order to allow a full and thorough assessment of these impacts (in	**TBC**			The points made as we understand them are: (i) NE seem to imply not enough has been done to identify potential functionally linked land (FLL) and establish the extent of its importance to SPA features. We would argue that we have adequately considered the key FLL for the appropriate features and seek detail from NE as to which features, they believe could be dependent on other FLL. (ii) NE may be implying we should consider chronic noise levels for the assessment of noise disturbance from construction activities. Further work on this element has been undertaken and is now presented in the sHRA addendum to supplement the sHRA Report. (iii) NE state that "Further information is required regarding construction dredging, shipping and piling and SCDF nourishment works/ This should be assessed with regard to	TBC

	▪ 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	sites) and their notified features. **(C) and (O)**	air and underwater). This assessment should not be limited to the boundaries of the designated sites but also include land within and around the red line boundary which may play an important role as functionally linked land (FLL), for example, in the context of Minsmere and marsh harrier (one of many notified species) this includes Sizewell Marshes and arable farmland which are used for foraging. The project should assess all notified species where there may be functional linkages with the MDS and surrounding land, and evidence should be provided to support any assumptions that areas of habitat are not deemed to represent FLL. Where significant numbers of birds and marine mammals are found to be present within the ZoI for noise, visual and light disturbance, the necessary assessments and underpinning modelling are required to determine impacts. In terms of noise impacts, for breeding bird species chronic noise is of particular concern, whereas for non-breeding birds species sudden loud impulsive noises such as piling are of particular concern. Modelling of predicted noise levels (during demolition, construction, and operation) against existing background noise levels should therefore be undertaken using suitable disturbance thresholds i.e. average noise levels for breeding species (LA_{eq}) and (typically) peak noise levels for non-breeding species (LA_{max}). 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 Some limited noise modelling was provided for Natural England to review at pre-application for a very limited number of terrestrial bird species, but none was provided for marine birds or mammals (in air and underwater). Further information is required regarding construction dredging,				all sensitive features." It is not clear whether this is referring to the submitted Shadow HRA or to the interim draft from November 2019. No indication is given as to why the information provided in the Shadow HRA is not sufficient, In any event, this assessment has been updated with further detail as relevant in the sHRA addendum submitted in January 2021. (iv) NE consider there are significant omissions in the assessment of these effects, but do not state what they are but refer to comments made on the different consultation stages. These may already have been addressed in the Shadow HRA and the SHRA Addendum. (v) We have reviewed the comments on marsh harriers and do not see a clear point to respond to here. Further marsh harrier surveys were undertaken in summer 2020 and a report provided. This new information was considered in the sHRA Addendum (January 2021) and no change to the assessment conclusions was required. These updates as well as further recent question responses, written responses to Natural England and RSPB/ SWT within examination may have addressed the points made. (vi) NE view the project baseline data for wintering waterbirds to be inadequate. A further winter of survey data was undertaken in winter 2019-2020 and the report was shared with Natural England. This new information was considered in the sHRA Addendum (January 2021) alongside the use of WEBS data and it is likely that will have addressed the point made. No change to the assessment conclusions was required. (vii) White-fronted Geese surveys are currently being undertaken in winter 2020-21 and will be concluded in March 2021, with the report submitted at Deadline 7. We would welcome further clarity on the points made and in particular any residual points relevant, once the sHRA addendum and the related survey reports, as well as the above comments as well as recent question responses, written responses to Natural England and RSPB/ SWT within examination have been taken into account. Specifically in relation to red-throated divers, an Outline Vessel Management Plan was submitted to Examination at Deadline 6 and provides a mechanism and related	

			shipping, and piling and SCDF nourishment works/ This should be assessed with regard to all sensitive features. Due to the limited information we were provided on these issues at pre-application, we have only provided detailed advice to EDF Energy on the assessment of impacts to marsh harrier in these regards. This included a proposal to create alternative foraging areas for marsh harriers in response to the forecast loss of foraging resource at Sizewell Marshes SSSI and surrounding arable farmland. However, this has yet to be fully quantified in terms of area to be lost vs. area to be created and the final design of these areas. We understand that these alternative foraging areas are areas of largely dry habitats, designed to optimise their use by small mammals and birds as a foraging resource for marsh harrier. This includes a core area of habitat within the MDS area (which also includes an element of wetland habitat creation) and some additional areas outside the MDS; for the latter, clarification is needed on whether these areas would be implemented from the outset or set aside as contingency to be triggered into use following monitoring of marsh harrier impacts during construction and whether they will be permanent or temporary. Natural England is satisfied that the criteria for derogating from the Habitats Regulations are fulfilled with respect to marsh harrier We consider these to be significant omissions which we have flagged throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 2.2 (ii), 3.2, 3.3, 3.5, 4.2, 4.3 (i, ii) and throughout Annex 2 (see comments under sections 4.2, 4.6, 4.14 and 4.16)); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.2, 3.3, 3.5 – 3.11, 4.3, 4.8, 4.9 and throughout Annex 3 (see comments under 7.4.39, 7.4.75, 7.4.92, 7.5.10, 7.5.58 – 7.5.60, 7.5.65,				governance to switch to alternative vessel routes if impacts to red-throated divers are considered problematic. **June 2021 – Comments on Written Representations** i. Details of the design of the compensation area for the Minsmere- Walberswick SPA (and Ramsar site) marsh harrier population As detailed in the Applicant's response to the Natural England Relevant Representations, it was often difficult to be clear as to the specific issues Natural England were raising in regard to the assessment of noise and visual disturbance on the SPA (and Ramsar site) marsh harrier population, and the associated compensation proposals. However, the Applicant did respond fully to the comments made in these Relevant Representations, given the Applicant's understanding of the issues being raised. Details relating to the design of the 48.7ha of compensatory habitat being provided within the EDF estate are presented in the Marsh Harrier Habitat Report [REP2-119]. This document outlines the habitat managements which have been, and will be, undertaken on the habitat compensation area, which was taken out of arable production approximately four years ago. It also details the incorporation of the proposed wetland habitats (open water, wet woodland, reedbed and open water channel) in the eastern parts of this compensation area (see Figure 3.1 in the Marsh Harrier Habitat Report [REP2-119]) and provides estimates of increases in abundance of the different marsh harrier prey groups expected to result from the different habitat managements that are being implemented. Further consideration is given to the compensation area for marsh harriers under 16, responding to additional points made by the RSPB/SWT.. ii. Effects on the Minsmere-Walberswick SPA (and Ramsar site) populations of breeding gadwall and shoveler As outlined in Natural England's Written Representations, the ShadowHRA Report [APP-145] concluded that 11% of the breeding gadwall and7% of the breeding shoveler	

			7.5.82, 7.8.6, 7.8.11, 7.9.4, 7.9.29, 7.9.68 – 7.9.70, 12.3.2 and 12.3.12); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, paragraphs 3.1, 3.5, 3.6, 3.9, 3.9.1 – 3.9.15, 4.5.1, 4.5.8, 4.5.9, 4.5.11 – 4.5.13, 4.5.15, 4.5.16, 4.5.40 – 4.5.48, 4.6.3.3, 4.6.4.8, 4.6.4.10 and 4.6.15.3); • Natural England's response to the *Sizewell C – Stage 4 Consultation: 18th July 2019 to 27th September 2019* (our ref: 289446, dated 26th September 2019, comments 3, 7 and 10); We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the incomplete draft shadow HRA which was circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. incomplete shadow HRA, bird survey data, marsh harrier mitigation strategy, lighting management plan and noise modelling assessment omitted from the review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this were not therefore obtained before the application was submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** **Marsh harrier compensation** The applicant is unable to demonstrate no adverse effect on the integrity of breeding SPA marsh harriers. The construction phase of the development is anticipated to result in the disturbance of breeding SPA marsh harriers causing				occurring on the Minsmere-Walberswick SPA(and Ramsar site) and the functionally linked habitats in the Minsmere South Levels and Sizewell Marshes would be displaced as a result of noise and visual disturbance associated with construction activities at the main development site. All of the birds predicted to be displaced occur on thefunctionally linked habitats, and not on the SPA (Ramsar site) itself. In termsof these areas of functionally linked habitat, the Minsmere South Levels made a much greater contribution to the overall population size against which the assessment was undertaken than did the Sizewell Marshes SSSI(by factors of approximately three and 30 for gadwall and shoveler,respectively). This conclusion in the Shadow HRA was reached in the absence of any data on the distributions of these populations within the Minsmere SouthLevels and Sizewell Marshes, with the available data being limited to estimates of the overall number of breeding pairs of these species in the different areas (see Table 6.9 in the Shadow HRA Report [APP-145]).Therefore, it was necessary to assume a uniform distribution of the breeding gadwall and shoveler on the Minsmere South Levels, whilst it was simply assumed that all gadwall and shoveler on the Sizewell Marshes would be displaced (given that the threshold noise level, as determined bythe 65dB LAmax contour, encompassed much of this area). Thus, the proportion of each population on the Minsmere South Levels which was assumed to be displaced was equivalent to the proportion of the areaencompassed by the threshold noise level and/or the visual impact zone(i.e. approximately 0.40 - see Section 8.8 f) iv. of the Shadow HRA Report [APP-145]). As reported in the Shadow HRA Report Addendum [AS-173], surveys were undertaken in 2020 which provided distributional data on breeding gadwall and shoveler in the Minsmere South Levels and Sizewell Marshes.These data demonstrated that the gadwall and shoveler breeding on the Minsmere South Levels are concentrated in the northeast of the area, outside those areas where displacement due to noise and visual disturbance from construction activities is predicted to occur (see Figures6A.16 and 6A.17 of the Shadow HRA Report Addendum [AS-177 and AS-178]). As Natural England point out in their Written Representations, this information on	

			displacement from their foraging habitat beyond the SPA on Minsmere South Levels, or the barrier effect of the construction phase preventing birds from accessing foraging habitats at Sizewell Marshes SSSI. Within the DCO application the applicant had considered that Stage II Appropriate Assessment has failed to exclude adverse effect on site integrity and following the completion of Stages III (no alternatives) and Stages IV (imperative reasons of overriding public interest), the need for compensation has been identified. The main topic of EDF's engagement with Natural England over SPA bird issues has been the issue of marsh harrier foraging, with the audit trail showing detailed consultation for over seven years. Specifically, the concern related to the disturbance of breeding SPA marsh harriers resulting in their displacement from their foraging habitat beyond the SPA on Minsmere South Levels, or the barrier effect of the construction phase preventing birds from accessing foraging habitats at Sizewell Marshes SSSI. Marsh harriers have large foraging ranges and this issue affects foraging undertaken beyond the boundary of the SPA and not disturbance at nesting locations. For an impact to occur, firstly, marsh harriers would have to be excluded from areas of functionally linked land, in line with their predicted behavioural response to noise and visual stimuli, or experience reduced foraging success due to auditory screening / interference. Secondly, marsh harriers would have to be unable to compensate for this loss in foraging resource elsewhere within their home range. Thirdly, marsh harriers would have to be unable to provision their chicks with the same amount of food and, finally, this would have to result in a decline in productivity and a potential reduction in their SPA population. There is uncertainty associated with each of these stages. Nevertheless, as survey work to identify marsh harrier flight lines did reveal significant use in areas potentially exposed to development effects, and the precautionary principle requires impact to be excluded rather than demonstrated (and considering the problematic nature of the highly technical work that would be necessary for this assessment to be even attempted) the requirement for offsetting was agreed. As potential displacement was occurring beyond the SPA site boundary, it was possible for habitat creation / improvements				distribution relates to a single year of data only but it is important to note that it is consistent with what would be expected, given that these distributions are broadly coincident with that of the main pool systems (and hence likely preferred habitats of both species) within the Minsmere South Levels. Therefore, the distributional data obtained in 2020 show that the actual percentage of the breeding gadwall and shoveler occurring on the Minsmere-Walberswick SPA (and Ramsar site) and the functionally linked habitats in the Minsmere South Levels and Sizewell Marshes which would be displaced due to noise and visual disturbance during the construction period would be considerably less than 11% and 7%, respectively (as estimated in the Shadow HRA). Notwithstanding the importance of the distributional data in refining the predictions on the scale of the potential effects of noise and visual disturbance on breeding gadwall and shoveler, the Applicant considers that the conclusion in the Shadow HRA of no adverse effects on these qualifying features is robust. However, Natural England state that the predicted displacement levels of 11% (for gadwall) and 7% (for shoveler) are significant and would be expected to be associated with a conclusion that the potential for an adverse effect could not be excluded. The Applicant considers that the Natural England position fails to recognise the fact that the predicted displacement effects relate to birds which occur on functionally linked habitat, as opposed to those within the boundaries of the designated site itself. In their review of authoritative decisions concerning potential effects on functionally linked habitats, Chapman and Tydesley (2016) identify the need to take account of functionally linked habitat in HRA assessments but also recognise that such assessments have to determine how critical the area of functionally linked habitat is to the designated population and whether it is necessary to maintain or restore favourable conservation status of the qualifying feature. Thus, effects which would not be acceptable within the boundary of the protected site may or may not be acceptable on the areas of functionally linked habitat (Chapman and Tyldesley, 2016).11.21.10 In the case of the Minsmere-Walberswick SPA (and Ramsar site)	

			required to offset this loss to also occur beyond the site boundary, yet still constitute mitigation if created within the foraging range of marsh harriers nesting at Minsmere. Optimal habitat for foraging marsh harriers is wetland, yet the applicant stated that the topography of the only area of land available was unsuitable *('Based on a review of the available data on the ground levels, the underlying geology and ground and surface water regimes in and around the mitigation area, it is concluded that it would not be feasible to create wetland across the majority of the mitigation area').* The applicant was unwilling to consider that if a Stage II Appropriate Assessment failed to exclude adverse effect on site integrity in the absence of sub-optimal terrestrial mitigation, following the successful completion of Stages III (no alternatives) and Stages IV (imperative reasons of overriding public interest) of an HRA, opportunities might then be sought elsewhere in order to create an optimal area of wetland habitat creation to secure the coherence of the network. As the option for optimal like for like wetland habitat creation was not deemed possible by the applicant, Natural England engaged upon this basis in order to develop an experimental approach to terrestrial habitat creation that sought to maximise populations of those prey species found in drier habitats. As Terrestrial Habitat of this type has not been created before in order to support marsh harriers, to overcome any residual uncertainty, an option for adaptive management has been presented whereby additional habitat might be created should observed use by foraging marsh harriers fall short of predicted use. The submitted DCO and associated documents now show, however, that the applicant has indeed completed shadow HRA stages III and IV that reach favourable conclusions, removing the applicant's self-imposed constraint. If endorsed by the Secretary of State, this would facilitate the creation of optimal wetland habitat with additional biodiversity benefits, not only with potential to support marsh harriers, but also other species of breeding and non-breeding wetland birds. With minimal adaptations to habitat management, the original terrestrial area identified might instead help compensate for potential shortfalls in the approach towards Net Gain and terrestrial species of bird that Natural England has identified. N.B. There were considerable levels of engagement over the design phase of the proposed terrestrial compensation area.			breeding gadwall and shoveler, the birds which breed within the designated site are not dependent on the functionally linked habitats on the Minsmere South Levels and Sizewell Marshes for the provision of resources which cannot be obtained from the within the designated site itself. Instead, the functional linkage is concerned with the occurrence of additional breeding birds on these nearby habitats outside the designated site. In this regard, the functional linkage is fundamentally different to that for the Minsmere-Walberswick SPA (and Ramsar site) marsh harrier population, for which the functionally linked habitats provide a foraging resource to the birds which breed within the designated site. This is an important distinction and in Chapman and Tyldesley's (2016) review of authoritative decisions3 that were concerned with approaches taken to functionally linked areas, only one of the 19 cases that involved SPAs gave consideration to the issue of whether breeding birds from outside the SPA should be regarded as part of the SPA population (see details of the Case Summaries provided in the Appendix (Section E) of Chapman and Tyldesley (2016)). For both breeding gadwall and breeding shoveler, the Minsmere-Walberswick SPA (and Ramsar site) populations are currently considerably above the citation levels (by approximately three-fold in both cases).Considering this in conjunction with the nature of the functional linkage for these two qualifying features, then it is highly unlikely that the functionally linked habitat on the Minsmere South Levels and Sizewell Marshes is necessary to achieving the conservation objectives for these features. Therefore, it is clear that in neither case would the predicted displacement of a relatively small number of breeding pairs from functionally linked habitat outside the designated site prevent achievement of the supplementary advice on the generic conservation objectives to maintain the SPA population size at above the citation level, whilst avoiding deterioration from its current level. Natural England's Written Representations also express concerns over the application of a 70dB LAmax threshold for the purposes of determining potential effects on breeding gadwall and breeding shoveler, stating that this threshold was derived for non-breeding waterbirds. However, as detailed in Shadow HRA Report [APP-145],	

			Despite engagement on the basis that alternative more beneficial options for optimal wetland habitat creation were not possible, and despite the experimental nature this approach (unlike wetland habitat creation), it is nevertheless deemed sufficient to prevent impact to foraging marsh harriers. **Other terrestrial bird species** All baseline survey data for the project, covering all habitats and species likely to be affected, should be acceptable in terms of methodologies, coverage and age. The recent Chartered Institute of Ecology and Environmental Management (CIEEM) Advice note on the Lifespan of Ecological Reports and Surveys states that, for surveys which are more than three years old, "*The report is unlikely to still be valid and most, if not all, of the surveys are likely to need to be updated*". Where the ecological survey data to inform the various Sizewell C impact assessments are not in line with this, we advise that clear justification must be provided on how the data remain valid and robust enough to inform conclusions. For a development of this scale directly which is directly adjacent to an SPA classified for (among other features) internationally and nationally important non-breeding coastal waterbirds would be expected to have conducted, as a minimum, two complete winters' survey effort, with typically two surveys per month from October to March (24 counts in total). Survey months might be extended to capture any classified populations of passage species present earlier in the autumn or spring. These up-to-date survey data could only then be deemed representative and allow an adequate assessment to be conducted. If reduced survey effort is deemed acceptable, the potentially unrepresentative sample relied upon must be taken into account and treated with an appropriate amount of precaution when determining impact and any potential requirement for mitigation / compensation. Surveys should also be tailored to the individual species' ecology; for example, bearing in mind that the construction site would be active 24 hours a day, nocturnal surveys for white-fronted geese should ideally be undertaken as they are most active outside daylight hours and daytime surveys only may therefore overlook potential impacts.				this issue is recognised and, as a consequence, a lower threshold of 65dB LAmax is applied in relation to breeding waterbirds. The Natural England Written Representations also fail to recognise the further noise modelling presented in the Shadow HRA Report Addendum [AS-173], which demonstrates the relatively low levels of chronic noise which will occur over the Minsmere South Levels during phases 3 and 4 of the construction period. iii. Effects on the Minsmere-Walberswick SPA populations of nonbreeding gadwall and shoveler Natural England's Written Representations raise two main concerns on the assessment of noise and visual disturbance from construction activities on the Minsmere-Walberswick SPA (and Ramsar site) populations of non breeding gadwall and non-breeding shoveler, as follows:• The additional project-specific survey data from the 2019 – 20 winter period record markedly higher numbers of both gadwall and shoveler on the Minsmere South Levels than during the previous project specific surveys (in winters 2014 – 15 and 2018 – 19). It is also stated that the 2019 – 20 surveys are the first complete winter of project specific waterbird counts.• The mapping of gadwall and shoveler distributions on the Minsmere South Levels during the 2019 – 20 winter surveys appears to be inadequate because the peak counts (in January) are represented by a single point location for gadwall (238 birds) and three point locations for shoveler (334 birds) (see Figure 2.9 in Appendix 2.9A of the Natural England's Written Representations are incorrect in stating that the2019 – 20 winter surveys were the first complete project-specific surveys of non-breeding waterbirds. The 2014 – 15 surveys encompassed the full winter period from November to March, so covering the same months as the 2019 – 20 surveys (whilst accepting that only one, as opposed to two, January surveys were completed in 2014 – 15 – see Table 6.2 in the Shadow HRA Report Addendum [AS-173] for a comparison of survey dates in all three winters of the project-specific non-breeding bird surveys). The Natural England Written Representations highlight the higher numbers of gadwall and shoveler recorded on the	

			Surveys of wintering SPA waterbirds: No complete winter's worth of dedicated project-specific survey for non-breeding gadwall and shoveler at Minsmere South Levels and Sizewell Marshes have been provided. Wintering surveys would be expected to be undertaken between October to March. Just two winter periods were surveyed with counts from November to March in 2014/15 and December to February in 2018/19. In addition, during the 2014/15 winter, only a single count was undertaken when all sectors were recorded together, rather than on separate dates. Wetland Bird Survey (WeBS) data were used to supplement project-specific counts, but these did not record the within-sector location of birds to enable development effects to be assessed. In addition, the Sizewell Marshes WeBS sector did not cover key parts of the project-specific survey area, missing Goodrum's Fen and SSSI Reedbed, hindering the use of WeBS data to supplement the lack of project-specific counts. Finally, neither have the distribution data associated with those limited project-specific bird counts been provided in sufficient detail to allow the conclusion of the shadow-HRA to be properly critiqued. **<u>Further comments on the DCO application, May 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** 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, we advise that 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				Minsmere South Levels during the2019 – 20 surveys compared to those recorded during the previous project tspecific non-breeding water bird surveys, referring to these as a 'significant increase' when compared to the previous counts. However, marked annual fluctuations in wintering waterbird numbers at individual sites are a frequent occurrence and the Wetland Bird Survey (WeBS) data that are presented in Table 6.13 (gadwall) and Table 6.15 (shoveler) of the Shadow HRA Report) [APP-145] clearly show this to be the case at the Minsmere South Levels. These WeBS data show that annual peak counts on the Minsmere South Levels between the winters of 2012 – 13 and 2018 – 19 varied from12 to 474 for gadwall and from 24 to 282 for shoveler (so representing larger fluctuations than those apparent from the different years of project-specific winter surveys). Therefore, the variation noted by Natural England in the project-specific counts recorded on the Minsmere South Levels should not be regarded as unusual (or indeed as indicative of any increase in the usage, or importance, of this area to non-breeding gadwall and shoveler).Furthermore, the assessment undertaken in the Shadow HRA gives greater weighting to the WeBS data than the project-specific surveys for the purposes of assessing the overall importance of the Minsmere South Levels for both populations (with the finer resolution project-specific survey data relied upon largely to inform distribution within the Minsmere South Levels). In relation to the adequacy of the mapping of survey records, the Natural England Written Representations fail to recognise that these species often occur in large, concentrated, aggregations during the non-breeding season,so distribution (of even large numbers) can be sufficiently well indicated by the mapped point locations. Importantly, the distribution of both nonbreeding gadwall and non-breeding shoveler on the Minsmere South Levels is shown to be consistently centred around the main pool systems on the Minsmere South Levels, and beyond the areas within which effects of noise and visual disturbance are predicted to occur. This consistency in distribution is apparent both within and between each of the three winter survey periods for which project-specific surveys were undertaken (see Figures 6.10 to 6.13 of the Shadow HRA Report [APP-146] and Figures6A.14 and 6A.15 of the Shadow HRA Report Addendum [AS-177]).	

			integrity for breeding and non-breeding gadwall and shoveler. We will provide further detailed advice on this within our Written Representations. **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.				Natural England also seek clarification on the reporting of the zero percentage figures for the WeBS counts relating to non-breeding gadwall and non-breeding shoveler, as reported in the Shadow HRA Report [APP-145] (see paragraphs 6.3.142 and 6.3.150). These are queried because the tabulated WeBS counts for both species contain no zero counts (Tables6.13 and 6.15 of the Shadow HRA Report [APP-145]). However, this is explained simply by the fact that the data in Tables 6.13 and 6.14 refer to the peak counts in each winter survey period, whilst the range of percentages detailed in the text are in relation to "all available counts" from which the peak counts are derived (with the peak counts in each winter survey period derived a range of counts over the period, as is standard for WeBS methods). A final point raised by the Natural England Written Representations in relation to the assessment for the Minsmere-Walberswick SPA nonbreeding populations of gadwall and shoveler is that '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'. The Applicant disputes this view because the potential for increased recreational disturbance to nonbreeding gadwall and non-breeding shoveler in relation to increased usage of the footpath running south of the Minsmere New Cut between Eastbridge and the coast is specifically considered in Sections 8.8 k) v. and 8.8 l) v. of the Shadow HRA Report [APP-145]. In relation to the use of this footpath,it is concluded that the predicted increases in visitor numbers during the construction of Sizewell C are unlikely to result in any additional recreational disturbance to birds using the Minsmere South Levels on the basis that the footpath is already heavily used (so areas affected by recreational disturbance will already be avoided by these birds). Further consideration of the potential additive effects of noise and visual disturbance and recreational disturbance on the SPA qualifying features (including nonbreeding gadwall and shoveler) is presented in Table 3.3. and Section 3.5b) ii. of Appendix 1A of the Shadow HRA Report Addendum [AS-174].	

			We also welcome the use of a hydrohammer as mitigation at source, to reduce the amount of noise introduced in the marine environment. **<u>August 2021</u>** **Marsh Harrier** We are in the process of reviewing the latest information which has been provided by the applicant at in Comments on the Written Submission to actions arising from ISH7 at Deadline 6 [REP6-002]. We are therefore unable to provide our updated position at this time but will use best endeavours to provide this as soon as we can. **Marine Mammals** ***Further information required*** Natural England provide the following comments on the Applicant's submitted Site Integrity Plan for the Southern North Sea SAC: <u>General comment</u> In line with Site Integrity Plans (SIP) produced for other plans and projects within and adjacent to the Southern North Sea SAC, Natural England would consider this SIP a draft that should be revisited and finalised prior to construction activities commencing. This will allow for a more refined, accurate in-combination assessment to be undertaken using more up to date information regarding the scheduling of works for other plans and projects. This may help to reduce the worst case scenario and the total percentage spatial footprint of activities in-combination. <u>Detailed comments</u> • 1.2.5 – NE acknowledges it is not yet known whether any UXO clearance works will be required, however other projects in the area of the proposed works have identified and had to clear UXO so there is a realistic chance that this will also be the case for piling works at Sizewell C. Therefore, the detonation of one UXO at Sizewell should be included in the in-combination assessment.				This concludes that 'There is little indication that increases in recreational disturbance during construction and decommissioning could add, in more than a very small way, to the small potential effects predicted to occur on these qualifying features as a result of noise and visual disturbance'. iv. Evidence base for concluding no adverse effects in relation to the Outer Thames Estuary SPA population of non-breeding red-throated diver Natural England's Written Representations highlight concerns over the potential effects of disturbance and displacement associated with vessel traffic in relation to the Outer Thames Estuary SPA population of nonbreeding red-throated diver. In particular, the Written Representations state that the approach of basing the assessment on an indicative vessel 'corridor' is insufficient and that a full vessel management plan is required. In relation to the indicative vessel 'corridor', importantly this represents a worst-case scenario which assumes that all deliveries to the temporary Beach Landing Facility (BLF) will originate from ports in the Inner Thames(with return trips also terminating at the Inner Thames), so that the extent to which these vessels are assumed to transit the Outer Thames Estuary SPA is essentially maximised (see Figure 8A.12 in the Shadow HRA Report Addendum [AS-173]. In reality, it is possible that at least some vessel routes will be to the north of Sizewell C, which would substantially reduce the transit distance through the SPA. However, even when the assessment is based upon this indicative vessel corridor the extent of the predicted vessel movements represents a very small increase in vessel activity within the SPA relative to the existing baseline levels (i.e. c.0.1 hours of vessel activity per km2 per month compared to existing levels within the SPA which are frequently at values of at least 1.5hours per km2 per month and can be above 5 – 10 hours perkm2 per month in shipping lanes and in proximity of wind farms (see Section 8.8 c) ii. of the Shadow HRA Report Addendum [AS-173]).	

			• 2.1.5 – Reference not found. • Table 2.1 – Please could clarification be provided as to how the figure of 332.5km2 for piling at the BLF has been arrived at? Does this reflect the proximity of the piling activity to the shore? • 2.2.6 – Reference not found. • Table 2.3 – NE disagree with the conclusion of no potential for adverse effect on the SNS SAC based on the 'most likely' scenario of 50 days as this duration cannot be guaranteed and conclusions should be based on the worst case scenario of 110 days. Therefore to ensure no adverse effect, piling for the BLF should not be undertaken in-combination with OWF monopile installation or UXO clearance works and works should be scheduled to achieve this. This also applies to the final scenario in table 2.3. • Table 2.4 - NE disagree with the conclusion of no potential for adverse effect on the SNS SAC based on the 'most likely' scenario of 60 days as this duration cannot be guaranteed and conclusions should be based on the worst case scenario of 110 days. Therefore to ensure no adverse effect, piling for the BLF should not be undertaken in-combination with OWF monopile installation or UXO clearance works and works should be scheduled to achieve this. This also applies to the final scenario in table 2.4. • Section 3 – Whilst NE recognises and welcomes the proposed use of a hydrohammer, mitigation and management should be based on the worst case scenario provided here and therefore, management of the scheduling of activities is required to ensure there is no adverse effect on the integrity of the SNS SAC as per our advice above. **Marine Ornithology – Red-throated diver** ***Further information required*** Natural England provide the following comments on the Outline Vessel Management Plan [REP6-027] with regards to concerns surrounding the disturbance of overwintering Red-throated diver by vessel traffic in the Outer Thames Estuary SPA.			It is also noted that the Natural England Written Representations state that red-throated diver may show disturbance responses to vessels of up to 5kmwith long resettlement times of 3–7 hours. However, the available evidence suggests that smaller effects than this are more likely in relation to the proposed vessel movements assessed in the Shadow HRA. Thus, average 'escape' distances for red-throated diver in relation to approaching vessels are more likely to be in the range of 400m to 1400m (Bellebaum et al. 2006,Fleissbach et al. 2019) and whilst vessel occurrence may result in reduced densities over considerably greater distances than this, it is noted that Dorsch et al. (2020) state that 'A recent study by Mendel et al. (2019a)suggests an effect of ships on red-throated divers up to 5 km distance. However, some uncertainty about the disturbance radius remains, as a rather coarse grid of bird data was used in that analysis'. It is also the case that resettlement times of red-throated diver disturbed by vessels are greatest in relation to vessels moving at considerably faster speeds (i.e.>40km/hour) than the self-propelled barges that it is assumed will be used for the BLF deliveries (which are likely to have a loaded maximum speed of18 – 24km/hour - see Section 8.8 c) ii. of the Shadow HRA Report Addendum [AS-173]). Therefore, as concluded in the Shadow HRA Report Addendum [AS-173], the Applicant considers that the very small predicted increase in vessel activity within the Outer Thames Estuary SPA as a result of the BLF deliveries will not result in an adverse effect on the SPA non-breeding population of red-throated diver. Nonetheless, the Applicant is prepared to work with Natural England in producing a vessel management plan that would accommodate the requirement of enabling the winter season BLF deliveries and contribute to reducing potential disturbance to the SPA red throated diver population v. Access to the Southern North Sea Site Integrity Plan Natural England were directed to the Southern North Sea Site Integrity Plan by email on 16/5/21, to its location on the PINS website. It is Appendix 9Aof the Shadow HRA Report [AS-178] and secured by Condition 40(c) of the deemed marine licence.	

			General comments • There appears to be no attempt to avoid the SPA or plan the vessel routes to reduce time spent within the SPA for the primary routes proposed. It is advised that planning routes with no attempt to mitigate against red-throated diver disturbance is insufficient. It is advised that routes that reduce vessel time/distance spent within the OTE SPA are preferred. • It would be useful to map existing shipping lanes and established routes. Existing shipping lanes should be utilised wherever possible in route planning to reduce additional disturbance at the OTE SPA. Mapping would inform the selection of optimum routes for the VMP and allow proposed routes away from pre-existing traffic to be visualised in the context of other shipping (existing disturbance 'corridors' from which red-throated divers are already displaced). • Implementing monitoring to detect red-throated diver disturbance is considered highly unlikely to be successful. The survey methods are not suitable and will be further compromised in the winter period by weather conditions. • Implementation of secondary routes that seek to avoid the SPA and/or causing red-throated diver disturbance once (if) detected is not considered appropriate. The VMP should identify routes that reduce the possibility of disturbance to red-throated divers within the OTE SPA from the outset, preferably by avoiding vessel movements within the SPA. • Vessel uplift figures presented in the VMP are incorrect, and significantly underestimate the increase in vessel movements attributed to the project by considering annual vessel movements compared to seasonal uplifts. **Detailed comments** • 1.1.4 What is the justification for the exclusions listed here? Will these vessels/operations be subject to any VMP or consider any mitigation of red-throated disturbance within the OTE SPA? • 1.2.1 The primary aim of the VMP should be to reduce the number and distance of vessel movements through the OTE SPA and where that is				**August 2021** It is considered that further assessment is unlikely to be required but further clarifications may be required. **September 2021** Natural England's comments on the Draft SIP made left have been addressed in the updated Draft SIP submitted to examination at Deadline 8. Similarly, Natural England's comments on the OVMP made left have been addressed in the updated OVMP submitted to examination at Deadline 8.	

			not possible, reduce the impact of any unavoidable vessel movements within the OTE SPA. o Take account of, and avoid, known areas of high red-throated diver density o Follow a route that reduces vessel time spent in the OTE SPA o Take account of, and utilise, existing shipping routes to minimise additional disturbance Mitigation of impacts arising from any vessel movements that cannot avoid the SPA should also be detailed in the VMP e.g. by avoiding revving of engines and reducing vessel speed. • Table 3.1 Most vessel movements are undertaken in the winter season. Red-throated diver are not present at the OTE SPA in the summer season. An obvious mitigation, if possible, is to bias vessel movements to the summer season. o The table legend indicates that vessel movements are tabulated annually. However, the figures accord with the number of allowable landings. Para 3.1.5 states that "each Landing would comprise two journeys, one inbound and one return journey". Therefore, it is assumed that in fact, 400 vessel movements per year are predicted, and the table should reflect this for clarity. • 4.1.1 Detecting disturbance of red-throated divers and then using alternative routes is not considered an acceptable solution. Detection and reporting of disturbance is challenging. Routes should seek to reduce the potential for disturbance. • 4.1.7 (Plate 4.2) We do not consider the use of Route 1A or 1B to be appropriate as it is novel, situated farther inshore, and is likely to cause red-throated diver disturbance alone, and in-combination (cumulatively) with the nearby route that is already established. Route 2A (for Lowestoft) appears to be a suitable compromise as it follows an existing route, albeit still almost entirely within the OTE SPA, it is likely that red-throated divers are already displaced from this route area. Route 3B (for Ipswich/Harwich) would be preferred to reduce impacts on the OTE SPA. • Table 4.2 The percentage uplift figures presented in this table are erroneous and misleading.				

			Annual (existing) vessel movements are used to calculate seasonal uplift. For route 2 a 233% uplift in vessel traffic is presented in the table for the winter period. In fact, if vessel movements only over the winter period are considered the uplift generated by 400 movements is much greater ([172/12] * 5 = 71.67 movements) (400/71.67) * 100 = 558% uplift in vessel traffic over the winter period • 4.1.10 While the use of an existing shipping route (4) is preferable to a novel route, project impacts would ideally be further reduced by employing route 5 to reduce vessel time spent in the OTE SPA • Plate 4.4 Route 6 could be improved by entering the OTE SPA further to the south at the closest point at the boundary to SZC, thus reducing the amount of vessel time spent in the SPA. • 5.1.1 Winter period defined here (October-April) differs from that in Para 3.1.2 (November – March). While not an issue per-se, it will be important to retain clarity on the changing definition of 'winter period' as it relates to vessel movements, and red-throated diver presence. • 5.3.2 The monitoring of red-throated divers by ship-based observers is not appropriate. The species is frequently flushed by vessels at distances greater than they can be reliably observed. Furthermore, some vessels described in the VMP will not enable surveyors to achieve a suitable eye-height to detect divers at distance. Poor weather and resulting rough sea states further reduce detection rates. o The monitoring of red-throated divers by UAV is not appropriate. Drone surveys are unproven offshore, and even if possible, would be heavily restricted by weather conditions and visibility issues in the winter period. Furthermore, it is likely that drones would need to be flown at a relatively low altitude, potentially causing visual and/or noise disturbance which may disturb/flush divers and other birds. Even if flown at sufficient height to avoid disturbing birds, it is not clear if a drone could be piloted far enough ahead of a vessel to detect divers and give enough time for evasive					

			manoeuvres to be made. This seems highly unlikely. • 5.3.3 See comments on 5.3.2, the proposed survey methods are not considered appropriate. • 5.3.4 See comments on 5.3.2, the proposed survey methods are not considered appropriate. • 5.3.5 For a disturbance threshold to realistically prevent adverse impacts on red-throated diver the cumulative effects acting upon the population would also need to be considered, e.g. disturbance and displacement from other shipping and industry activity. • 5.3.8 It is suggested that with good planning vessel routes should not displace large numbers of divers. It is also not clear that detection of such an event would be possible. • 5.3.9 It is not considered possible to detect 'chronic disturbance' using the proposed survey methods. [1] Digital video aerial surveys of red-throated diver in the Outer Thames Estuary Special Protection Area 2018 - NECR260 (naturalengland.org.uk) Use of kernel density estimation and maximum curvature to set Marine Protected Area boundaries: Identifying a Special Protection Area for wintering red-throated divers in the UK - ScienceDirect					
28	**ECOLOGY:** Impacts on internationally designated sites: ▪ Minsmere to Walberswick Heath and Marshes SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site	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 internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features.	**Context and background** **Overview of coastal geomorphology advice and issues for the natural environment**: • 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. • The geomorphological features and their dependent wildlife exist as a mosaic in a dynamic environment, where features are often ephemeral, seasonal, and adapted to living alongside waves, storms and tides.	**TBC**			The Shadow HRA and SHRA Addendum assess the coastal processes implications of the works involved in the following: – coastal defences – permanent and temporary BLFs – cooling water intakes and outfalls – FRR system and CDO. The conclusion is that the effects are of such low magnitude (spatial scale and duration) that no effect is predicted on any European sites and, therefore, our view is that the assessment demonstrates that the SZC Project will not disrupt coastal processes to cause or magnify adverse effects on habitats, species, or geomorphology, relative to any background natural change.	Coastal Processes Monitoring and Mitigation Plan (CPMMP)

		(O)	Erosion, sediment transport and wave energy moves material that feeds the beaches in great volumes and often over long distances. The coastal zone may change considerably in the future in response to climate change, with or without the proposed Sizewell project. 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. • 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. • The entire coastal frontage is within the Suffolk Coast and Heaths AONB, and development pressures on the foreshore and adjacent coast have the potential to impact the special qualities of the nationally significant landscape. **Summary of geomorphological concerns raised during pre-app to be addressed in the DCO**: • It is accepted that this stretch of coast is likely to change in response to future sea level rise and climate change, with or without the Sizewell C project, with possible consequent permanent changes to habitats and features. Our headline requirement is for the project to demonstrate beyond reasonable doubt the planned coastal defences, landing facility and nearshore structures to will not disrupt coastal processes to cause or magnify adverse effects on habitats, species or geomorphology, relative to any background natural change. • The project should avoid, alone or in combination, a direct adverse effect on foreshore wildlife and the geomorphology of Minsmere-Walberswick Marshes				As Natural England notes, the Coastal Geomorphology and Hydrodynamics report refers to mitigation scenarios and proposes mitigation through beach management (nourishment, bypassing and recycling) should the HCDF becomes exposed by shoreline recession. The requirement for such measures (and the nature of measures required) is to be determine via monitoring. For this reason, it is not possible to define in detail how any mitigation measures might be implemented, but it is reasonable to assume that part of the assessment of the feasibility of any mitigation will involve identifying any management and control measures necessary such that direct effects on the SAC that could negatively affect condition (e.g. through vehicle movements) are avoided. The CPMMP provides the approach to monitoring of coastal processes and outlines the approach to be taken to any required remedial works. **June 2021** SZC Co. notes that Natural England is reviewing various reports connected with the coastal processes assessment and has not made any further specific comments on this area of the assessment in its written representation. SZC Co. will respond once Natural England has made comments on the assessments. **August 2021** It is considered that this matter can be an agreed matter, given the support provided to the approach by other regulators, once Natural England have had the opportunity to review recent exchanges and submissions to the examination.	

			SAC/SPA and SSSI and wetland habitats and species within Minsmere Valley itself, as a result of changes to coastal processes. Particularly where any are identified and cannot be avoided, they will need to be mitigated on-site or compensated for in advance off-site. This particularly relates to features Annual vegetation of drift lines and perennial vegetation of stony banks; Coastal shingle vegetation outside the reach of waves) and the species they potentially support for nesting (e.g. little terns and ringed plovers); • Indirect adverse effects on designated freshwater wetland habitats and species landward of the barrier beach within Minsmere Valley and RSPB reserve are also possible, by increasing the risk of saltwater breaching or overtopping. Again, where any are identified and cannot be avoided, they will need to be mitigated on-site or compensated for in advance off-site • A locally important County Wildlife Site, supporting dune and shingle habitats, currently runs along the foreshore corridor in front of Sizewell B and C. It is likely to be largely destroyed or permanently altered as a result of land-take to the main development site platform and adjacent hard and soft coastal defences. We are looking for the project to demonstrate how it will offset and replace this loss, on or off-site. • The project should explore and commit to opportunities arising from the coastal defence and structures, to enhance the coastal natural environment through the Biodiversity Net Gain route. Opportunities for wider enhancement of the coastal natural environment beyond statutory protected site requirements should be explored, as a potential contribution to wider landscape scale habitat creation and nature recovery. We have advised on these issues throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008:					

			• Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 2.2 (i and ii), 3.5, 4.3 (i), 4.4 (i) and section 4.12); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 4.9 and throughout Annex 3 (see comments under 7.4.52, 7.4.58, 7.4.64, 7.4.77, 7.5.48 and 7.9.58 – 7.9.63); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, e.g. paragraphs 3.9.1 – 3.9.15, 4.5.11 – 4.5.16, 4.6.4.3, 4.6.4.4 – 4.6.4.7, 4.6.4.9 and 4.6.5.2 – 4.6.5.9); We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (incomplete shadow HRA, relevant BEEMS report omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this were not therefore obtained before the application was submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** Specific comments on the Coastal Geomorphology and Hydrodynamics report within the DCO, including further information or evidence we think is required or which needs clarification:				

			• We welcome the coastal geomorphology and hydrodynamics report as part of the DCO consultation, it is detailed and contains a thorough attempt to quantify and assess impact pathways for all the coastal defence and nearshore structures, relative to the Minsmere to Walberswick designated site. We note that the conclusion for most of these are that any effects are mostly negligible and insignificant, particularly where offshore effects are predicted relating to the outfalls, intakes and Beach landing facility. • We welcome the inclusion of an Expert Geological Assessment, something we had previous identified as being needed. We note its conclusion that without mitigation, the Hard Coastal Defence Structure HCDF is likely to be impacted by coastal erosion sometime between 2053 and 2087, within the operational life of the project. • The report explores various mitigation scenarios and proposes mitigation through beach management (nourishment, bypassing and recycling) should the HCDF becomes exposed by shoreline recession, and potentially interrupt sediment pathways to the designated site to the north. A significant (moderate) risk to designated site features is identified. It is explained how the measures will help maintain beach volumes, in turn supporting beach volume and form and geomorphological features. But there is less explanation of how the various beach measures will avoid an adverse effect and maintain condition of SAC foreshore annuals vegetation communities. It is important this is clarified, particularly where future beach management measures might require manual intervention (for example, vehicle movements on the beach) which in turn could adversely affect the feature by hindering colonising plants. This is important as manual beach management schemes elsewhere often involve lorry movements directly on beaches, which is disturbing to flora and fauna. • The report predicts an increase in sediment supply from the SCDF and slowing of erosion along the southern SAC/SPA frontage, against current and				

			anticipated erosion rates there. It is reassuring if it can be demonstrated that this will reduce risk there. But more clarity is required on the extent to which the measures will also reduce the risk to SAC/SPA habitats in Minsmere Valley behind the barrier beach, by building resilience on the beach to storm breaches and over-topping and reducing risk of the project exacerbating the impact of storm-tide surge events. There is reference in the report to the beach potentially tripping over into a state of more over-washing and possible breach, in theory increasing risk of saltwater inundation risk to the more brackish or freshwater SAC and SPA habitats in the Valley. Storm driven events (like the 2013 tidal surge) are predicted to increase in frequency and severity through the life of the project. The project needs to demonstrate that the proposed mitigation measures are sufficient to avoid the Project contributing to this trend and escalating it. • The report refers to the material for the SCDF and any subsequent nourishment needs as coming from excavated beach material (under the HCDF footings), a licensed aggregate extraction site, or material excavated from the main development site. The importance of the source material being compatible with the integrity of the geomorphology is an important part of maintaining site condition. It is important for barrier beach grain, form and the way wave processes sort and grade the beach, part of its geomorphological function. It is also necessary for the extent to which the beach is suitable substrate for SAC vegetated shingle communities to establish, and nesting sites for breeding shorebirds. More clarity is needed on beach sediment sources and their compatibility with the designated site. • The report mentions the dune County Wildlife Site but makes little or no mention of the impact of the coastal defence measures on it. We would welcome more detail here on how the loss of most of the site will be mitigated or offset within the footprint of the HCDF and SCDF. • There is reference in the report to how the beach management measures will avoid to reduce risk of				

			adverse effect on designated habitats, but little exploration of how the coast protection of the development site will enhance the wider coastal natural environment, including its form, function, and ability of coastal habitats to contribute to climate change resilience and nature recovery, as part of UK governments 25 Year Environment Plan. **<u>Further comments on the DCO application, May 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. **August 2021** ***Further information required*** **TR545 Storm erosion modelling of the Sizewell C Soft Coastal Defence Feature [REP3-048]:** Page 69/75				

			'With the receded shoreline, sediment eroded from the SCDF was predicted to feed the beach areas immediately north and south of the SCDF, but <u>further modelling of multi-decadal longshore transport and shoreline change would be required to better understand the cumulative influence of the SCDF on the adjacent shorelines</u>.' • Natural England request further clarification on if this is going to happen? We advise that it would bring greater confidence to the assessment of the impact to protected sites on the Minsmere frontage. **Coastal Processes Monitoring and Mitigation Plan [REP5-059]** Page 16 *'The present assumption is that the HCDF would be removed after decommissioning but confirmation, or otherwise with justification, will be made as part of the cessation report.'* • Natural England advise against the HCDF being left in place and this left to the end of the design life. • The effect of its presence over this length of time has not been modelled and considered in full, therefore there is considerable uncertainty over the effect it will have on the shoreline in the long-term and subsequent consequences for the protected sites on the Minsmere frontage. Page 50 • Natural England advise that we would not expect 'non-native' sizes of sediment to be used in coastal defence features. o E.g. cobble sizes that are not found on this shoreline.					
29	**ECOLOGY:** Impacts on internationally designated sites ▪ Alde-Ore and Butley Estuaries SAC	Impacts from changes/ increases in recreational disturbance arising from the MDS project elements	**<u>Context and background</u>** The proposed accommodation campus and temporary caravan site on LEEIE will house up to 7900 workers during the construction peak.	**TBC**			Disturbance due to increase in recreational pressure is a potential effect pathway that has been assessed within the Shadow HRA report. As the Shadow HRA report notes, SZC Co. is committed to the principles outlined within the RAMS. A payment to accord with the RAMS calculated for campus and caravan park workers, as determined by ESC, is to be included in the s106 contribution.	Section 106 agreement (RAMS payment, Environment Fund to fund any measures at other European sites)

	▪ 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	(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)**	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 noise disturbance, trampling etc. EDF Energy have collected a suite of evidence and data to inform the recreational disturbance impact assessment and this was shared with Natural England at the pre-application stage which was helpful. However, EDF Energy have also acknowledged that "*Given the existing relatively high levels of recreational disturbance, as recognised in the SIPs, and the inherent difficulties in assessing relatively small incremental changes that may be attributable to Sizewell C against this background, it is considered prudent to develop a recreational management and monitoring strategy, in partnership with relevant stakeholders*" (paragraph 4.9.6 of *HRA Recreational Disturbance Assessment v2_20190528* as circulated at pre-application). Given these acknowledged uncertainties, we consider the development of a recreational disturbance mitigation and monitoring strategy to be the correct mitigation approach in the context of the precautionary principle which is enshrined in the Habitats Regulations. This approach is consistent with that which we have followed in advising East Suffolk Council and housing developers on impacts from their projects on these sites, which resulted in the development of the Suffolk Coast Recreational disturbance Avoidance Mitigation Strategy (Suffolk Coast RAMS). In terms of the package of mitigation measures to ensure that adverse effects to these sites do not occur as a result of the Sizewell C project, we consider that this should constitute a two-pronged approach of: **1. Provision and promotion of 'on-site' alternative greenspace within/ in close proximity to the MDS**				The Aldhurst Farm and Kenton Hills proposals are described within the ES and form a key part of the embedded measures to support any recreational displacement, as does keeping the closure of the Coastal path to an absolute minimum. **June 2021 – Comments of Written Representations** SZC Co. is continuing the dialogue with Natural England (and others) with respect to this matter. SZC Co. has committed to delivering the measures to reduce and mitigate this potential impact, namely: • Mitigation measures to minimise effects on recreational receptors due to changes to sound, views, air quality, traffic, and potential increases in people. • Measures in the updated Rights of Way and Access Strategy which was submitted at Deadline 2 [REP2-035] to keep recreational routes and accessible landscapes open as far as possible, and provide suitable diversions when closures are necessary. • Improvements included in the updated Rights of Way and Access Strategy [REP2-035] including permanent new Public Rights of Way, and provision of recreational access and improvements at Aldhurst Farm and Kenton Hills.. • A suite of enhancements to rights of way and access outside the main development site being agreed with SCC, which will be funded through the Public Rights of way Fund (Schedule 10 Paragraph 3 of the Draft Deed of Obligation (Doc Ref. 8.17(D))). • European Sites Access Contingency Fund (Schedule 11 Paragraph 6 of the Draft Deed of Obligation (Doc Ref. 8.17(D))). • Monitoring and Mitigation Plans for the Minsmere European sites, Sandlings Special Protection Area (SPA) and the Alde-Ore Estuary [REP2-118]. • Payment of a Recreational Avoidance Mitigation Contribution (Schedule 11 Paragraph 7 of the Draft Deed of Obligation (Doc Ref. 8.17(D))).	Monitoring and Mitigation Plan (in prep) for Recreational Displacement at Minsmere European Sites and Sandlings (North), secured by requirement Monitoring and Mitigation Plan (in prep) for Recreational Displacement at 'other European sites' (South), secured by requirement

			This should include provision and promotion of an area of greenspace within/ in close proximity to the MDS, with the aim being to minimise any increase in recreational pressure to the designated sites (from workers and displaced local people) by concentrating a proportion of recreation in this area. Such provisions must be carefully designed to ensure that people will use them in preference to the sensitive designated sites and the Suitable Accessible Natural Greenspace (SANG) guidance here is helpful in designing them; it should be noted that this document is specific to the SANG creation for the Thames Basin Heaths, although the broad principles are more widely applicable. As a minimum, we advise that such provisions should include: • High-quality, informal, semi-natural areas including a variety of habitat types and topography where possible; • Circular dog walking routes of 2.7 km^2 within the site and/or with links to surrounding public rights of way (PRoW); • Dedicated 'dogs-off-lead' areas; • Adequate parking provisions; • Signage/information leaflets to users (workers and displaced local people in this case) to promote these areas for recreation; • Dog waste bins; • A commitment to the long term maintenance and management of these provisions. EDF Energy have previously indicated that they are currently considering the use of Aldhurst Farm to fulfil this function. If this site it to be taken forward, the current baseline recreational use of the site must be assessed to ensure that it would have the capacity to fulfil its function				The Shadow HRA conclusion is that with these measures in place there would be no adverse effect on integrity arising from recreational amenity at European sites. SZC Co. notes that Natural England's Written Representation explicitly acknowledges that the organisation '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.)'. Notwithstanding this, Natural England 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, suggesting that a SANG within or in close proximity to the accommodation campus is provided, along with a package of 'off-site' measures (often referred to as Strategic Access Management and Monitoring Strategies (SAMMS)) in order to mitigate impacts from Sizewell C. The principle of SANG is an established mitigation mechanism developed by Natural England for the Thames Basin Heaths SPA as a means to mitigate potential harm from recreational pressure as a result of (primarily)residential development and has been adopted more widely by planning authorities across England (e.g. Dorset). It has very specific purposes and requirements, namely to avoid recreational disturbance at European sites by providing alternative open space for recreation as a consequence of the increased population arising from (permanent) additional housing being built in an area. The construction phase of the Sizewell C Project is temporary, lasting up to 12 years and has different characteristics. SZC Co. does not consider the provision of a SANG, per se to be an appropriate response to the pressure of construction workers. Construction workers at the	

[2] Taken from *Jenkinson, S., (2013), planning for dog ownership in new developments: reducing conflict – adding value. Access and greenspace design guidance for planners and developers*

			as a SANG for the new and displaced users. The same considerations are needed for the proposed improvements to Kenton Hills car park if this is also going to be included as part of the 'on-site' recreational disturbance mitigation package. Furthermore, it must be ensured that the above features could be successfully integrated into the design of Aldhurst Farm without compromising the other functions that it is proposed to fulfil, including Sizewell Marshes SSSI habitat loss compensation (e.g. reedbed and ditches), protected species mitigation (e.g. water voles, reptiles), access mitigation (including the England Coast Path temporary diversion route) and grassland/heathland habitat creation as part of the wider ecological legacy. **2. Strategic 'off-site' measures to make the designated sites more resilient to changes/increases in recreational pressures (e.g. visitor engagement, education and information, access management etc.) arising from the proposed development** The unique draw of the designated sites in the surrounding area means that, even when well-designed, such 'on-site' provisions are unlikely to fully mitigate impacts, especially when the proposed development is considered 'in combination' with other plans and projects within reach of them, including new residential development and the England Coast Path (ECP)[3]. Consideration of 'off-site' measures (i.e. in and around the relevant designated site(s)) are also therefore required as part of the mitigation package for predicted recreational disturbance impacts. Whilst these measures will need to be focussed on the designated site features to which impacts are likely to occur (as informed by the baseline evidence report), they should form part of a wider co-ordinated strategic approach involving these statutory sites and the respective land managers (including Natural England) within the zone of influence for recreational disturbance impacts. As mentioned above, in recent years Natural England and others have been working with local planning authorities in Suffolk, including East Suffolk Council, to develop the Suffolk Coast RAMS Essentially,				accommodation campus and LEEIE, and in private rental and tourist accommodation, have a different profile to typical residents and would use European sites for recreation substantially less than the general public for reasons set out in the responses to ExQ1 Question AR.1.12submitted at Deadline 2 [REP2-100]. SZC Co. has proposed a suite of measures to mitigate adverse recreational impacts of construction workers and displaced people, who may recreate at recreational resources surrounding the main development site, including European sites. In addition, SZC Co. will make a significant financial contribution to the Suffolk Coast RAMS to mitigate potential recreational impacts from construction workers, targeted towards an agreed suite of measures from the Suffolk Coast RAMS mitigation package specific to the potential Sizewell C development impacts. SZC Co. considers that this is a robust and highly precautionary contribution; and the approach has been agreed by East Suffolk Council. The mitigation measures include a new informal car park accessed off theB1122, a surfaced footpath (new designated Public Right of Way), and approximately 27 hectares of new open access land where dogs will be allowed to be exercised off-lead at Aldhurst Farm (designed based on the principles of what a SANG needs to provide, but not provided as SANG perse),improvements to Kenton Hills car park including additional spaces,management of vegetation and signage. SZC Co. is also in discussion with SCC and ESC on projects which would enhance the right of way and access network, that lie outside the DCO site boundary, which will be funded by SZC Co. through the Deed of Obligation (a draft Deed of Obligation is provided in Doc Ref. 8.17(D)). These will include a number of enhancements outside European sites which will make recreational resources more attractive to use, helping to reduce displacement of people to European sites.11.23.13 In addition, SZC Co. has undertaken consultation with the Natural England,the RSPB, the Natural Trust and Suffolk Wildlife Trust (amongst others) to discuss the proposed approach to monitoring and mitigation at European sites	

[3] Further information on timescales for the adoption of the ECP is given on our website here

			this is a package of strategic mitigation measures aimed at making sensitive designated sites more resilient to recreational pressures arising from new housing development within reach of them. The mitigation package is 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 (incl. codes of conduct) and effectiveness monitoring (of visitors, birds, habitats etc.). It is therefore fair and reasonable to expect the approach to mitigating recreational disturbance impacts from the proposed Sizewell C project through the 'off-site' measures to be in line with and complimentary to the approach and principles of the Suffolk Coast RAMS. The package of measures should be proportionate to the nature, scale and duration of the development. As a starting point, it is worth bearing in mind that the numbers of workers will be 7900 people at peak (roughly equivalent to 3300 houses by number of people) and that the required financial developer contribution for new housing within Zone B of the Suffolk Coast RAMS (within which the Sizewell C project is proposed) is £321.22 per dwelling. The proposed recreational management and monitoring strategy must also include a monitoring element (of 'on-site' and 'off-site' mitigation measures) as these will be crucial to ensuring that the final package of measures are successful in avoiding/ mitigating adverse impacts on these designated sites. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 2.2 (ii), 3.4, 3.5, 4.2, 5.3 and 5.8); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3*				that have potential to be affected by recreational disturbance due to the Sizewell C Project. It is these measures which would be most effective in addressing any residual risk of harm. SZC Co. is developing two monitoring and mitigation plans to cover relevant European sites, as follows: Monitoring and Mitigation Plan for Minsmere – Walberswick European Sites and Sandlings (North) European Site. Drafts have been consulted on, and the latest draft was submitted at Deadline 2[REP2-118]; and• Monitoring and Mitigation Plan for Sandlings (Central) and Alde,Ore and Butley Estuaries European Sites (a draft has not yet been consulted on but will be in due course, which will be submitted by Deadline 5). SZC Co. believe the RAMS payment and the proposed package of mitigation measures together are an appropriate response and will prevent Adverse Effects on the Integrity of European sites, and that a SANG, or further green space provision following the SANG principles, is not required. **<u>September 2021</u>** A bespoke Monitoring and Mitigation Plan prepared specifically for Minsmere and Sandlings (North) (including Dunwich Heath) was submitted to examination and an updated version submitted at Deadline 6 to address the measures which may be required at the only European sites at which the potential for significant displacement was predicted. These measures are being deployed to ensure that there is no adverse effect on Integrity. Monitoring and the use of trigger levels will determine whether additional mitigation measures are required. The plan and related funding will be secured by the Deed of Obligation. A second bespoke plan has been prepared for Sandlings (central) and the Alde-Ore Estuary and was submitted at Deadline 6. This plan initially covers monitoring measures only but the monitoring will determine whether mitigation measures need to be introduced. The sHRA conclusions did not rely on any initial mitigation measures being introduced at these sites. The plan and related funding will be secured by the Deed of Obligation.	

			February 2017 (our ref: 202551, dated 2nd February 2017, paragraphs 3.7, 3.10, 4.10 and throughout Annex 3 (see comments under 7.4.14 and 7.5.58 – 7.5.60); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, e.g. paragraphs 3.9.1 – 3.9.15 and 4.6.8.1 – 4.6.8.4); • Natural England's response to the *Sizewell C – Stage 4 Consultation: 18th July 2019 to 27th September 2019* (our ref: 289446, dated 26th September 2019, comment 6); We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents circulated through EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (incomplete shadow HRA, Recreational Management and Monitoring Strategy omitted from the review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this were not therefore obtained before the application was submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** As raised in our previous screening advice February 2019 (Our Ref 273239), disturbance due to increase in recreational pressure' category: we advise that increased recreational pressure is a potential impact pathway for which LSE cannot be ruled out without consideration of further detailed information (e.g. visitor surveys etc.). As such, we advise a LSE cannot be ruled out at this stage.				Both plans were updated for minor changes at Deadline 8 It is understood that the above approach is broadly accepted by relevant parties as providing appropriate mitigation for recreational displacement and recreational impacts, with one exception (see below) and it is considered that agreement on these other matters can be agreed. There is no agreement of the need for SANGS, SZC Co. does not believe that a SANGS is required for reasons explained to the examination. Nevertheless, SZC Co has undertaken to provide further access enhancements, which aligned with SANGS principles, to the EDF Energy estate and these are outlined at Deadline 8. The proposals were shared directly with Natural England three days before Deadline 8. An updated version of these new proposals, which, where possible, addresses comments received, will be submitted to Deadline 10. Discussions ongoing.	

			Further information is required to determine the sufficiency of the monitoring plan in providing mitigation to prevent the impacts of recreational displacement. We advise that any measures proposed are discussed with Natural England and secured through DCO requirements. **<u>Further comments on the DCO application, May 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. Further detailed advice is provided on this issue within our Written Representations. **August 2021** ***Further Information Required*** We have further engaged with the applicant on the issue of recreational disturbance and provided them with a detailed response on their assessments (our ref: DAS/363894, dated 16th August 2021) which we summarise below. Natural England's primary concern on the issue of recreational disturbance is the estimates produced by the applicant on the predicted use by construction workers of nearby nature conservation sites of international and national importance for wildlife (i.e. Special Areas of Conservation (SACs, Special Protection Areas (SPAs), Ramsar sites and Sites of Special Scientific Interest (SSSIs) for recreation, some of which are both highly attractive and readily accessible in this regard. We consider these figures to be a potentially vast underestimation, informed by limited and unreliable evidence. Consequently, we consider that the proposed mitigation and monitoring strategies (i.e. without provision of an alternative green space integrating Suitable Alternative Natural Greenspace (SANG) principles as part of the package) are inadequate to address the potential scale of impacts which are unprecedented in this location.				

			Sizewell C is located within a part of the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) that is highly attractive to recreational users. We consider that the applicant has failed to fully consider the excellent access the footpaths at the Eastbridge campus accommodation offer to numerous designated sites with high recreation value (beach, woodland and heathland, much of which is open access) which are also particularly sensitive and already under significant pressure from the current levels of recreational use. We also advise that national trends for increasing levels of outdoor informal recreational use of the countryside have not been properly considered, instead relying on older data which is less likely to reflect these increases. The current mitigation strategies are designed to reduce the impact of recreational disturbance based on the applicant's estimation of displaced recreational users and construction workers. Natural England's view is there is significant uncertainty regarding these estimates, particularly those of construction workers likely to be participating in outdoor recreation locally. We advise that, on this basis and in accordance with the precautionary principle which is enshrined in the Habitats Regulations, adverse effects on the integrity of the nearby designated sites (as agreed within scope) cannot be ruled out beyond reasonable scientific doubt based on the mitigation which is currently proposed by the applicant. To address the significant amount of residual uncertainty regarding impacts from construction workers, we advise that an alternative green space integrating Suitable Alternative Natural Greenspace (SANG) principles should also form part of the package, specifically to address impacts from workers within close proximity of the worker's accommodation. Natural England acknowledges that the recreational needs of workers are slightly different to typical housing residents (e.g. most will not be allowed dogs) but consider that an alternative green space is required given that the worker's accommodation is proposed so close to the highly attractive designated sites and that the construction period is long term at 10-12 years during which time adverse effects could occur. We consider that the size and design of the alternative green space is open for debate in terms of SANGS guidelines (as partially listed in issue 29 of our Relevant Representations, Written Representations and above within this issue), but that				

			it would need to be specifically designed to mitigate impacts from workers, targeted at the types of recreation they are likely to undertake. We would be keen to work with the applicant to develop and agree this.					
30	**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 ▪ Southern North Sea SAC ▪ The Wash and North Norfolk Coast 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>Context and background</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. The main issues associated with the intakes include the assessment methods for total fish and invertebrate entrapment losses (combined impingement and entrainment), the scale of the assessment zone of influence at the North Sea Spawning Stock Biomass or ICES, which does not consider local fish stocks and populations. There is currently no clear justification of why an Acoustic Deterrent Device could not be used as mitigation at the SZC site. The conservation objectives for a number of designated species within the GSB include to maintain the water quality standards on which these species rely. There are concerns that there may be indirect impacts on the food web and in particular those species with small foraging ranges. The presence of the infrastructure and associated scour protection may also lead to a long-term/permanent loss of habitat within designated sites. We have flagged these issues throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: ▪ Natural England's response to the Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development (our ref: 71859, dated 6th February 2013).	**TBC**			The Shadow HRA assesses the potential effects of the intakes and outfalls on prey availability and water quality. We note the issues raised by Natural England and further discussion is ongoing with the Environment Agency regarding these potential effects and the approach to the assessment. In relation to the SPA features, we consider that a full assessment has been undertaken of potential water quality effects (resulting from potential effects on prey availability / foraging efficiency) and of the potential effects of impingement and entrainment on the prey resource for these features. Further assessment of the within-project in-combination effects from both of these pathways acting together has been undertaken to supplement the assessment reported in the Shadow HRA and was included in the sHRA addendum in January 2021. This additional consideration of the potential within-project in-combination effects does not result in any changes to the conclusions of the Shadow HRA in relation to the SPA features. **<u>June 2021</u>** 11.24 Impacts from intakes and outfalls (Part II, issue 30) i. Twaite Shad The comments regarding twaite shad raised by Natural England are noted and a full response will be provided for Deadline 5. ii. Allis Shad Natural England's acknowledgement of the inclusion of allis shad in the LSE screening is noted.	N/A [Permitting as relevant]

			▪ Natural England's response to the Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017 (our ref: 202551, dated 2nd February 2017, paragraphs 7.4.49-7.4.56, 7.5.47); ▪ Natural England's response to the Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019 (our ref: 272181, dated 29th March 2019, e.g. paragraphs 4.5.34, 4.5.36, 4.6.3-4.6.3.22); We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy (Our Ref 283006, 284902, 284923, 295524). Despite this, the incomplete draft shadow HRA and relevant ES chapter which were circulated to Natural England in December 2019 as part of EDF Energy's Sizewell C – Stakeholder Review Process (draft DCO submission) did not reflect our previous advice in this regard (incomplete shadow HRA, incomplete entrapment report, no WFD assessment, no CoCP, missing BEEMS reports) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this were not therefore obtained before the application was submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** The impacts from the intake and outfalls will be assessed as part of a Water Discharge Activity Permit for the construction and operational phase of the proposed development, as issued by the Environment Agency. Due to the simultaneous submission of the permitting and DCO applications by the Applicant Natural England have not yet been consulted on the permit and may not be able to provide our final advice in relation to likely effects until the permitting process is complete, i.e. potentially not within the DCO examination				iii. Migratory Fishes The comments regarding migratory fishes, the prey upon which they rely, and mitigation measures raised by Natural England are noted and a full response will be provided for Deadline 5. iv. Fish as prey for HRA bird species The Natural England Written Representations acknowledge the further modelling that has been undertaken to predict the levels of depletion of different fish species/groups which would occur at the local scale of the Greater Sizewell Bay and tidal excursion as a result of impingement at the cooling water intakes for Sizewell B and Sizewell C combined. This includes modelling of depletion for those fish groups which are important prey for marine birds (e.g. pelagic species such as herring and sprat). The Written Representations also state that '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 modelling itself is restricted to exploring the depletion of fish at three different scales (including the 'local' scale of the Greater Sizewell Bay and tidal excursion), with data on the between-year (i.e. 'natural') variability in the abundance of different fish groups being derived from the impingement numbers at Sizewell B. Natural England's Written Representations state that the findings from this local-scale modelling suggest that the depletion of the prey resource for marine birds (i.e. key fish groups) is akin to the impact that would result from a continuous and unrestricted commercial fishery causing constant depletion of the prey, so leading to a cumulative effect. This could be taken to imply a progressive year-on-year reduction in the prey resource as a result of impingement but this is not what the modelling indicates. Rather, modelling at the scale of the Greater Sizewell Bay and tidal excursion predicts that depletion levels asymptote after a period of approximately 50 days. Depletion levels predicted from both stations operating with mitigation are approximately 1.5% in the case of pelagic fish species	

			period. It should be clear from the permitting what monitoring and mitigation are proposed. We would expect to see the Water Framework Directive Assessment presented not just at WFD waterbody scale but also to show areas of localised detrition in relation to SAC and SPA areas and considered in HRA against conservation objectives. **<u>Further comments on the DCO application, May 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 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. Acoustic Fish Deterrent devices), especially for those species with the highest impingement rates and 100% FRR mortality rates (clupeids such as sprat and herring). <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*			(including herring and sprat), 2.5% in the case of epibenthic fish species and 6.5% in the case of demersal fish species. The between year dynamics of prey availability is largely driven by processes of recruitment. Within the Greater Sizewell Bay the abundance and distributionof prey availability is highly heterogeneous both temporally and spatially. Amongst the marine bird species which are relevant to the Shadow HRA, the modelling of prey depletion at the scale of the Greater Sizewell Bay and tidal excursion is most relevant to the tern species and particularly to little tern, which is the species most dependent on inshore foraging areas. The most important prey groups for the terns within the waters around Sizewell are likely to be pelagic fish such as herring, sprat and anchovy (see Section 6 of the Shadow HRA Report [APP-145]. Thus, the modelling of the effects of impingement on prey depletion within the Greater Sizewell Bay and tidal excursion indicates that effects are small. This conclusion is further strengthened by considering that the predictions from this modelling relate to the combined effects of impingement from the operation of Sizewell B together with Sizewell C (and so, essentially, incorporates part of the existing baseline situation) and that modelling at the larger scales of the ICES Statistical Rectangle 33F1 and Statistical Area 4c predicts depletion levels that are orders of magnitude lower than those predicted for the Greater Sizewell Bay and tidal excursion The data on impingement numbers recorded at Sizewell B between 2009 and 2017 for different fish species / groups demonstrate that the scale of between-year variability in their abundance is orders of magnitude greater than the level of depletion predicted to occur within the Greater Sizewell Bay and tidal excursion as a result of impingement. For example, between year variability in sprat and herring abundance is estimated to average 172% and 133%, respectively, over this period (with maximum values being 454% and 153%, respectively), so that the scale of the predicted local depletion from impingement (at approximately 1.5%) is trivial by comparison. In their Written Representations, Natural England imply that the predicted local-scale depletion in prey could cause a baseline shift in the 'fish stock', such that 'the 'normal' fish stock is represented by the current 'low' end of natural		

			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				variability in the prey resource', which it is suggested could be insufficient to support (or allow recovery of) the designated marine bird populations. However, the available evidence suggests that such a scenario is not credible, with the data on between year variability in fish abundance demonstrating that the differences between the current 'normal' and 'low' end stock levels are more than an order of magnitude greater than the predicted level of local-scale depletion predicted to result from impingement. Consequently, the predicted effects of impingement could not result in the proposed baseline shift. A further issue raised in Natural England's Written Representations is that moribund fish returned to the surface via the fish recovery and return (FRR) system may be fed upon by gulls (presumably with reference to the Alde- Ore Estuary SPA (and Ramsar site) population of breeding lesser black backed gulls, as the only designated gull population with connectivity to the Project). It is suggested that this could increase the risk of exposure to chemical discharges from ingestion of the fish or by increasing the time spent within the area of the chemical plume. 11.24.10 Section 22.5, Paragraph 22.5.26 of Volume 2, Chapter 22 (Marine Ecology and Fisheries) of the ES [APP-317] states that the FRR wash water would not be chlorinated, therefore, impinged biota would not be subjected to TRO exposure. Hydrazine enters the cooling water circuit at the discharge pit before being discharged via the outfalls. Therefore, impinged fish are not exposed to hydrazine within the FRR. Dead fish would not bioaccumulate chemicals and would only be in contact with the extremely low residual concentrations of TRO, bromoform and hydrazine present in surface plumes. For live fish either discharged from the FRR or present in the wider environment, exposure to chlorine total residual oxidants, bromoform or hydrazine in various discharge plumes is not expected to result in significant bioaccumulation of these substances. Paragraph 22.9.271 [APP-317] states that chlorination by-products are rapidly degraded in the marine environment and the low bioconcentration factor of bromoform indicates that indirect effects due to bioaccumulation in the food web is limited (Ref. 22.105); and paragraph 22.9.137 [APP-317] states that 'The rapid degradation rates and low bioconcentration factor of hydrazine indicates that the bioaccumulation potential is low (Ref. 22.62). No indirect food webs effects		

			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>				from hydrazine bioaccumulation are predicted'. The Applicant is not aware of evidence for any such effects arising in relation to gulls (or other bird species) feeding upon moribund fish returned to the surface at other nuclear power stations. v. Update to baseline conditions – marine birds Natural England's Written Representations state that 'No additional useful information appears to have been gathered with respect to seabirds', although it is also noted that this is in part due to a lack of terns in the survey area. The limitations of the coastal vantage point surveys undertaken to record tern usage of inshore foraging areas are fully acknowledged in the Shadow HRA Report [APP-145] (e.g. see Section 6.3 a) iii.) and Shadow HRA Report Addendum [AS-173] (e.g. see Section 6.3 a) iii.). However, with respect to little tern, there is the potential to gain information on the main near-shore areas which are used by foraging birds, with this being of greater value for little tern than for the other tern species due to its greater dependence on in-shore foraging areas. Whilst it is acknowledged that limited information was gained from the additional tern surveys undertaken in 2020, the Applicant considers that the further evidence of the coincidence of some little tern foraging activity with areas encompassed by the predicted distributions of the 2o and 3oC thermal uplifts and 5µg/l and 10µg/l thresholds for bromoform and Total Residual Oxidants (TRO), respectively, associated with Sizewell B provides useful contextual information for the assessment (see Figures 6A.2 to 6A.4 of the Shadow HRA Report Addendum [AS-174 and AS-175]). The usage of these areas by little terns indicates that the assessment of the potential effects of the thermal and chemical discharges on the relevant SPA qualifying features is precautionary in assuming that foraging birds will show strong avoidance of, orbe displaced from, the areas encompassed by the associated plumes. In relation to the comments in the Written Representations on these surveys, the Applicant would also highlight that more detailed or intensive survey approaches could not be justified (and would not have provided data of any greater value), given the absence or scarcity and sporadic occurrence of the Alde-Ore Estuary SPA (and Ramsar site)	

			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				populations of breeding Sandwich tern and breeding little tern and of the Minsmere- Walberswick SPA (and Ramsar site) population of breeding little tern (as detailed in Sections 6.3 a) ii.and iii. and 6.3 f) ii. and iii. of the Shadow HRA Report [APP-145]). Natural England's Written Representations also appear to imply a link between the issues surrounding the ability to collect project-specific survey data on the SPA tern populations (due to their absence or scarcity) and the need for the assessment to give consideration to the potential for effects to constrain or prevent the restoration of these populations. The Applicant can confirm that the Shadow HRA gives full consideration to whether potential effects may limit restoration of designated populations that are in unfavourable condition. vi. Scale of assessment The comments regarding scale of assessment raised by Natural England in Part II issue 30 and issue 22 are noted and a full response will be provided for D5. Whilst a full response will be provided at Deadline 5 to each of comments raised by Natural England, the Applicant notes the Deadline 2 response from the MMO (para. 2.4.7): "In relation to the scale of assessment, the MMO notes that the Applicant continues to justify the use of the International Council for Exploration of the Sea ("ICES") stock areas as using the best available evidence. The MMO concludes that the use of ICES stock areas for commercial fish species represents the current best scientific evidence available. There is currently no robust information that would support use of more local stock areas in the assessment. The percentage impact on a stock increases in proportion to the decrease in stock area/size used (the stock area/size is the denominator in the impact calculation). Thus, a ten-fold reduction in the stock area/size used results in a 10-fold increase in estimate impact." **August 2021** Further clarifications have been provided to the examination, notably at ISH7 and there is no change in the approach proposed.	

			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?				Discussions ongoing.	

			August 2021 Natural England are currently reviewing the Applicants revised technical reports, submitted at Deadlines 5 and 6 and should they reflect a change in the Applicant's position, we will update our position accordingly.					
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 ▪ Outer Thames Estuary SPA	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>Context and background</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. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013. • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017. • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019. We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the incomplete draft shadow HRA and relevant ES chapter which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (incomplete shadow	**TBC**			The potential effect of the thermal plume (increase above ambient and maximum allowable temperature) has been assessed in the Shadow HRA (e.g. via effects on prey availability to SPA features). The temperature thresholds for SACs relates to any area designated for estuary or embayment habitat and/or salmonid species. The thermal plume is only predicted to intersect the mouth of the Alde-Ore Estuary (designated SAC) and only at increased temperatures in the 0°C to 1°C range as 98th percentiles (noting this result is the predicted combined effect of SZB + SZC). The extent of the SZC plume alone does not intersect with the SAC and is located over 12 km to the north of the SAC. **June 2021** The potential effect of the thermal plume (increase above ambient and maximum allowable temperature) has been assessed in the Shadow HRA (e.g. via effects on prey availability to SPA features). The temperature thresholds for SACs relates to any area designated for estuary or embayment habitat and/or salmonid species. The thermal plume is only predicted to intersect the mouth of the Alde-Ore Estuary (designated SAC) and only at increased temperatures in the 0°C to 1°C range as 98th percentiles (noting this result is the predicted combined effect of SZB + SZC). The extent of the Sizewell C plume alone does not intersect with the SAC and is located over 12 km to the north of the SAC. In relation to the effects on the marine bird populations associated with SPAs (and Ramsar sites), the assessment	N/A [Permitting as relevant]

			HRA, WDA permit application) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this were not therefore obtained before the application was submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **Comment of the DCO application - Relevant Representations, September 2020** ***Further Information Required*** The thermal plume will be managed as part of the WDA operational permit, as issued by the Environment Agency. Natural England has yet to be consulted on the permit and associated HRA. Natural England will need to see further details of the proposed and final permit application before we can provide robust advice on potential impacts to designated sites and species. As raised previously, Natural England would welcome the provision of further information on the modelled determination of water quality status in relation to WFD status criteria at a localised scale in relation to SAC and SPA areas. **Further comments on the DCO application, May 2021** Natural England do not have any comment to provide beyond that submitted in our Relevant Representations which we reiterate at this point. **August 2021** Natural England reiterate our previous comments, as there has been no further development on this issue.				of effects is based upon an assumption that foraging birds will show strong avoidance of, or be displaced from, the areas encompassed by the thermal plumes. As indicated above (in the response to comments on impacts from intakes and outfalls – issue 30), project-specific survey data indicate that this is likely to be a precautionary assumption. **August 2021** Discussions ongoing.	
32	**ECOLOGY:** Impacts on internationally designated sites	Impacts from the Combined Drainage Outfall (CDO) and subsequent	**Context and background** The Combined Drainage Outfall from the site will be used during the construction phase for the dewatering of the site,	**TBC**			The potential effects of discharges from the CDO have been assessed within the Shadow HRA. **June 2021**	N/A [Permitting as relevant]

	▪ Alde-Ore Estuary SPA ▪ Alde-Ore Estuary Ramsar site ▪ The Humber Estuary SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site ▪ Outer Thames Estuary SPA	ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	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. We have flagged this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013. • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017. • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019. We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the incomplete draft shadow HRA and relevant ES chapter which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this				The CDO will remain in place through the operational phase and its potential impacts have been assessed in the Shadow HRA. The Coastal Processes Monitoring and Mitigation Plan (MMP) (Volume 3, Appendix 2.15.A of the ES Addendum) [AS-237]), to be approved under Requirement (7A) of the draft DCO and Marine Licence Condition (17) [REP2-015] includes monitoring and management actions for potential impacts of the marine elements of the Sizewell C Project, including two BLFs, the two Fish Recovery and Return outfalls, the CDO and the main cooling water intake and outfall heads. **August 2021** Discussions ongoing.	

			were not therefore obtained before the application was submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** Natural England will need to see further detail on the likely impacts of the DCO through the permitting process. Natural England will be consulted on the permit and the associated HRA in due course. We would expect to see further information on the monitoring and mitigation proposed as part of the permit. Natural England cannot provide our final advice until the permitting process is finalised. Natural England would welcome further information on why the CDO will be left in place during the operational phase if it is not be used, and whether given the increase in hard infrastructure and necessary scour protection, anti-fouling, potential for INNS whether there is the potential to remove the infrastructure? **<u>Further comments on the DCO application, May 2021</u>** Natural England do not have any comment to provide beyond that submitted in our Relevant Representations which we reiterate at this point. **August 2021** Natural England reiterate our previous comments, as there has been no further development on this issue.					
33	**ECOLOGY:** Impacts on internationally designated sites ▪ Alde-Ore Estuary SPA	Impacts from the chemical plume and subsequent ecological effects on internationally	**<u>Context and background</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.	**TBC**			The potential indirect effects on foraging seabirds due to effects of the chemical plume on seabirds has been assessed within the Shadow HRA. The potential for direct effects has not been raised previously (e.g. it is not identified as a pathway in the HRA screening matrices) and in our opinion is not a credible	N/A [Permitting as relevant]

	▪ Alde-Ore Estuary Ramsar site ▪ The Humber Estuary SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site ▪ Outer Thames Estuary SPA	designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013. • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017. • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019. We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the incomplete draft shadow HRA and relevant ES chapter which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard, which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this were not therefore obtained before the application was submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** Natural England considers additional evidence is required, detailing the direct impacts that any chemical plume will have				pathway for a significant effect on waterbirds. We are not aware of any evidence of such effects being apparent in connection with other existing discharges from nuclear power stations. **June 2021** The potential indirect effects of the chemical plume on marine bird qualifying features of relevant SPAs (and Ramsar sites) has been assessed within the Shadow HRA. The assessment of effects is based upon an assumption that foraging birds will show strong avoidance of, or be displaced from, the areas encompassed by the different chemical plumes. As indicated above (in the response to comments on impacts from intakes and outfalls – issue 30), project-specific survey data indicate that this is likely to be a precautionary assumption. In terms of the potential for indirect effects on marine bird prey species exposure to chlorine total residual oxidants, bromoform or hydrazine in various discharge plumes is not expected to result in significant bioaccumulation of these substances: Paragraph 22.9.271 [APP-317] states that 'chlorination by-products are rapidly degraded in the marine environment and the low bioconcentration factor of bromoform indicates that indirect effects due to bioaccumulation in the food web is limited (Ref. 22.105)'. Paragraph 22.9.137 [APP-317] states that 'The rapid degradation rates and low bioconcentration factor of hydrazine indicates that the bioaccumulation potential is low (Ref. 22.62)'. **August 2021** Discussions ongoing.	

			on the features of the listed designated sites. While the application considers foraging area sterilisation as a result of the chemical plume, we would advise that risks from direct or repeated exposure to the chemical plume should be considered and detailed. With particular reference to marine foraging birds species. **<u>Further comments on the DCO application, May 2021</u>** 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 **August 2021** Natural England reiterate our previous comments, as there has been no further development on this issue.					
34	**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 chlorination and subsequent ecological effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	**<u>Context and background</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. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013. • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017. • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019. We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the incomplete draft shadow HRA and relevant ES chapter which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard, which we again	**TBC**			The potential effects of chlorination have been assessed within the Shadow HRA, and it is noted that Natural England would be further consulted on the WDA permit. **<u>August 2021</u>** Discussions ongoing.	N/A [Permitting as relevant]

			flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this were not therefore obtained before the application was submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** We welcome that the Chlorination strategy as outlined in the Mitigation Route Map includes the use of seasonal chlorination and that chlorination would be applied after the drum screens. We note that this mitigation will be secured within the WDA operational permit. Natural England have not yet been consulted on the WDA permit as part of the DCO and cannot provide detailed comment on the potential impacts and would welcome further clarification of wording of the mitigation and definition of spot chlorination, and clarification of localised effects to water quality with mitigation in place. **<u>Further comments on the DCO application, May 2021</u>** Natural England do not have any comment to provide beyond that submitted in our Relevant Representations which we reiterate at this point. **August 2021** Natural England reiterate our previous comments, as there has been no further development on this issue.				
35	**ECOLOGY:** Impacts on internationally designated sites	Impacts from hydrazine and subsequent ecological	**<u>Context and background</u>**	**TBC**			The potential effects of hydrazine discharge have been assessed within the Shadow HRA, and it is noted that Natural England would be further consulted on the WDA permit.	N/A [Permitting as relevant]

	▪ Alde-Ore Estuary SPA ▪ Alde-Ore Estuary Ramsar site ▪ The Humber Estuary SAC ▪ Minsmere-Walberswick SPA ▪ Minsmere-Walberswick Ramsar site ▪ Outer Thames Estuary SPA	effects on internationally designated sites (SACs, SPAs and Ramsar sites) and their notified features. **(C) and (O)**	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. We have flagged this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013). • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017). • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019). We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the incomplete draft shadow HRA and relevant ES chapter which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard, which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this were not therefore obtained before the application was submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required***				**<u>August 2021</u>** Discussions ongoing.	

			Natural England welcome that Hydrazine discharges would be treated, Natural England would welcome further details on this process. We note that this is not secured in the CoCP or DCO/DML and will be secured as part of the WDA permit process (Mitigation Route Map). Natural England has not currently been consulted on the permitting process and therefore cannot provide our final advice until the permitting process is finalised. **<u>Further comments on the DCO application, May 2021</u>** 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 **August 2021** Natural England reiterate our previous comments, as there has been no further development on this issue.					
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>Context and background</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. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013). • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017). • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019). We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the incomplete draft shadow HRA and relevant ES chapter which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard, which we again flagged in our response (our ref: 299823, dated 9th December 2019).	TBC			It is noted that Natural England is requesting further information on the methodology, procedures and safeguards that would be put in place to reduce the possibility releases of bentonites (frack outs) via the CoCP. It is worth noting that bentonite is included on the Oslo Paris Convention for the Protection of the Marine Environment of the North-east Atlantic (OSPAR) list of 'pose little or no risk to the environment' substances. **<u>June 2021</u>** Natural England refers to the potential for frack outs of bentonite and refers to the points made in its relevant representation on this matter. Natural England requested that further information is provided on the methodology, procedures and safeguards that would be put in place to reduce the possibility of frack outs in designated sites, and for this to be outlined in a certified document, for example the Code of Construction Practice (CoCP). **<u>August 2021</u>** Discussions ongoing.	CoCP [Permitting as relevant]

			We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. Assurances from Natural England on this were not therefore obtained before the application was submitted, contrary to the advice given in paragraph 4.2 of the Planning Inspectorate's advice note 10 with regards HRA. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** Given the number of occurrences of bentonite break outs or frack outs that have occurred on other HDD projects around the coast recently Natural England consider the potential for this impact pathway to be considered a likely significant effect. We would therefore expect to see further information provided on the methodology, procedures and safe guards that would be put in place to reduce the possibility of frack outs in designated sites, and for this to be outlined in a certified document, for example the CoCP. In the case of a drilling mud breakout in a designated site Natural England would want to be consulted within 24 hours, and this commitment to be secured in a certified document. We would also welcome the inclusion of potential drilling muds to be used to be specified as part of the DCO/DML. **Further comments on the DCO application, May 2021** Natural England reiterates the comments made in our Relevant Representations. We note the designation of Bentonite as 'posing little or no risk to the environment'. However, Natural England highlight that bentonite break outs and frack outs have occurred at other coastal sites where HDD has been used, and maintain that this impact pathway be considered a likely significant effect. **August 2021**				

			Natural England reiterate our previous comments, as there has been no further development on this issue.					
37	**ECOLOGY:** Impacts on protected species ▪ Bats ▪ Natterjack toads ▪ Otters ▪ Reptiles ▪ Water voles ▪ Badgers ▪ Deptford Pink ▪ Breeding birds	Protected species' mitigation and compensation for MDS impacts **(C) and (O)**	**<u>Context and background</u>** See issue 10 above for our advice on the protected species licencing approach. The MDS supports a number of protected species as listed which will be impacted by the projects. Potential impacts include: • **Bats** – Habitat loss (e.g. conifer plantation at Goose Hill etc.) and habitat fragmentation affecting key foraging and commuting routes (including the SSSI crossing); • **Natterjack toads** – Habitat loss and habitat fragmentation (Retsom's Field); • **Otters** – Habitat loss and habitat fragmentation (including the SSSI crossing), impacts on water quality and quantity and direct disturbance; • **Reptiles** – Habitat loss and habitat fragmentation; • **Water voles** – Habitat loss and habitat fragmentation (particularly around the SSSI crossing) and impacts on water quality and quantity; • **Badgers** – Habitat loss and direct disturbance; • **Deptford Pink** – Direct loss (north of Sizewell B power station) • **Breeding birds** – Habitat loss and direct disturbance Natural England was not given the opportunity to review the complete up-to-date survey information for each of these species at the pre-application stage alongside the respective	**TBC**			An extensive series of baseline ecology surveys were undertaken on the MDS in 2020 and the survey reports have been provided to Natural England and have all been submitted to PINS (in submissions in November, December 2020 and January 2021.) The updated information was considered in the ES Addendum submitted in January 2021. No changes to the significance of effects predicted in the assessments provide in the ES were identified. A more detailed assessment on the impacts of bats was also provide in the ES addendum to replace that provided in the ES. In addition, mitigation strategies, draft licenses and method statements were updated in January 2021 as relevant and appended. Additional design changes include the inclusion of a bat barn in accordance with Natural England's requirements, the inclusion of a mammal culvert to link Aldhurst Farm wetlands to Sizewell Marshes SSSI and a new tree lined connection for bats to link Kenton Hills to the Ash Cottages area during construction. Further surveys in 2021 for bat roosts (tree climbs) provided detailed data to inform licence requirements and were submitted to examination but did not not change the assessment of roost resource defined in the ES and ES addendum. Monitoring for these species during construction and the early years of operation is defined in the Terrestrial Ecology Monitoring and Mitigation Plan (TEMMP), shared with Natural England in February 2021. The TEMMP was submitted to examination in June 2021 and will be secured by requirement. It was updated at Deadline 5 and is further updated further at Deadline 8. The DAS with Natural England has been designed to ensure that the draft licensing process for all relevant species can be progressed in parallel with the examination and EDF Energy will engage fully on resolving all protected species matters as relevant to licensing.	Protected Species Licensing secures approach to individual species measures, as relevant to licensing Habitats (operational) within site secured by oLEMP, landscape masterplan and DAS Habitats within wider EDF Energy estate delivered through existing or updated management plans. COCP and Lighting Management Plan secure noise and lighting controls Terrestrial Ecology Monitoring and Mitigation Plan (TEMMP), secured by requirement

			mitigation strategies. It has not therefore been possible for us to provide extensive comments on protected species mitigation to date. We advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.8, 4.3 (iii) and 4.4 (iii and iv)); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.19 and throughout Annex 2 (see comments under 4.3, 4.4 and Annex 3 (see comments under 7.4.78, 7.4.84, 7.5.3, 7.5.58 – 7.5.60, 7.5.65, 7.8.6, 7.9.6, Table 9.3 and Table 10.3); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, paragraphs 3.9.16 – 3.9.20, 4.5.18 – 4.5.26, 4.5.44, 4.5.48 – 4.5.51 and 4.6.2.21 – 4.6.2.27). We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. Natterjack Mitigation Strategy, Reptile Mitigation Strategy, Water Vole Mitigation Strategy, Appendix: Amphibians, Appendix: Reptiles, Appendix: Ornithology, Appendix: Bats, Appendix: Terrestrial Mammals within ES Chapter 14: Terrestrial Ecology Ornithology omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we			A tranche of updated draft licences for the MDS were submitted to Natural England in July 2021 and all remaining updated draft licences have now been submitted. The updated reptile mitigation strategy is submitted to examination at Deadline 8. Once Natural England have reviewed all of the updated licenses and the related material, it is suggested that new commentary is provided and SZC Co. can respond accordingly. SZC Co has suggested to Natural England that they advise ExA, prior to examination close, whether there are any fundamental reason why the relevant licences would not be granted, even if formal LoNI are not available in this period. Discussions ongoing.	

			are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** All baseline survey data for the project, covering all habitats and species likely to be affected, should be acceptable in terms of methodologies, coverage and age. The recent Chartered Institute of Ecology and Environmental Management (CIEEM) Advice note on the Lifespan of Ecological Reports and Surveys states that, for surveys which are more than three years old, "*The report is unlikely to still be valid and most, if not all, of the surveys are likely to need to be updated*". Where the ecological survey data to inform the various Sizewell C impact assessments are not in line with this, we advise that clear justification must be provided on how the data remain valid and robust enough to inform conclusions. Further detailed advice on this for MDS protected species is outlined throughout Appendix III to this letter, but to summarise some of our key concerns: • **Bats:** Further details about the project are required to enable assessment, specifically the provision of bat hibernaculum. Further consideration should also be given to the retention of additional section of Goose Hill, following further surveys. Bat surveys have not been carried out since 2016 therefore some updated surveys are required. Additional surveys should be carried out on the Goose Hill pine plantation that is to be destroyed by the development to assess the current bat assemblage and identify further bat foraging areas/commuting routes/flight paths. Where it is deemed that disturbance may lead to roost abandonment additional avoidance measure are to be considered: ▪ **Trees with confirmed bat roosts:** Where surveys confirm the presence of bat roosts				

			further consideration should be given to the possibility of retaining the roost. ▪ **Potential Bat roosts in woodland blocks:** Where woodland block are to be removed and there is potential trees with unidentified roost to be lost further consideration should be given to the need for a mitigation licence using Licensing Policy 4. • **Badgers:** The possibility of retaining Main sett 3 should be considered further. Current proposals include the permanent exclusion of badgers from a number of setts which impacting two social groups. This includes the destruction of the main badger's sett in each of these territories. Sett 3, the main sett for the Goose hill/Coronation Wood/ Reckham Pitts Social Group is just within the red line boundary of the development footprint. The location of the individual sett entrances has not been provided. However further consideration should be to the possibility of retaining this sett or justification provided as to why this is not considered possible. • **Water voles**: Water vole surveys have not been carried out since 2009, other than at the Aldhurst Farm receptor site. It is noted that it is proposed to carry out surveys in 2020, details of these up-to-date surveys are required before an assessment of the impacts can be made. Insufficient water vole survey information has been provided to enable an assessment of the impacts and thus the suitability of the compensation provided. Upon completion of 2020 surveys it is recommended that Natural England pre submission screening service is used to enable us to fully assess and comment on The trapping of water voles must be timed to enable them to be relocated directly to the receptor site for release to prevent them having to be taken into captivity. Displacement should also be considered if short lengths of bank are being impacted only.				

			Further information is required detailing the quantity and location of water vole habitat will be damaged or destroyed and where trapping or displacement will occur. • **Breeding birds:** The results of breeding bird surveys are valid for 3 years. Typically, for many designated site surveys, data would be deemed valid for two years. Such an approach is endorsed by CIEEM who state that after three years ecological reports are unlikely to still be valid and most, if not all, of the surveys are likely to need to be updated. Owing to the scale of the development and, consequently, the need to survey multiple taxonomic groupings and multiple interest features owing to the range of designations affected, it is understandable that survey work has been spread over a longer time period than would normally be expected. This does not, however, invalidate the basis of the CIEEM advice. There are a lack of buffers to assess the effects of indirect habitat loss. Breeding bird surveys should consider indirect effects of the proposal of breeding birds beyond the red line boundary. **<u>Further comments on the DCO application, May 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. **August 2021** As outlined in our response to the ISH7 in July [REP5-160]. *"It is our understanding that for the proposed project this includes water voles, natterjack toads, bats, otters, great crested newts, badgers and Deptford Pink.* *As set out in our Relevant [RR-0878] and Written Representations [REP2-153], we advised the Applicant throughout pre-application that final draft licences for all relevant protected species should be submitted by them with or shortly after the submission of their Development Consent Order (DCO) application in May 2020. This was to ensure that the Examining Authority (ExA) has the certainty that is required in terms of Natural England reviewing each licence application and providing letters of no impediment (LoNIs) before any consent might be granted. We specifically created the LoNI process for this purpose to de-risk applications for developers in this regard. The advice given by the PINS Consents Service Unit in their Prospectus for developers document (page 8, Annex 2), which support developers in understanding the risks of not undertaking this process, states that "It is worth noting where developers choose to apply for non-planning consent later in the process, it may be difficult to provide the Examining Authority with reassurances about the likelihood of obtaining them".* *As outlined in our oral submission at ISH 7, Natural England started receiving the final draft protected species licence applications from the Applicant on the 9th July 2021 (water voles, Deptford Pink), and have also received an outline of when the Applicant intends on submitting the remaining applications to Natural England and the ExA as below:*				

Licence Title	***Proposed Submission Date to Natural England***	***Submission to ExA***
Water Vole Method Statement: Main Development Site	*9th July (issued)*	*Deadline 5*
Natterjack Toad: Main Development Site	*20th July*	*Deadline 5*
Badger: Main Development Site	*16th July*	*Deadline 5*
Deptford Pink: Main Development Site	*9th July (issued)*	*Deadline 5*
Otter: Main Development Site	*21st July*	*Deadline 5*
Water Vole: Two Village Bypass	*16th July*	*Deadline 5*
Badger: Two Village Bypass	*16th July*	*Deadline 5*
Great Crested Newt: Northern Park and Ride	*27th August*	*Deadline 7*
Great Crested Newt: Sizewell Link Road	*27th August*	*Deadline 7*
Great Crested Newt: Rail	*27th August*	*Deadline 7*
Bat	*27th August*	*Deadline 7*

As such, we have not yet had time to review and come to a conclusion on any of the applications and are therefore not in a position to issue any LoNIs to the ExA at this time.

			We do not have a statutory response time on this element of our licencing work but ordinarily would aim for 30 working days, although staff are currently operating at 45+ working days due to resource constraints. Applications typically require multiple rounds of drafts being submitted per species before they reach a stage that they are considered satisfactory for Natural England to reach a conclusion. Without pre-judging the applications, given the scale and complexity of the Sizewell C project it may be that our response following initial review is to request further information for some or all of them, after which the review process is repeated. *We therefore wish to highlight that our conclusions on each licence application, and subsequent issuing of LoNIs to the ExA (if a favourable conclusion is reached), may not occur until close to or after the end of the examination period as currently scheduled (14th October 2021). As outlined in our oral submission at ISH 7, the LoNIs themselves do not take much time to prepare and issue once a favourable conclusion has been reached."* **We note that we are still awaiting submissions for Great Crested Newts and Bats. But to the best of our knowledge have received all other licenses which are currently under review.**					
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>Context and background</u>** See comments under issue 27 above for further details. The impact assessments and any mitigation/compensation must also consider the notified features of these SSSIs. We do not consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **Comment of the DCO application - Relevant Representations, September 2020** ***Further Information Required*** See our comments under issue 27 above which also apply here with regards SSSI features				Comments under issue 27 broadly relevant here	As for Issue 27

			<u>Further comments on the DCO application, May 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. **August 2021** 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>Context and background</u>** See comments under issue 28 above for further details. The impact assessments and any mitigation/compensation must also consider the notified features of these SSSIs. We do not consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** See our comments under issue 28 above which also apply here with regards SSSI features **<u>Further comments on the DCO application, May 2021</u>** ***Further Information Required***	**TBC**			Comments under issue 28 broadly relevant here	As for issue 28

			See our comments under issue 28 above which also broadly apply here with regards SSSI features at risk through this impact pathway. **August 2021** ***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.					
40	**ECOLOGY:** Impacts on nationally designated sites: ▪ Alde-Ore Estuary SSSI ▪ Leiston-Aldeburgh SSSI ▪ Minsmere – Walberswick Heath and Marshes SSSI	Impacts from changes/ increases in recreational disturbance arising from the MDS project elements (accommodation campus and temporary caravan site on the LEEIE), and subsequent ecological effects on nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	**<u>Context and background</u>** See comments under issue 29 above for further details. The impact assessments and any mitigation/compensation must also consider the notified features of these SSSIs. We do not consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** See our comments under issue 29 above which also apply here with regards SSSI features **<u>Further comments on the DCO application, May 2021</u>** ***Further Information Required*** See our comments under issue 29 above which also broadly apply here with regards SSSI features at risk through this impact pathway. **August 2021**	**TBC**			Comments under issue 29 broadly relevant here **June 2021 – Comments on Written Representations** The response provided in Section 11.29 of this report for Issue 29 above is relevant. Whilst the response for Issue 29 is in relation to the European sites in the context of the shadow HRA, the principles set out in the response remains applicable to Issue 40. SZC Co. has committed to delivering measures to reduce and mitigate this potential impact on the relevant European sites and these measures include the provision of recreational access and improvements at Aldhurst Farm and Kenton Hills as well as the payment of a Suffolk RAMS contribution as defined in the draft Deed of Obligation (Doc Ref. 8.17(D)). In addition, recreational facilities are being provided for the workforce and no dogs are permitted on site. **September 2021** Additional recreational proposals are submitted at Deadline 8 as described under Issue 29 above. All of these measures will also serve to mitigate any potential impacts of recreational displacement on nearby SSSIs and the Sizewell Marshes SSSI in particular.	As for issue 29

			Further Information Required 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>Context and background</u>** See comments under issue 30 above for further details. The impact assessments and any mitigation/compensation must also consider the notified features of these SSSIs. We do not consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** See our comments under issue 30 above which also apply here with regards SSSI features **<u>Further comments on the DCO application, May 2021</u>** ***Further Information Required*** See our comments under issue 30, which also broadly apply here with regards SSSI features at risk through this impact pathway. **August 2021** ***Further Information Required*** See our comments under issue 30 above which also broadly apply here with regards SSSI features at risk through this impact pathway.	**TBC**			Comments under issue 30 broadly relevant here **June 2021 – Comments on Written Representations** Please refer to the response provided in Section 11.24 for Issue 30 above. Whilst the response for Issue 30 is in relation to the HRA, the response remains applicable to Issue 41. The Section of the Marine Ecology and Fisheries ES Chapter [APP-317] starting at paragraph 22.7.269 specifically considers the spread of nonindigenous species in relation to the presence of the Cooling Water System (CWS) intake and outfall structure 'The area of new three-dimensional surface available to INNS due to the presence of the CWS would be approximately 1ha, which is less than the Marine Evidence-Based Sensitivity Assessment pressure benchmark for colonisation (1ha) (Ref. 22.11). This surface would be available for colonisation for the lifetime of the Sizewell C Project. While the pressure has a long duration, the very small spatial scale of the structure results in an impact magnitude of very low'. Paragraphs 22.7.359 to 22.7.461 consider CWS effects of chemical discharges upon benthic invertebrates and paragraphs 22.8.720 to 22.8.807 cover CWS effects of chemical discharges for fish. Synergistic effects are feasible over limited spatial areas but not predicted to increase the significance of effects concluded for the pressures alone. It is unlikely that the inter-relationship between thermal and chlorinated or hydrazine discharges would increase the significance of the effects of localised displacement, beyond the effects predicted for the pressures individually. This conclusion applies to all fish receptors assessed.	As for issue 30

							Indirect effects on food webs through the potential of chemical bioaccumulation were considered in Section 22.10 of [APP-317]. No indirect food webs effects from chlorination products or hydrazine bioaccumulation are predicted.	
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>Context and background</u>** See comments under issue 31 above for further details. The impact assessments and any mitigation/compensation must also consider the notified features of these SSSIs. We do not consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** See our comments under issue 31 above which also apply here with regards SSSI features **<u>Further comments on the DCO application, May 2021</u>** ***Further Information Required*** See our comments under issue 31 which also broadly apply here with regards SSSI features at risk through this impact pathway. **August 2021** ***Further Information Required*** See our comments under issue 31 above which also broadly apply here with regards SSSI features at risk through this impact pathway.	**TBC**			Comments under issue 31 broadly relevant here	As for issue 31

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)**	**Context and background** See comments under issue 32 above for further details. The impact assessments and any mitigation/compensation must also consider the notified features of these SSSIs. We do not consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **Comment of the DCO application - Relevant Representations, September 2020** ***Further Information Required*** See our comments under issue 32 above which also apply here with regards SSSI features **Further comments on the DCO application, May 2021** ***Further Information Required*** See our comments under issue 32 which also broadly apply here with regards SSSI features at risk through this impact pathway. **August 2021** ***Further Information Required*** See our comments under issue 32 above which also broadly apply here with regards SSSI features at risk through this impact pathway.	**TBC**			Comments under issue 32 broadly relevant here	As for issue 32
44	**ECOLOGY:** Impacts on nationally designated sites:	Impacts from the chemical plume and subsequent ecological effects on	**Context and background** See comments under issue 33 above for further details. The impact assessments and any mitigation/compensation must also consider the notified features of these SSSIs.	**TBC**			Comments under issue 33 broadly relevant here	As for issue 33

	▪ Alde-Ore Estuary SSSI	nationally designated sites (SSSIs) and their notified features. **(C) and (O)**	We do not consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** See our comments under issue 33 above which also apply here with regards SSSI features **<u>Further comments on the DCO application, May 2021</u>** ***Further Information Required*** See our comments under issue 33 which also broadly apply here with regards SSSI features at risk through this impact pathway. **August 2021** ***Further Information Required*** See our comments under issue 33 above which also broadly apply here with regards SSSI features at risk through this impact pathway.					
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.	**<u>Context and background</u>** See comments under issue 34 above for further details. The impact assessments and any mitigation/compensation must also consider the notified features of these SSSIs. We do not consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission.	**TBC**			Comments under issue 34 broadly relevant here	As for issue 34

		(C) and (O)	**<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** See our comments under issue 34 above which also apply here with regards SSSI features **<u>Further comments on the DCO application, May 2021</u>** ***Further Information Required*** See our comments under issue 34 which also broadly apply here with regards SSSI features at risk through this impact pathway. **August 2021** ***Further Information Required*** See our comments under issue 34 above which also broadly apply here with regards SSSI features at risk through this impact pathway.					
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>Context and background</u>** See comments under issue 35 above for further details. The impact assessments and any mitigation/compensation must also consider the notified features of these SSSIs. We do not consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required***	**TBC**			Comments under issue 35 broadly relevant here	As for issue 35

			See our comments under issue 35 above which also apply here with regards SSSI features **<u>Further comments on the DCO application, May 2021</u>** ***Further Information Required*** See our comments under issue 35 which also broadly apply here with regards SSSI features at risk through this impact pathway. **August 2021** ***Further Information Required*** See our comments under issue 35 above which also broadly apply here with regards SSSI features at risk through this impact pathway.					
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 (SSSIs) and their notified features. **(C) and (O)**	**<u>Context and background</u>** See comments under issue 36 above for further details. The impact assessments and any mitigation/compensation must also consider the notified features of these SSSIs. We do not consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** See our comments under issue 36 above which also apply here with regards SSSI features **<u>Further comments on the DCO application, May 2021</u>**	**TBC**			Comments under issue 36 broadly relevant here	As for issue 36

			Further Information Required See our comments under issue 36 which also broadly apply here with regards SSSI features at risk through this impact pathway. **August 2021** ***Further Information Required*** 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>Context and background</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 some the permanent loss of these habitats. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.5, 4.3 (iii and iv), 4.4 (ii and iii) and 4.2.8) • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.4, 3.8 – 3.11, 4.1 – 4.4 and throughout Annex 3 (see comments under Table 7.1, 7.4.39 and7.4.72 – 7.4.78);	**TBC**			The wetlands at Aldhurst Farm provide 6ha of high quality open water, ditches and wet reedbeds, which have already attracted breeding marsh harriers from 2019 and otters from 2021. The total quantum of habitat greatly exceeds the permanent land take of these habitats from the SSSI. The quantum of permanent landtake for all habitats were presented in the ES and following updated NVC mapping in 2020, were updated in the ES addendum in January 2021. Aldhurst Farm is subject to an existing management plan. It is intended to update the management plan in 2021. A new SSSI crossing design with a 40m wide bridge has been brought forward which slightly reduced land take compared to the earlier 68m long culvert option and should minimise the potential for fragmentation of habitats and removes shading from 28m of the Leiston Beck. **June 2021 – Comments on Written Representations** SZC Co. welcomes the qualified response in relation to the acceptability for the habitat quantum and quality of tall herb fen (reedbed) and lowland ditch systems which has now been provided at Aldhurst Farm. SZC Co.'s position is that the three-span option is unsuitable because of its adverse impact upon the	Plans for approval (SSSI Crossing design) Mammal culvert commitment mechanism Aldhurst Farm already exists and is subject to an existing management plan. It is intended to update the management plan in 2021.

			• Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, e.g. paragraphs 3.6, 3.9, 3.9.13 – 3.9.15, 4.5.1 – 4.5.4, 4.5.6, 4.6.1.2 and 4.6.2.2 – 4.6.2.9); • Natural England's response to the *Sizewell C – Stage 4 Consultation: 18th July 2019 to 27th September 2019* (our ref: 289446, dated 26th September 2019, comments 4 and 5); We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not fully reflect our previous advice in this regard which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** In all regards, the project proposals should clearly follow the avoidance-mitigation-compensation hierarchy in terms of impacts to ecology and landscape and include consideration of less damaging alternatives as per section 4.4. and paragraph 5.3.7 of NPS EN-1. In the context of Natural England's remit, this is particularly important in the context of high value ecological receptors of national importance such as the SSSI. EDF Energy have proceeded with a culvert with embankment design for the SSSI crossing when potentially less damaging options for its design exist. Several alternative design options were presented to us by EDF Energy during pre-application and Natural England's preferred option remains that which				construction programme (see response to Question G.1.34 submitted at Deadline 2 [REP2-100]). SZC Co notes Natural England's continued concern that the proposed single span bridge accepted change may not minimise impacts on Sizewell Marshes SSSI. In response to these concerns SZC Co. has carried out a design review of the SSSI crossing to further reduce impacts as far as practicable. This design review took into account advice received from the EA on reducing impacts to aquatic invertebrates. Based on this design review, SZC Co. committed at Deadline 2 to reduce the width of the permanent bridge from 40m to approximately 15m once the power station has been built, which is a substantial reduction. This reduction in width would be achieved by removing part of the bridge deck. It was also confirmed at Deadline 2 that the soffit level of the bridge would be raised, although no details were provided because that particular aspect of the design review was still underway at the time. The design review is now almost complete, and SZC Co can confirm that the soffit level can be raised to provide approximately 6m of clearance above Leiston Drain. There would be no change in permanent or temporary land-take from Sizewell Marshes SSSI. Updated indicative plans and further details will be submitted at Deadline 5. Requirement 12C of the draft DCO [REP2-015] will also be updated at the same time to secure the proposed primary mitigation. The new mammal culvert across Lover's Lane will connect the new wetlands at Aldhurst Farm with the Sizewell Marshes SSSI in a location that is close to the existing culvert. This will provide connectivity for otters and water voles along the Leiston Drain and otter fencing of embankments will ensure mortality is minimised. SZC Co. consider that it is not feasible to replace the existing culvert in this location, since changing the culvert would lead to unknown hydrological and flood risk impacts on the Leiston Drain and on the Sizewell Marshes SSSI. **August 2021** The design was further revised in July 2021 to remove the eastern bridge deck in the operational phase, leaving a bridge of approximately 16m in width. Evidence has been	

			would have the least environmental impact, including on the SSSI. One of the alternative design options included a three span bridge which we understand would be less damaging to these particular SSSI features (reedbed and ditches) by requiring less land take of these habitats. The proposal for future management of water levels also presents challenges and risks for the survival and quality of the SSSI as a result of the project. It should be noted that any impacts on the functionality of the ecological corridor between Sizewell Marshes and Minsmere South Levels cannot be addressed by the habitat creation scheme at Aldhurst Farm which can only account for habitat loss. Maintaining a visibly healthy and thriving wetland is important ecologically as well as to the landscape character and quality of this part of the AONB. 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 through the submission of further information.** Irrespective of the SSSI crossing design, the general principle of compensating for the loss of these SSSI habitats (which would occur to a degree under all crossing design options) has previously been established at the earlier stages of our engagement, with an area of new reedbed and ditches already created at Aldhurst Farm. Should the culvert/ embankment design for the SSSI crossing be considered justifiable against possible alternatives, then we advise that the area of replacement reedbed and ditch habitats should be greater than the area of habitat to be lost due to the inherent risk of creating habitat of the same quality and distinctiveness. We understand that the area of reedbed and ditch habitat that has been created at Aldhurst Farm is broadly in line with the agreed minimum compensation ratios. **However, this needs to be fully quantified within the**				provided to examination, notably at ISH7, as to why the embankment and single span bridge is required, since it provides a very substantial programme benefit over the discounted triple span option. The landtake difference between the two options is approximately 0,02ha, none of which would be open water or reedbed habitat, and the updated design further reduces any potential for fragmentation. For hydrological reasons and to minimise impacts on the Leiston Drain and the SSSI it is not possible to replace the existing culvert under Lovers Lane. However, the ES addendum provides a commitment to provide a new mammal culvert close to the existing culvert to link Sizewell Marshes and Aldhurst Farm and to include adjacent otter fencing to minimise fatalities. SZC Co is engaged with Natural England to work towards the designation of the wetlands at Aldhurst Farm as an extension to the Sizewell Marshes SSSI. It is anticipated that once Natural England has had the opportunity to review the new material and commitments described above and given that the choice of SSSI crossing does not change landtake of this habitat, the land take of the wetland habitats and related compensatory habitats can be an agreed matter. Discussions ongoing.	

			application documents in terms of areas to be lost vs. areas created. We note and welcome that these wetland habitats at Aldhurst Farm have developed a characteristic avifauna, which includes some species of the SSSI wet grassland assemblage as well as wider non-designated species. However, it should be recognised that the ecological connectivity for species moving between Sizewell Marshes SSSI and the wetland habitats created at Aldhurst Farm is currently severely limited by the culvert crossing that exists on Lover's Lane. We understand that the Environment Agency also have records of otter mortality at this location. We therefore advise that this culvert should be replaced with a crossing to improve this situation. The proposed road improvement works on Lover's Lane presents the opportunity to undertake these improvement works at the same time and EDF Energy committed to exploring this at pre-application. **However, this does not appear to have been addressed in the application and is therefore an omission which needs to be addressed through the submission of further information.** **<u>Further comments on the DCO application, May 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. **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. **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. **August 2021** We welcome the continued optimisation of the SSSI crossing design and that while our preference remains for a three-span bridge we acknowledge that the current design represents a best alternative. However, this issue will remain 'amber' as we still believe that the three-span bridge design will have the least impact ecologically on Sizewell Marshes SSSI. We also welcome steps taken to increase connectivity between Aldhurst Farm and Sizewell Marshes SSSI using a mammal culvert. 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.					
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>Context and background</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. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.5, 4.3 (iii and iv), 4.4 (ii and iii) and 4.2.8); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3*	TBC			The quantum of permanent landtake for all habitats were presented in the ES and following updated NVC mapping in 2020, were updated in the ES addendum in January 2021. The permanent landtake of fen meadow habitat would be 0.46ha. A Fen Meadow Strategy has been developed to deliver at least 4.14ha (was 4.5ha) of fen meadow habitat and to achieve the compensation ratio requested by Natural England, this being a 9X multiplier on habitat loss. In order to achieve this ratio, a third site (Pakenham) has been added to the previous proposals which were based on two sites (Benhall and Halesworth). The use of three sites greatly reduces the risks associated with delivery. The Fen Meadow Strategy was subject to extensive consultation and was submitted in January 2021. It provides a commitment to produce a series on reports in 2021 which will broadly address the documentation requested left. and lead to a Fen Meadow Plan (see below), which would include Natural England as an approver through a Review group. The Strategy would be secured by requirement and includes a contingency strategy if the	Fen Meadow Strategy secured by Requirement

			February 2017 (our ref: 202551, dated 2nd February 2017, paragraphs 3.4, 3.8 – 3.11, 4.1 – 4.4 and throughout Annex 3 (see comments under Table 7.1, 7.4.39 and 7.4.72 – 7.4.78 and 7.9.3); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, e.g. paragraphs 3.6, 3.9, 3.9.13 – 3.9.15, 4.5.1 – 4.5.6, 4.6.1.2 and 4.6.2.2 – 4.6.2.9); • Natural England's response to the *Sizewell C – Stage 4 Consultation: 18th July 2019 to 27th September 2019* (our ref: 289446, dated 26th September 2019, comments 4, 5 and 8); We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not fully reflect our previous advice in this regard (i.e. fen meadow strategy omitted from the review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** As highlighted above under issue 48, the 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.				quantum of fen meadow delivered falls short of 4.14 ha (was 4.5ha) after 10 years of on-site works. **June 2021** The SZC Co position in relation to habitat compensation for Fen Meadow, Wet Woodland and for areas subject to temporary land take is provided against issues 49-51 in the Initial; Statement of Common Ground with Natural England [REP2-071]. Further updates are as follows: • Fen Meadow: − The SSSI Crossing, irrespective of its layout would not result in the land take of fen meadow habitats from the SSSI. − An explanation of the design evolution for the selected SSSI crossing design is provided under Issue 48 above. − Detailed baseline reports for the three fen meadow sites are submitted to the examination at Deadline 3 (Doc Ref. 9.34). − A draft of the Fen Meadow Plan, referred to by Natural England will be submitted to examination at Deadline 6. − A note on the potential impacts to the Snape Wetland RSPB reserve will be submitted to examination at Deadline 5. Ongoing assessment work has identified no adverse effects on integrity in the HRA context and no significant adverse effects in the EIA context. − The draft Deed of Obligation (Doc Ref. 8.17(D)) and the Fen Meadow Strategy [AS-209] will be updated at a suitable deadline to extend the contingency fund to a wider geographic area to include Norfolk, Suffolk, Essex and Cambridgeshire .The creation of habitats at the fen meadow sites is likely to be dependent on powers in any development consent order and so it would not have been possible, to acquire suitable sites, which are very limited, to progress this in advance. Furthermore, given the duration of time for the creation of these habitats it would not have been possible to fully establish these habitats in advance to align with the Natural England statement. **September 2021** The draft Fen Meadow Plan was submitted to examination at Deadline 6 and confirms that each of the three sites are viable and provides substantially greater detail of the proposals at each site. This was updated, with reduced Order Limits at Deadline 8.	

			EDF Energy have proceeded with a culvert with embankment design for the SSSI crossing when potentially less damaging options for its design exist. Several alternative design options were presented to us by EDF Energy during pre-application and Natural England's preferred option remains that which would have the least environmental impact, including on the SSSI. One of the alternative design options included a three span bridge which we understand would be less damaging to this SSSI feature (fen meadow) by requiring less land take of this habitat. Maintaining a visibly healthy and thriving wetland is important ecologically as well as to the landscape character and quality of this part of the AONB. 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 through the submission of further information.** Firstly, unlike the reedbed and ditch habitats discussed in issue reference 48 above it must be acknowledged that the feasibility of re-creating fen meadow is not well evidenced. Creating compensatory habitat of the same quality to that which will be destroyed will therefore be extremely difficult, if not impossible. Holistic headwater seepage, floodplain and river restoration is likely to be the most successful and sustainable approach to providing compensatory fen meadow habitat at the sites which have been proposed by EDF Energy. Even if successful, it should be acknowledged that these sites are functionally removed from Sizewell Marshes SSSI which is a limitation of this approach. Although this particular feature of the SSSI may be re-created there, the complex ecological interactions with other features which will be lost at Sizewell Marshes would not be. Should the culvert/ embankment design for the SSSI crossing be considered justifiable against possible alternatives, then we advise that the area of replacement fen meadow habitat should be greater than the area of habitat to be lost due to				The new SSSI crossing design with a 40m wide bridge has been brought forward which slightly reduced landtake compared to the earlier 68m long culvert option and should minimise the potential for fragmentation of habitats and removes shading from 28m of the Leiston Beck. The design was further revised in July 2021 to remove the eastern bridge deck in the operational phase, leaving a bridge of approximately 16m in width. Evidence has been provided to examination, notably at ISH7, as to why the embankment and single span bridge is required, since it provides a very substantial programme benefit over the discounted triple span option. **The landtake difference between the two options is approximately 0,02ha, none of which would be fen meadow habitat, and the updated design further reduces any potential for fragmentation (see also above).** It is anticipated that once Natural England has had the opportunity to review the new material, including the updated draft fen meadow plan and commitments described above, and given that the choice of SSSI crossing does not change landtake of this habitat, the landtake of fen meadow habitats can be an agreed matter.	

			the inherent risk of creating habitat of the same quality and distinctiveness. The extent of fen meadow likely to be destroyed is not identified consistently across the different chapters/sections of the DCO documents. Appendix 14C says the permanent loss 'is likely to be less than 0.5 ha'. The non-technical survey document identifies that 0.7 ha will be destroyed, and 0.9 ha will be required for temporary land-take. **Further information is required to clarify if these latter two figures are the same areas or are, they are additive. More detail is also required to understand the impact of the temporary land take.** Given the rarity and continued losses of M22 fen meadow in the UK – the Guidelines for Grassland SSSI Selection report less than 10000 ha (the true figure for England is likely to be less than 5000 ha) – and the known difficulty of restoring species-rich fen/fen meadow habitat, we advise that the maximum multiplier needs to be applied here, i.e. area to be lost × 9. This will result in compensation areas of either 4.5 ha, 6.3 ha, or more, depending on severity and potential long-term impact of temporary land-take. Given the hydrological complexity of high value wetland habitats, it is anticipated that a larger extent of wetland restoration/compensation would be required in order to provide the conditions required specifically by the M22 fen meadow. Restoration will likely give rise to areas of wetter conditions and drier conditions that do not support M22, given natural hydrological, topographical and substrate variation within sites. The proposed fen meadow creation sites have been selected and taken forward to the DCO application stage following a walk-round survey and shallow soil core survey. The following documentation does not seem to have been provided: • A feasibility study into appropriate creation methods has not been carried out • Details of the ongoing and future ownership/management of the sites • Long-term management and monitoring plans • A contingency plan should fen meadow compensation not be possible				

			It is possible that once the next steps are undertaken (detailed ecological survey, topographical survey, surface and groundwater level data collection and hydrochemical data) that none of the sites are suitable. The risk of these creation options not coming to fruition therefore appears high. **With regard to the restoration and action needed to give highest chance of success, further detail is required to give confidence that any work would achieve compensation aims**. In particular, the stated desire to avoid engineering/groundworks is likely to significantly reduce the likely success of restoration works, given the published literature on fen restoration, including the findings recently published based on a review of European restoration projects, which suggested that both topsoil removal and re-wetting/hydrological manipulation were necessary to restore functioning fen habitat. Klimkowska A, Goldstein K, Wyszomirski T, Kozub Ł, Wilk M, Aggenbach C, et al. (2019) Are we restoring functional fens? – The outcomes of restoration projects in fens re-analysed with plant functional traits. PLoS ONE 14(4): e0215645. https://doi.org/10.1371/journal.pone.0215645 Given this lack of confidence in the outcomes of any compensatory fen meadow restoration, based on both lack of detail on area needed/to be provided and techniques/methods, it is not possible to conclude that the loss of fen meadow from Sizewell Marshes SSSI is not significant, as stated in the non-technical summary document. **<u>Further comments on the DCO application, May 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 (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**.				

			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. **August 2021** *Further Information Required* We welcome the continued optimisation of the SSSI crossing design and that while our preference remains for a three-span bridge we acknowledge that the current design represents a best alternative. However, this issue will remain 'amber' as we still believe that the three-span bridge design will have the least impact ecologically on Sizewell Marshes SSSI. *Fen Meadow Plan* Early discussions with the applicant highlighted the desirability of establishing a near-natural hydrological regime in the selected restoration sites, including stream/river channels and peatland/valley floor and lower valley slopes. This was on the basis that it would provide the most sustainable expression of fen meadow and associated vegetation including wet woodland, wetter fen and open water features. Having reviewed Fen Meadow Plan submitted at deadline 6 [REP6-026] it is not clear that this is proposed at any of the sites, most of the work involves retention of some/most of current artificial modifications to valley/site ecohydrology. An example would be the catch dyke at Halesworth – why not completely in-fill this rather than retain it and add more structures to it? There are also clearly big issues around the artificial drainage systems at Pakenham and implications for restoration. Some clarification and further consideration of this is needed across all three sites. *Site Specific Comments* .				

			Benhall • No controls of River Fromus or canal. What is the significance of this for levels in restoration site? Do these not set the overall level across site, regardless of ditches being blocked. • Canal and river water high nutrient, and flood site. This is a constraint on the development of high value vegetation. Although the 'M22 character' may persist with some eutrophication it will be of less nature conservation value than stands supplied with meso/oligo water, with fewer species and higher risk of dominance of competitive species, therefore lower confidence in long-term outcome. **Halesworth** • There are issues with catch drain restoration. As discussed above the biggest chance of success would be to restore natural hydrological regimes. Therefore, disabling the catch drain may offer a better chance at success. **Pakenham** • There are very high NO3 concentrations in GW apart from in dipwells. This may have implications for sustainability in the longer term. • The account here (3.24, page 77-78) describes the highly sub-optimal nature of the 'wetland' at Pakenham Meadows SSSI. If the proposed works can help to raise the water table in this site, then it would likely be beneficial. The caveat would be that if the water was highly enriched with N and/or P then there is a threat to the remaining areas of mesotrophic wetland vegetation, however, given the likely previous occurrence of alkaline fen vegetation here, in principle wetting up here is to be encouraged. • 'Complex drainage arrangements' limit proposals for re-naturalisation here. We advise that these are re-evaluated with constraints to more ambitious programme of re-naturalisation clearly justified. We are happy to engage in this process with technical specialists.					

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 **(C)**	**<u>Context and background</u>** Sizewell Marshes is also in part notified as being of national significance is 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 2.3 ha 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. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.5, 4.3 (iii and iv), 4.4 (ii and iii) and 4.2.8) • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.4, 3.8 – 3.11, 4.1 – 4.5 and throughout Annex 3 (see comments under Table 7.1, 7.4.39 and 7.4.72 – 7.4.78); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, e.g. paragraphs 3.6, 3.9, 3.9.13 – 3.9.15, 4.5.1 – 4.5.3, 4.5.6, 4.5.10, 4.6.1.2 and 4.6.2.2 – 4.6.2.9); • Natural England's response to the *Sizewell C – Stage 4 Consultation: 18th July 2019 to 27th September 2019* (our ref: 289446, dated 26th September 2019, comments 4, 5 and 9);	**TBC**			The quantum of permanent landtake for all habitats were presented in the ES and following updated NVC mapping in 2020, were updated in the ES addendum in January 2021. The permanent landtake of wet woodland habitat would be approximately 3.06ha. A Wet Woodland Strategy has been developed to deliver at least 3.06ha of wet woodland, with at least 0.7ha delivered on site and with the balance provided at two of the fen meadow sites (Benhall and Pakenham) where wet woodlands are already present in adjacent areas. Delivery of wet woodlands at the fen meadow sites creates a linkage between these habitats which is similar to the linkage seen at Sizewell Marshes SSSI and in the longer term can be expected to provide high value habitats for invertebrates. **June 2021 – Comments of Written Representations** The updated Wet Woodland Strategy was submitted to examination at Deadline 1 [REP1-020]. This commits to delivering a total of at least 3.06ha of compensatory wet woodland habitats with 0.7ha delivered on the main development site and 2.36ha delivered at two fen meadow sites (Benhall and Pakenham). − An explanation of the design evolution for the selected SSSI crossing design is provided under Issue 48 above. The selection of the SSSI crossing design is relevant in the wet woodland context as this is the habitat which is most greatly impacted by any variation in designs. Wet Woodland is not a habitat for which the SSSI is designated although it does provide a habitat for the invertebrate community which is a designated feature of interest. − The acquisition of sites to create fen meadow habitats is covered above. Natural England and other ecological stakeholders are supportive of the co-location of the wet woodland creation at the fen meadow sites. As with the fen meadow habitats, given the duration of time for the creation of wet woodland habitats, it would not have been possible to fully establish these habitats in advance to align with the Natural England statement. This is not an unusual position where compensatory woodland habitats are involved for any development which involves woodland loss.	Wet Woodland Strategy secured by Requirement

			We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not fully reflect our previous advice in this regard (i.e. Appendix: Invertebrates of ES Chapter 14 for MDS omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** As highlighted above under issue 48, the 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. EDF Energy have proceeded with a culvert with embankment design for the SSSI crossing when potentially less damaging options for its design exist. Several alternative design options were presented to us by EDF Energy during pre-application and Natural England's preferred option remains that which would have the least environmental impact, including on the SSSI. One of the alternative design options included a three span bridge which we understand would be less damaging to this particular SSSI feature (invertebrate assemblage) by requiring less land take of the supporting wet woodland habitat. It would also cause less indirect harm to the SSSI invertebrates which include aquatic beetles (Coleoptera), flies (Diptera), moths (Lepidoptera), dragonflies (Odonata) and				**September 2021** The wet woodland strategy was submitted to examination at Deadline 1 as explained above. It was revised extensively prior to examination to address all of the proposed amendments suggested by Natural England, including a commitment to enhance the retained wet woodlands in the SSSI for invertebrates, with Natural England agreement. The new SSSI crossing design with a 40m wide bridge has been brought forward which slightly reduced landtake compared to the earlier 68m long culvert option and should minimise the potential for fragmentation of habitats and removes shading from 28m of the Leiston Beck (see also above). The design was further revised in July 2021 to remove the eastern bridge deck in the operational phase, leaving a bridge of approximately 16m in width. Evidence has been provided to examination, notably at ISH7, as to why the embankment and single span bridge is required, since it provides a very substantial programme benefit over the discounted triple span option. The landtake difference between the two options is approximately 0,02ha, which would be wet woodland habitat, and the updated design further reduces any potential for fragmentation (see also above). The Wet Woodland Plan, which is aligned with the wet woodland strategy and the draft fen meadow plan is submitted to examination at deadline 8. This defines the 2.36ha of offsite wet woodland habitats on the fen meadow sites. Once Natural England has reviewed the material, including the commitments described above, the landtake of wet woodland habitats can be an agreed matter. Discussions ongoing.	

			spiders (Araneae)), through reducing connectivity at Sizewell Marshes; groups such as Odonata which are strong dispersers and high flying (and so able to see beyond the drain) may not be affected by the culvert design. However, other wetland invertebrate groups are not such good, or poor, dispersers, and so are likely to be directly affected by the culvert as proposed, being narrow and 70 m long, which will result in lack of light reaching the water. The design could potentially be modified (e.g., widened) so that light is able to reach the water and alleviate some of the most significant effects, but a bridge design would alleviate these concerns. Maintaining a visibly healthy and thriving wetland is important ecologically as well as to the landscape character and quality of this part of the AONB. 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 through the submission of further information.** Should the culvert/ embankment design for the SSSI crossing be considered justifiable against possible alternatives, then we advise that the area of replacement wet woodland habitat should be greater than the area of habitat to be lost due to the inherent risk of creating habitat of the same quality and distinctiveness. Habitat creation should also be established in advance of the habitat being lost to the development. The applicant has proposed an area of 0.7 ha of wet woodland to be created within the north of the development, adjacent to the marsh harrier habitat improvement area to provide some compensatory habitat for this loss. **However, we advise that further information is needed to demonstrate that the proposed wet woodland would fully compensate for the SSSI loss** by being: • *In a suitable location:* It is not obvious that the proposed location for this habitat would be appropriate hydro-topographically for the creation of				

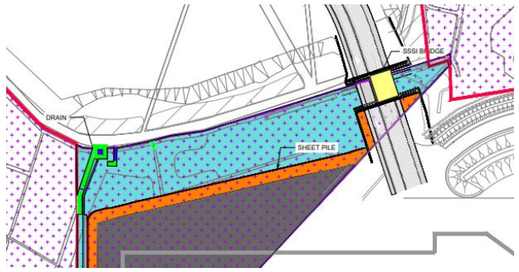
			any wetland habitats. The creation of a natural wet to dry transition at the SSSI edge may still be worthwhile but it may mean that it will not specifically provide compensation for wet woodland loss associated with the Sizewell Marshes SSSI crossing. If that is the case, then other potential compensation sites will need to be identified and Natural England consulted on these. The creation of wet woodland compensation should also not be at the expense of the existing SSSI features (i.e. open water, reedbed, fen) and we require clarification on this point. • *Of a sufficient size:* i.e. what is a suitable compensation ratio? The applicant proposes 0.7 ha of wet woodland habitat to compensate 2.63 ha lost (para 14.7.130, Chapter 14, Environmental Statement). As this is a significant effect on wet woodland and its associated invertebrate assemblage, measures still need to be put in place to compensate for the direct loss of habitat, as mitigation does not seem to be possible. It is Natural England's recommendation that creation of wet woodland habitat should compensate for the total quantum of habitat lost as well as any damage caused by accessing and drilling within them. • *Of a sufficient structure and quality to support the designated invertebrate interest:* this also needs to take into account ecological connectivity and the facilitation of species movement. Connectivity between areas of high quality habitat is vital on a landscape scale and must be retained, or if it is considered that some has to be lost/ damaged, we need to know how this would be mitigated for. The current proposals to produce compensation for lost wet woodland include non-natives species. There appears to be no justification for including these rather than replacing species like-for-like and this therefore requires further consideration. • *Fully functioning as wet woodland within a suitable timeframe*: planting vs natural regeneration should be considered here. If feasible, the latter may produce a more diverse outcome, but would likely take longer to establish and therefore become functional as compensation;				

			• *Secured and maintained in the long-term and integrated into the overall site management plan;* **<u>Further comments on the DCO application, May 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. **August 2021** We welcome the continued optimisation of the SSSI crossing design and that while our preference remains for a three-span bridge we acknowledge that the current design represents a best alternative. However, this issue will remain 'amber' as we still believe that the three-span bridge design will have the least impact ecologically on Sizewell Marshes SSSI. We welcome continued steps to reduce permanent land take of wet woodland. We are in the process of reviewing the latest information which has been provided by the applicant in addition to waiting to review information incoming at Deadline 7. We are therefore unable to provide our updated position at this time but will use best endeavours to provide this as soon as we can.				

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)**	**Context and background** 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 48 – 50 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. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.5, 4.3 (iii and iv), 4.4 (ii and iii) and 4.2.8) • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.4, 3.8 – 3.11, 4.1 – 4.5 and throughout Annex 3 (see comments under Table 7.1, 7.4.39 and 7.4.72 – 7.4.78); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, e.g. paragraphs 3.6, 3.9, 3.9.13 – 3.9.15, 4.5.1 – 4.5.3, 4.5.6 – 4.5.7, 4.5.10, 4.6.1.2 and 4.6.2.2 – 4.6.2.9); We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not fully reflect our previous advice in this regard (which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we	**TBC**			The quantum of temporary landtake for all habitats were presented in the ES and following updated NVC mapping in 2020, were updated in the ES addendum in January 2021 at 3.02ha. Explanations are provided of works within various areas, such as the works required to replace overhead lines. Until contractors are appointed it is not feasible to provide full details of all of these works, however, other than the overhead line works, the works within the areas subject to temporary landtake are likely to be completed within the first two years of construction. Habitat re-establishment and recovery would then be enabled and monitored. A commitment is provided in the ES to use a method statement process for works within the areas of the SSSI subject to ensure damage is minimised. A commitment to monitoring of the areas of temporary landtake is provided in the Terrestrial Ecology Monitoring and Mitigation Plan At Deadline 6, further details were provided on the works within the areas of temporary landtake. None of these areas have the potential to become what might be regarded as permanent landtake It is important to note that the temporary land take of the SSSI as defined in the ES is simply the difference between the permanent land take and the order limits. That area is required to varying degrees in order to construct the project. The intensity of use is likely to vary from 'high' and last for several months (e.g. the narrow corridor to create the new route of the Sizewell drain and to provide new connection with the Leiston drain, west of the new platform) to 'light' and last for a few weeks or less (e.g. overhead line works along the existing overhead line corridor). In much of the remainder of the area of the retained SSSI immediately to the west of the proposed SSSI Crossing surrounding the Leiston drain, further consideration of working methods indicates that temporary land take is unlikely to be necessary. The three relevant areas are described as follows: The ES (in Volume 2, Chapter 14 [AS-033]) explained at paragraph 14.7.125 (in part) and 14.7.131, the techniques which would be used to protect the **SSSI land underneath the area where National Grid overhead power lines**	A commitment to provide detailed method statements for works in areas subject to temporary landtake

			are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** Further information is required to understand the impacts of temporary land take and how it will be restored. All habitat impacted by construction should be restored and maintained in accordance with what was originally present. Any restoration should not be at the expense of existing SSSI features. Further detail is required about the reestablishment of SSSI habitat, including method, objectives, timeframe, monitoring (including success in establishing desirable species) and management. We recommend that opportunities to improve the habitat area considered within the boundary of the SSSI. **<u>Further comments on the DCO application, May 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. 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. **August 2021** We welcome the continued optimisation of the SSSI crossing design and that while our preference remains for a three-span bridge we acknowledge that the current design represents a best alternative. However, this issue will remain				**need to be installed,** which will serve the expanded National Grid substation located at Sizewell B. In summary the approach in this area is for the wet woodland to be coppiced to enable the cable to be laid out, prior to lifting and the fen meadow would be protected from damage using appropriate methods for spreading the weight of plant in wet ground, such as the use of 'bog matting'. The operation is likely to be undertaken over a period of weeks and the SSSI interest would be retained. The works would be undertaken under a method statement agreed with Natural England. Along the **western edge of the new platform,** the new alignment of the Sizewell Drain would be excavated and connected to the retained Leiston Drain. The majority of this excavation, other than at the very northern extent would be undertaken using excavators working from the east, east of the sheet pile wall installed to protect the SSSI and this will avoid compaction of soils with the SSSI. The works along this narrow linear corridor would be the most intensive of the works required in the areas of temporary landtake. Nevertheless the newly created channel would be profiled to create high quality habitats which would be expected to achieve SSSI quality within a ten year period. The works would be undertaken under a method statement agreed with Natural England. Evidence to suggest that SSSI quality is achievable for the realigned Sizewell drain is provided by the establishment of similar ditches within the newly created wetlands at Aldhurst Farm, which are approaching, or may already have achieved, SSSI quality. The remainder of what to date has been considered temporary landtake is **an area of approximately 2.0ha, which sits within a corridor which lies along and to the south of the retained Leiston Drain** and is shown in pale blue below. Other than (i) the works to connect the new Sizewell Drain into the Leiston drain and (ii) to stop up a ditch from the northern side, both shown in green and dark blue on this plate, it has been determined that no works are required in this area and it is outside the sheet piles which define the outer edge of the platform and the SSSI Crossing. The limited working areas shown in green are excluded from the 2.0ha. To the east of the new SSSI Crossing a footpath diversion and footbridge will traverse the retained wet woodland corridor but this can be micro-	

			'amber' as we still believe that the three-span bridge design will have the least impact ecologically on Sizewell Marshes SSSI. We are therefore unable to provide our updated position at this time but will use best endeavours to provide this as soon as we can.				sited to avoid habitat loss and the area of this narrow linear feature is excluded from the approximate areas provided here.  An update, including any relevant updates to the Landscape Retention Plans and Site Clearance Plans contained within the Main Development Site Landscape Plans [REP5-016], was provided at Deadline 7 to demonstrate the retention of the vegetation in this area, which is primarily wet woodland and to further clarify the residual temporary landtake figures. . **September 2021** Updated landtake figures are provided to the examination at Deadline 8, to account for the updated approach to construction outlined above. These confirm that the reduced temporary landtake figure is 1.99ha (previously reported in the January 2021 **ES Addendum** as 3.02ha)	
ASSOCIATED DEVELOPMENT SITE – Two Village Bypass (A12)								
52	**ECOLOGY:** Impacts on protected species ▪ Bats ▪ Badgers ▪ Otters	Protected species' mitigation and compensation for Two Village Bypass impacts	**Context and background** This AD site supports a number of protected species as listed which will be impacted by the project. Potential impacts include:	**TBC**			The two road schemes were surveyed extensively in 2019 and one area of land on the SLR to which no access was available in 2019 was surveyed in 2020. The 2020 survey reports have been provided and have been taken into account in the ES addendum (January 2021). No substantive changes to the original assessments were required in relation to these baseline updates.	Protected Species Licensing as relevant

	▪ Water voles	**(C) and (O)**	• Bats - Habitat loss with possible fragmentation • Badgers – Habitat loss and direct disturbance with possible fragmentation • Otter - Habitat loss with possible fragmentation • Water vole - Habitat loss and direct disturbance with possible fragmentation Natural England was not given the opportunity to review the complete up-to-date survey information for each of these species at the pre-application stage alongside the respective mitigation strategies. It has not therefore been possible for us to provide extensive comments on protected species mitigation to date. We advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.8, 4.3 (iii) and 4.4 (iii and iv)); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.19 and throughout Annex 2 (see comments under 4.3, 4.4 and Annex 3 (see comments under 7.4.78, 7.4.84, 7.5.3, 7.5.58 – 7.5.60, 7.5.65, 7.8.6, 7.9.6, Table 9.3 and Table 10.3); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, paragraphs 3.9.16 – 3.9.20, 4.5.26, 4.5.44, 4.5.48 – 4.5.51 and 4.6.16.3). We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. the				Further surveys were undertaken for all Associated Development sites in winter 20/21 for wintering birds (to address previous stakeholder comments) and in Spring 2021 for great crested newts (populations in ponds where previously recorded) and bat roosts (tree climb inspections where roost potential was detected in 2019). The latter two surveys provide the detailed data required to inform licensing for these species and the survey reports will be shared with ecology stakeholders including Natural England and PINS. The bat roost survey update report was submitted to examination and the great crested newt population survey report will be submitted at Deadline 7. Both are used to support the licensing approach but neither change the conclusions of the ES. No great crested newts have been detected along the route of the Two Village Bypass. Additional surveys are being undertaken in August 2021 to address specific queries made by the examining authority in relation to bats in the Farnham Hall area and in relation to the possible presence of Dormice in the surrounding woodlands and hedgerows. There is only one record of Dormice in East Suffolk north of the Orwell. In summary, we do not consider there to be shortcomings in survey and certainly none that would alter the conclusions of the assessments presented. The additional information requirements suggested left can be discussed through the protected species licensing approach and would not affect the assessment. In relation to water voles, the working method of construction for the River Alde bridge would entirely avoid bank margins and the water course and so further water vole population data seems unlikely to be required in this context. During targeted surveys, recent water vole field signs, including burrows, droppings, latrines and feeding signs were found along the River Alde and a connected ditch to the north of the River Alde within the site and were indicative of a low population within this length of the River Alde.	

			protected species which should be included within ES Chapter 14: Terrestrial Ecology Ornithology was omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **Comment of the DCO application - Relevant Representations, September 2020** ***Further Information Required*** All baseline survey data for the project, covering all habitats and species likely to be affected, should be acceptable in terms of methodologies, coverage and age. The recent Chartered Institute of Ecology and Environmental Management (CIEEM) Advice note on the Lifespan of Ecological Reports and Surveys states that, for surveys which are more than three years old, "*The report is unlikely to still be valid and most, if not all, of the surveys are likely to need to be updated*". Where the ecological survey data to inform the various Sizewell C impact assessments are not in line with this, we advise that clear justification must be provided on how the data remain valid and robust enough to inform conclusions. Further detailed advice on this for Two Village Bypass protected species is outlined throughout Appendix III to this letter, but to summarise our key concerns: • **Water vole:** For the water vole method statement, additional information will be required to determine whether an individual licence or Class licence is required for the works. • **Badgers:** Underpasses to be considered depending upon results of further surveys. Badger surveys carried out along the route included a 50m buffer however further surveys of the wider area are required. If it identified that the route will sever territories the placement of underpasses along				In relation to badgers, a single outlying sett was located. Crossing points are provided through the River Alde crossing and the two culverts which have been introduced into the design on the eastern edge of the flood plain. **September 2021** A tranche of updated draft licences were submitted to Natural England in July 2021 and all remaining updated draft licences have now been submitted. Once Natural England have reviewed all of the updated licenses and the related material, it is suggested that new commentary is provided and SZC Co. can respond accordingly. SZC Co has suggested to Natural England that they advise ExA, prior to examination close, whether there are any fundamental reason why the relevant licences would not be granted, even if formal LoNI are not available in this period. Discussions ongoing.	

			key commuting routes should be incorporated into the design. **<u>Further comments on the DCO application, May 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. **August 2021** As outlined in our response to the ISH7 in July [REP5-160]. *"It is our understanding that for the proposed project this includes water voles, natterjack toads, bats, otters, great crested newts, badgers and Deptford Pink.* *As set out in our Relevant [RR-0878] and Written Representations [REP2-153], we advised the Applicant throughout pre-application that final draft licences for all relevant protected species should be submitted by them with or shortly after the submission of their Development Consent Order (DCO) application in May 2020. This was to ensure that the Examining Authority (ExA) has the certainty that is required in terms of Natural England reviewing each licence*				

			application and providing letters of no impediment (LoNIs) before any consent might be granted. We specifically created the LoNI process for this purpose to de-risk applications for developers in this regard. The advice given by the PINS Consents Service Unit in their Prospectus for developers document (page 8, Annex 2), which support developers in understanding the risks of not undertaking this process, states that "It is worth noting where developers choose to apply for non-planning consent later in the process, it may be difficult to provide the Examining Authority with reassurances about the likelihood of obtaining them". *As outlined in our oral submission at ISH 7, Natural England started receiving the final draft protected species licence applications from the Applicant on the 9th July 2021 (water voles, Deptford Pink), and have also received an outline of when the Applicant intends on submitting the remaining applications to Natural England and the ExA as below:*					

Licence Title	***Proposed Submission Date to Natural England***	***Submission to ExA***
Water Vole Method Statement: Main Development Site	*9th July (issued)*	*Deadline 5*
Natterjack Toad: Main Development Site	*20th July*	*Deadline 5*
Badger: Main Development Site	*16th July*	*Deadline 5*
Deptford Pink: Main Development Site	*9th July (issued)*	*Deadline 5*
Otter: Main Development Site	*21st July*	*Deadline 5*
Water Vole: Two Village Bypass	*16th July*	*Deadline 5*

Badger: Two Village Bypass	*16th July*	*Deadline 5*
Great Crested Newt: Northern Park and Ride	*27th August*	*Deadline 7*
Great Crested Newt: Sizewell Link Road	*27th August*	*Deadline 7*
Great Crested Newt: Rail	*27th August*	*Deadline 7*
Bat	*27th August*	*Deadline 7*

As such, we have not yet had time to review and come to a conclusion on any of the applications and are therefore not in a position to issue any LoNIs to the ExA at this time.

We do not have a statutory response time on this element of our licencing work but ordinarily would aim for 30 working days, although staff are currently operating at 45+ working days due to resource constraints. Applications typically require multiple rounds of drafts being submitted per species before they reach a stage that they are considered satisfactory for Natural England to reach a conclusion. Without pre-judging the applications, given the scale and complexity of the Sizewell C project it may be that our response following initial review is to request further information for some or all of them, after which the review process is repeated.

We therefore wish to highlight that our conclusions on each licence application, and subsequent issuing of LoNIs to the ExA (if a favourable conclusion is reached), may not occur until close to or after the end of the examination period as currently scheduled (14th October 2021). As outlined in our oral submission at ISH 7, the LoNIs themselves do not take much time to prepare and issue once a favourable conclusion has been reached."

We note that we are still awaiting submissions for Great Crested Newts and Bats. But to the best of our knowledge have received all other licenses which are currently under review.

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>Context and background</u>** Foxburrow Wood, Palant's Grove and Pond Wood are designated as ancient woodland and are in close proximity to the proposed route of the bypass. As set out in NPS EN – 1, "*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. The IPC should not grant development consent for any development that would result in its loss or deterioration unless the benefits (including need) of the development, in that location outweigh the loss of the woodland habitat*" (paragraph 5.3.1). We therefore welcome that the red line boundary for the bypass was amended following our pre-application advice at Stage 3 to avoid direct loss of Foxburrow Wood ancient woodland. However, any routing of the bypass in close proximity to these ancient woodlands must also consider wider potential impacts to them (indirect damage, fragmentation etc.) in line with the avoidance-mitigation-compensation hierarchy as outlined further below. We have raised this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, paragraph 4.6.16.4). • Natural England's response to the *Sizewell C – Stage 4 Consultation: 18th July 2019 to 27th September 2019* (our ref: 289446, dated 26th September 2019, comment 1); We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. the Two Village Bypass Terrestrial Ecology Ornithology ES Chapter	**TBC**			The ancient woodland blocks are being avoided by the two schemes and buffers/ offsets are being provided. For Foxburrow Wood a 15m offset from excavation has been included within the design, whilst Pond Wood which is just over 30m away from the closest working area. Measures to protect retained trees adjacent to the works are included in the CoCP and would be applicable at Foxburrow Wood. The relevant impacts to ancient woodlands have been determined through the appropriate process and are assessed in the ES. **June 2021** As noted, offsets from the ancient woodland have been embedded into the scheme design to ensure root protection zones are maintained. As detailed previously in the response to Bio 1.1.15 [REP2-100], changes in air quality as not significant for Foxburrow Wood County Wildlife Site (CWS) and the lowland mixed deciduous woodland present along the scheme corridor as a result of the primary and tertiary mitigation measures to be implemented. In addition, the air quality assessment (Volume 5, Chapter 5 of the ES) [APP-418] predicted the total nitrogen deposition that Foxburrow Wood would experience as follows: • Foxburrow Wood is predicted to experience a total nitrogen deposition of 16.4 kgN/ha/Yr for the 2023 future baseline year without two village bypass, 16.3 kgN/ha/Yr for the 2028 future baseline year and 16.3 kgN/ha/Yr for the 2034 future baseline year. • Foxburrow Wood CWS is predicted to experience a total nitrogen deposition of 16.4 kgN/ha/Yr during the construction phase of the Sizewell C Project (2023). • Foxburrow Wood CWS is predicted to experience a total nitrogen deposition of 17.4 kgN/ha/Yr during both the 2028 average day and busiest day scenarios.	CoCP for measures to protect retained woodlands

			was omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** As mentioned above, the routing of the bypass is in close proximity to these ancient woodlands and therefore needs to 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; • ***Damage:*** routing the road in such a way as to avoid damage to ancient woodland. 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:*** the road should be routed in such a way that it avoids fragmentation of ancient woodland which would reduce the ecological connectivity between them, negatively impacting on species movement and creating/increasing edge effects;				• Foxburrow Wood CWS is predicted to experience a total nitrogen deposition of 17.2 kgN/kgN/ha/Yr during the operational year of the Sizewell C Project. In relation to impacts upon Foxburrow Wood, it is noted that the historic background deposition rates have been materially higher than current rates. The air quality modelling work carried out to inform the assessment has assumed a worst-case scenario as in reality, it is expected that the transition to electric vehicles will progressively reduce emissions to air from vehicles whilst other energy related changes will also reduce background concentrations. Therefore, based on this scenario NOx and N deposition can be expected to fall considerably. However, this is not assured and timescales of these changes are unknown so a worst case has been assumed and air quality modelling has factored in continued use of petrol/diesel cars. In the case of Foxburrow Wood, the baseline deposition rate is already forecast to be 60-70% above the minimum part of the critical load range (i.e. c. 16-17 kgN compared to a minimum critical load of 10 kgN) and this is likely to have been the case for decades (for example nitrogen deposition trend data on the UK Air Pollution Information System for the area around Minsmere illustrates a generally flat trend for nitrogen deposition to forest from 2005-2018) such that the vegetation is already likely to have materially changed and adapted with the abundance of the most sensitive species reducing in response excess levels of nitrogen. However, the surveys of the woodland have shown that despite the elevated levels, some ancient woodland ground flora indicator species, such as bluebell and wild garlic (Ramsons) remain and have continued to persist under these conditions. Whilst woodland habitats can be adversely affected by increased nitrogen deposition dose-response data (published in Natural England Commissioned Report 210) indicate that for species-richness many habitats see a lessening effect from further nitrogen deposition when nitrogen is already in excess as the major changes in species composition have already occurred. Moreover,	

			We are not yet satisfied that damage/fragmentation to these woodlands will be avoided/mitigated as proposed. If it cannot, we do not consider that adequate justification for progressing with this option where less damaging options might be available has yet been provided. Natural England was recently requested to review evidence and information for Pond Wood which resulted in it being added to the Ancient Woodland Inventory (AWI). It therefore needs to be accounted for appropriately in relation to this aspect of the proposal. In Chapter 7 Terrestrial Ecology and Ornithology and its appendices, loss of habitat within Pond Wood is identified and mitigated proposed in the form of new habitat creation. However, consideration of the avoidance of any potential direct loss to the site and appropriate buffering in line with our standing advice should be considered as already applied to Foxburrow Wood. This includes appropriate recognition in Outline Landscape and Ecological Management Plan (oLEMP), Code of Construction Practice etc. as needed. Due to its inclusion on the AWI it should be also be screened into the Air Quality Assessment for this project and impacts to ground water changes should also be considered. **<u>Further comments on the DCO application, May 2021</u>** Further Information Required 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				responses to further nitrogen in a given woodland can vary dependent upon other parameters such as the groundflora, drainage, canopy cover which can intercept light and rainfall. The terrestrial ecology and ornithology assessment reviewed the potential changes in total nitrogen deposition associated with the new road and given the context described above, concluded that the overall impact of air quality on Foxburrow Wood CWS would be a negligible adverse effect, which is considered to be not significant. **August 2021** There has been discussion during the examination of ancient woodlands but there is no change to the assessment of impacts to ancient woodlands defined in the ES and summarised above and there will be no landtake of ancient woodlands. Several third parties have suggested that several additional woodlands within or adjacent to the AD sites, such as Nuttery Belt (on the Two Village Bypass route) or Little Nursery Wood, could be consider ancient but there is no evidence to support that position. See also Issue 21 above. Having reviewed the construction layouts in detail at Foxburrow Wood it is clear that no further buffer other than the 15m offset defined above can be accommodated. Discussions ongoing.	

			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. **August 2021** In the case of Foxburrow Wood, the baseline deposition rate is already forecast to be 60-70% above the minimum part of the critical load range (i.e. c. 16-17 kgN compared to a minimum critical load of 10 kgN)". Modelling shows that the development is likely to increase N deposition and take N deposition rates beyond the maximum critical load for the habitat (Foxburrow Wood CWS is predicted to experience a total nitrogen deposition of 17.2 kgN/kgN/ha/Yr during the operational year of the Sizewell C Project). In an era of nature recovery this is not an acceptable approach to take, and we would expect such developments to be exemplars in this regard. The air pollution evidence indicates that a larger buffer is likely to be required to protect the ancient woodland. The impacts of excessive nitrogen deposition on the woodland habitats are not confined to a reduction in ground flora species, but will likely include changes in soil processes, nutrient imbalance, altered composition of mycorrhiza, lichen communities and ground vegetation. The Dutch Nitrogen case refers to European sites but establishes the principle of 'nutrient neutrality' where environmental benchmarks are exceeded or are close to exceedance. As yet unpublished research by Forest Research on ancient woodland buffers has shown that higher amounts of tree and woodland cover in the vicinity of a development can ameliorate the impacts of road traffic pollution. The landscape in which this development sits has fairly minimal tree and woodland cover, which tends not to be very well connected. Therefore, we would urge that opportunities to further expand the mitigation and compensation woodland and tree habitat creation are explored.				

			We still have no evidence that ecohydrological impacts will not damage the ancient woodland. Impacts in combination have not been adequately addressed.					
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)**	**<u>Context and background</u>** This AD site supports a number of protected species as listed which will be impacted by the project. Potential impacts include: • Bat – Habitat loss Natural England was not given the opportunity to review the complete up-to-date survey information for each of these species at the pre-application stage alongside the respective mitigation strategies. It has not therefore been possible for us to provide extensive comments on protected species mitigation to date. We advised EDF Energy on this issue a number of times throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.8, 4.3 (iii) and 4.4 (iii and iv)); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.19 and throughout Annex 2 (see comments under 4.3, 4.4 and Annex 3 (see comments under 7.4.78, 7.4.84, 7.5.3, 7.5.58 – 7.5.60, 7.5.65, 7.8.6, 7.9.6, Table 9.3 and Table 10.3);	**TBC**			The two road schemes were surveyed extensively in 2019 and one area of land on the SLR to which no access was available in 2019 was surveyed in 2020. The 2020 survey reports have been provided and have been taken into account in the ES addendum (January 2021). No substantive changes to the original assessments were required in relation to these baseline updates. Further surveys are being undertaken for all Associated Development sites in winter 20/21 for wintering birds (to address previous stakeholder comments) and in Spring 2021 for great crested newts (populations in ponds where previously recorded) and bat roosts (tree climb inspections where roost potential was detected in 2019). The latter two surveys will provide the detailed data required to inform licensing for these species and the survey reports will be shared with ecology stakeholders including Natural England and PINS. The bat roost survey update report was submitted to examination and the great crested newt population survey report will be submitted at Deadline 7. Both are used to support the licensing approach but neither change the conclusions of the ES. In summary, we do not consider there to be shortcomings in survey at Yoxford Roundabout and certainly none that would alter the conclusions of the assessments presented. The points made in relation to bat boxes will be addressed through the protected species licensing workstream. The Landscape design for Yoxford Roundabout does include some hedgerow planting but opportunities are limited within such a small site.	Protected Species Licensing as relevant

			• Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, paragraphs 3.9.16 – 3.9.20, 4.5.26, 4.5.44, 4.5.48 – 4.5.51 and 4.6.17.4). We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. the protected species which should be included within ES Chapter 14: Terrestrial Ecology Ornithology was omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **Comment of the DCO application - Relevant Representations, September 2020** ***Further Information Required*** All baseline survey data for the project, covering all habitats and species likely to be affected, should be acceptable in terms of methodologies, coverage and age. The recent Chartered Institute of Ecology and Environmental Management (CIEEM) Advice note on the Lifespan of Ecological Reports and Surveys states that, for surveys which are more than three years old, "*The report is unlikely to still be valid and most, if not all, of the surveys are likely to need to be updated*". Where the ecological survey data to inform the various Sizewell C impact assessments are not in line with this, we advise that clear justification must be provided on how the data remain valid and robust enough to inform conclusions. Further detailed advice on Yoxford Roundabout protected species is outlined throughout Appendix III to this letter, but to summarise:				**September 2021** A tranche of updated draft licences were submitted to Natural England in July 2021 and all remaining updated draft licences have now been submitted. Once Natural England have reviewed all of the updated licenses and the related material, it is suggested that new commentary is provided and SZC Co. can respond accordingly. SZC Co has suggested to Natural England that they advise ExA, prior to examination close, whether there are any fundamental reason why the relevant licences would not be granted, even if formal LoNI are not available in this period. Discussions ongoing.	

			• **Bats:** Natural England supports the inclusion of bat boxes; however the applicant needs to provide a variety of bat boxes to accommodate the different roost types such as maternity, day and hibernation. • **Birds:** Natural England strongly recommends that the applicant undertakes a series of bird surveys at the site to determine the impacts of the development to any breeding or wintering birds that use the site. The survey effort should cover the following periods: Breeding bird season (March – July), Wintering bird season (November – March) and Passage birds (March – October**).** • Natural England recommends that where possible the applicant considered enhancing local habitats to improve biodiversity. **<u>Further comments on the DCO application, May 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.					

			August 2021 As outlined in our response to the ISH7 in July [REP5-160]. *"It is our understanding that for the proposed project this includes water voles, natterjack toads, bats, otters, great crested newts, badgers and Deptford Pink.* *As set out in our Relevant [RR-0878] and Written Representations [REP2-153], we advised the Applicant throughout pre-application that final draft licences for all relevant protected species should be submitted by them with or shortly after the submission of their Development Consent Order (DCO) application in May 2020. This was to ensure that the Examining Authority (ExA) has the certainty that is required in terms of Natural England reviewing each licence application and providing letters of no impediment (LoNIs) before any consent might be granted. We specifically created the LoNI process for this purpose to de-risk applications for developers in this regard. The advice given by the PINS Consents Service Unit in their Prospectus for developers document (page 8, Annex 2), which support developers in understanding the risks of not undertaking this process, states that "It is worth noting where developers choose to apply for non-planning consent later in the process, it may be difficult to provide the Examining Authority with reassurances about the likelihood of obtaining them".* *As outlined in our oral submission at ISH 7, Natural England started receiving the final draft protected species licence applications from the Applicant on the 9th July 2021 (water voles, Deptford Pink), and have also received an outline of when the Applicant intends on submitting the remaining applications to Natural England and the ExA as below:* ***Licence Title*** / ***Proposed Submission Date to Natural England*** / ***Submission to ExA*** *Water Vole Method Statement: Main Development Site* / *9th July (issued)* / *Deadline 5*				

			Natterjack Toad: Main Development Site	*20th July*	*Deadline 5*					
			Badger: Main Development Site	*16th July*	*Deadline 5*					
			Deptford Pink: Main Development Site	*9th July (issued)*	*Deadline 5*					
			Otter: Main Development Site	*21st July*	*Deadline 5*					
			Water Vole: Two Village Bypass	*16th July*	*Deadline 5*					
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			Great Crested Newt: Northern Park and Ride	*27th August*	*Deadline 7*					
			Great Crested Newt: Sizewell Link Road	*27th August*	*Deadline 7*					
			Great Crested Newt: Rail	*27th August*	*Deadline 7*					
			Bat	*27th August*	*Deadline 7*					
			As such, we have not yet had time to review and come to a conclusion on any of the applications and are therefore not in a position to issue any LoNIs to the ExA at this time. *We do not have a statutory response time on this element of our licencing work but ordinarily would aim for 30 working days, although staff are currently operating at 45+ working days due to resource constraints. Applications typically require multiple rounds of drafts being submitted per species before they reach a stage that they are considered satisfactory for Natural England to reach a conclusion. Without pre-judging the applications, given the scale and complexity of the Sizewell C project it may be that our response following initial review is to request further information for some or all of them, after which the review process is repeated.*							

			We therefore wish to highlight that our conclusions on each licence application, and subsequent issuing of LoNIs to the ExA (if a favourable conclusion is reached), may not occur until close to or after the end of the examination period as currently scheduled (14th October 2021). As outlined in our oral submission at ISH 7, the LoNIs themselves do not take much time to prepare and issue once a favourable conclusion has been reached." **We note that we are still awaiting submissions for Great Crested Newts and Bats. But to the best of our knowledge have received all other licenses which are currently under review.**					
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)**	**<u>Context and background</u>** This AD site supports a number of protected species as listed which will be impacted by the project. Natural England was not given the opportunity to review the complete up-to-date survey information for each of these species at the pre-application stage alongside the respective mitigation strategies. It has not therefore been possible for us to provide extensive comments on protected species mitigation to date. Potential impacts include: • Bat – Habitat loss and possible fragmentation • GCN – habitat loss • Water vole – possible habitat loss We advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.8, 4.3 (iii) and 4.4 (iii and iv));	**TBC**			The two road schemes were surveyed extensively in 2019 and one area of land on the SLR to which no access was available in 2019 was surveyed in 2020. Survey updates for the two P&R sites and the GRR were also undertaken in 2020. The 2020 survey reports have been provided and have been taken into account in the ES addendum (January 2021). No substantive changes to the original assessments were required in relation to these baseline updates. Further surveys are being undertaken for all Associated Development sites in winter 20/21 for wintering birds (to address previous stakeholder comments) and in Spring 2021 for great crested newts (populations in ponds where previously recorded) and bat roosts (tree climb inspections where roost potential was detected in 2019). . The bat roost survey update report was submitted to examination at Deadline XX and the great crested newt population survey report will be submitted at Deadline 7. Both are used to support the licensing approach but neither change the conclusions of the ES. In summary, we do not consider there to be shortcomings in survey and certainly none that would alter the conclusions of the assessments presented.	Protected Species Licensing as relevant

			• Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.19 and throughout Annex 2 (see comments under 4.3, 4.4 and Annex 3 (see comments under 7.4.78, 7.4.84, 7.5.3, 7.5.58 – 7.5.60, 7.5.65, 7.8.6, 7.9.6, Table 9.3 and Table 10.3); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, paragraphs 3.9.16 – 3.9.20, 4.5.26, 4.5.44, 4.5.48 – 4.5.51 and 4.7.1.5). We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. the protected species which should be included within ES Chapter 14: Terrestrial Ecology Ornithology was omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** All baseline survey data for the project, covering all habitats and species likely to be affected, should be acceptable in terms of methodologies, coverage and age. The recent Chartered Institute of Ecology and Environmental Management (CIEEM) Advice note on the Lifespan of Ecological Reports and Surveys states that, for surveys which are more than three years old, "*The report is unlikely to still be valid and most, if not all, of the surveys are likely to*					In relation to the detailed points: Bats: The route of the proposed development would be mostly unlit, thereby maintaining a dark corridor, minimising the potential impacts to nocturnal species. To ensure road safety, lighting would be provided at the A12 and B1122 roundabouts. The remaining junctions would have low minor road flows and be similar to existing unlit rural junctions and would be unlit to minimise light spill. Operational lighting design would be compliant with relevant highway standards, and where possible would be chosen to limit stray light. Guidance within the latest Institution of Lighting Professionals Guidance Note: Bats and artificial lighting in the UK would be followed as far as possible. These measures would minimise impacts on nocturnal species, such as bats that may use the nearby tree lines, or habitats for roosting or foraging, and would also maximise the use of reinstated 'bat crossing points. At least 4 crossing points (bat hop-overs) to facilitate the passage of bats across the road alignment have been incorporated in the design where foraging or commuting routes have been identified, to reduce the potential for incidental mortality as a result of bats crossing the road and colliding with vehicles. These features would comprise hedgerow planting with tall standards planted where hedgerows meets the road to encourage bats to pass up and over the newly constructed road. Bat Crossing Point surveys commenced in 2021 to inform the design of bat crossing points, including planting arrangements. Great Crested Newts: The draft licence covers licence covers habitat loss & mitigation. Replacement great crested breeding ponds are included within the design of the proposed development to compensate for the loss of existing ponds. Replacement ponds would be created prior to destruction of the original ponds and appropriate terrestrial habitat would be created around the ponds. Under the habitat proposals with the design, a total of 1ha of new core habitat would be created and 0.9ha re-instated, 12.6ha of new intermediate habitat would be created and 6ha would be re-instated, and 7.1ha	

			need to be updated". Where the ecological survey data to inform the various Sizewell C impact assessments are not in line with this, we advise that clear justification must be provided on how the data remain valid and robust enough to inform conclusions. Further detailed advice for SLR protected species is outlined throughout Appendix III to this letter, but to summarise: • **Bats:** Natural England strongly advises the applicant to create a bat lighting plan for the route. Along the route the lighting placement should take into account foraging and commuting routes of bats. The bat hop over points, should be areas where there is no lighting present due to the sensitivity of certain bat species to light. Close board fencing along the route should be considered to prevent light spill into woodland areas or by having the lighting not exceed 0.1 lux. Other methods such as having the lamps fitted with hoods to prevent further light spill, or using bat friendly colours or shades along the route should be considered • **GCN:** The proposals of the link road as they stand will lead to a net loss of habitat for great crested newts. Though some compensatory habitat has been proposed, there is still a net loss of overall. With any habitat provided as mitigation and compensation for the scheme Natural England strongly recommends providing habitats of high ecological value to newts. The applicant should consider the provision of further areas of scrub habitat or wild flower grass lands as areas of foraging. • **Water vole:** Any loss of water vole habitat should be considered and compensated for. An updated assessment of the ditches should be made in advance of the works. **<u>Further comments on the DCO application, May 2021</u>** ***Further Information Required***				of new distant habitat would be created and 6.8ha re-instated. It is currently assumed that eight mitigation ponds and six enhancement ponds would also be created. We look forward to discussing the mitigation proposals in more detail with Natural England, particularly once the population surveys have been completed in early 2021, but our view is that improvements to terrestrial habitats (compared to existing intensive arable in most locations), will compensate for net area loss. The draft licence will be updated to account for the 2021 surveys and resubmitted to Natural England shortly. A parallel District Level Licence Inquiry will also be submitted. Water Voles: No suitable habitat for water voles has been identified within the site. All watercourses are dry in summer with no suitable marginal or emergent vegetation. Despite the absence of suitable habitat portal culverts are being provided over water courses so as not to hinder any potential for otters or water voles to disperse across the landscape. **September 2021** A tranche of updated draft licences were submitted to Natural England in July 2021 and all remaining updated draft licences have now been submitted. Once Natural England have reviewed all of the updated licenses and the related material, it is suggested that new commentary is provided and SZC Co. can respond accordingly. SZC Co has suggested to Natural England that they advise ExA, prior to examination close, whether there are any fundamental reason why the relevant licences would not be granted, even if formal LoNI are not available in this period. Discussions ongoing.	

			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. **August 2021** As outlined in our response to the ISH7 in July [REP5-160]. *"It is our understanding that for the proposed project this includes water voles, natterjack toads, bats, otters, great crested newts, badgers and Deptford Pink.* *As set out in our Relevant [RR-0878] and Written Representations [REP2-153], we advised the Applicant throughout pre-application that final draft licences for all relevant protected species should be submitted by them with or shortly after the submission of their Development Consent Order (DCO) application in May 2020. This was to ensure that the Examining Authority (ExA) has the certainty that is required in terms of Natural England reviewing each licence application and providing letters of no impediment (LoNIs) before any consent might be granted. We specifically created the LoNI process for this purpose to de-risk applications for developers in this regard. The advice given by the PINS Consents Service Unit in their Prospectus for developers document (page 8, Annex 2), which support developers in understanding the risks of not undertaking this process, states that "It is worth noting where developers choose to apply for non-planning consent later in the process, it may be*					

difficult to provide the Examining Authority with reassurances about the likelihood of obtaining them".

As outlined in our oral submission at ISH 7, Natural England started receiving the final draft protected species licence applications from the Applicant on the 9th July 2021 (water voles, Deptford Pink), and have also received an outline of when the Applicant intends on submitting the remaining applications to Natural England and the ExA as below:

Licence Title	***Proposed Submission Date to Natural England***	***Submission to ExA***
Water Vole Method Statement: Main Development Site	*9th July (issued)*	*Deadline 5*
Natterjack Toad: Main Development Site	*20th July*	*Deadline 5*
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Deptford Pink: Main Development Site	*9th July (issued)*	*Deadline 5*
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Water Vole: Two Village Bypass	*16th July*	*Deadline 5*
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Great Crested Newt: Northern Park and Ride	*27th August*	*Deadline 7*
Great Crested Newt: Sizewell Link Road	*27th August*	*Deadline 7*

			<table><tr><td>*Great Crested Newt: Rail*</td><td>*27th August*</td><td>*Deadline 7*</td></tr><tr><td>*Bat*</td><td>*27th August*</td><td>*Deadline 7*</td></tr></table> *As such, we have not yet had time to review and come to a conclusion on any of the applications and are therefore not in a position to issue any LoNIs to the ExA at this time.* *We do not have a statutory response time on this element of our licencing work but ordinarily would aim for 30 working days, although staff are currently operating at 45+ working days due to resource constraints. Applications typically require multiple rounds of drafts being submitted per species before they reach a stage that they are considered satisfactory for Natural England to reach a conclusion. Without pre-judging the applications, given the scale and complexity of the Sizewell C project it may be that our response following initial review is to request further information for some or all of them, after which the review process is repeated.* *We therefore wish to highlight that our conclusions on each licence application, and subsequent issuing of LoNIs to the ExA (if a favourable conclusion is reached), may not occur until close to or after the end of the examination period as currently scheduled (14th October 2021). As outlined in our oral submission at ISH 7, the LoNIs themselves do not take much time to prepare and issue once a favourable conclusion has been reached."* We note that we are still awaiting submissions for Great crested Newts and Bats. But to the best of our knowledge have received all other licenses which are currently under review.				
ASSOCIATED DEVELOPMENT SITE – Theberton Bypass (B1122)								
56	**ECOLOGY:** Impacts on protected species • Bats	Protected species' mitigation and compensation	**<u>Context and background</u>** This AD site supports a number of protected species as listed which will be impacted by the project.	**TBC**			The Theberton Bypass option no longer forms part of the proposals. A bypass around Theberton forms part of the Sizewell Link Road proposals and so is addressed above. **We suggest this row is deleted.**	N/A

	• GCN • Water voles	for Theberton Bypass impacts **(C) and (O)**	Natural England was not given the opportunity to review the complete up-to-date survey information for each of these species at the pre-application stage alongside the respective mitigation strategies. It has not therefore been possible for us to provide extensive comments on protected species mitigation to date. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.8, 4.3 (iii) and 4.4 (iii and iv)); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.19 and throughout Annex 2 (see comments under 4.3, 4.4 and Annex 3 (see comments under 7.4.78, 7.4.84, 7.5.3, 7.5.58 – 7.5.60, 7.5.65, 7.8.6, 7.9.6, Table 9.3 and Table 10.3); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, paragraphs 3.9.16 – 3.9.20, 4.5.26, 4.5.44, 4.5.48 – 4.5.51 and 4.8.3.4). We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. the protected species which should be included within ES Chapter 14: Terrestrial Ecology Ornithology was omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019).					

			We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** All baseline survey data for the project, covering all habitats and species likely to be affected, should be acceptable in terms of methodologies, coverage and age. The recent Chartered Institute of Ecology and Environmental Management (CIEEM) Advice note on the Lifespan of Ecological Reports and Surveys states that, for surveys which are more than three years old, "*The report is unlikely to still be valid and most, if not all, of the surveys are likely to need to be updated*". Where the ecological survey data to inform the various Sizewell C impact assessments are not in line with this, we advise that clear justification must be provided on how the data remain valid and robust enough to inform conclusions. Further detailed advice for Theberton Bypass protected species is outlined throughout Appendix III to this letter, but to summarise: • Please see comments for issue 56 above (SLR) which largely apply here too. **<u>Further comments on the DCO application, May 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. **August 2021** As outlined in our response to the ISH7 in July [REP5-160]. *"It is our understanding that for the proposed project this includes water voles, natterjack toads, bats, otters, great crested newts, badgers and Deptford Pink.* *As set out in our Relevant [RR-0878] and Written Representations [REP2-153], we advised the Applicant throughout pre-application that final draft licences for all relevant protected species should be submitted by them with or shortly after the submission of their Development Consent Order (DCO) application in May 2020. This was to ensure that the Examining Authority (ExA) has the certainty that is required in terms of Natural England reviewing each licence application and providing letters of no impediment (LoNIs) before any consent might be granted. We specifically created the LoNI process for this purpose to de-risk applications for developers in this regard. The advice given by the PINS Consents Service Unit in their Prospectus for developers document (page 8, Annex 2), which support developers in understanding the risks of not undertaking this process, states that "It is worth noting where developers choose to apply for non-planning consent later in the process, it may be difficult to provide the Examining Authority with reassurances about the likelihood of obtaining them".* *As outlined in our oral submission at ISH 7, Natural England started receiving the final draft protected species licence applications from the Applicant on the 9th July 2021 (water voles, Deptford Pink), and have also received an outline of when the Applicant intends on submitting the remaining applications to Natural England and the ExA as below:*				

Licence Title	***Proposed Submission Date to Natural England***	***Submission to ExA***
Water Vole Method Statement: Main Development Site	*9th July (issued)*	*Deadline 5*
Natterjack Toad: Main Development Site	*20th July*	*Deadline 5*
Badger: Main Development Site	*16th July*	*Deadline 5*
Deptford Pink: Main Development Site	*9th July (issued)*	*Deadline 5*
Otter: Main Development Site	*21st July*	*Deadline 5*
Water Vole: Two Village Bypass	*16th July*	*Deadline 5*
Badger: Two Village Bypass	*16th July*	*Deadline 5*
Great Crested Newt: Northern Park and Ride	*27th August*	*Deadline 7*
Great Crested Newt: Sizewell Link Road	*27th August*	*Deadline 7*
Great Crested Newt: Rail	*27th August*	*Deadline 7*
Bat	*27th August*	*Deadline 7*

As such, we have not yet had time to review and come to a conclusion on any of the applications and are therefore not in a position to issue any LoNIs to the ExA at this time.

			We do not have a statutory response time on this element of our licencing work but ordinarily would aim for 30 working days, although staff are currently operating at 45+ working days due to resource constraints. Applications typically require multiple rounds of drafts being submitted per species before they reach a stage that they are considered satisfactory for Natural England to reach a conclusion. Without pre-judging the applications, given the scale and complexity of the Sizewell C project it may be that our response following initial review is to request further information for some or all of them, after which the review process is repeated. *We therefore wish to highlight that our conclusions on each licence application, and subsequent issuing of LoNIs to the ExA (if a favourable conclusion is reached), may not occur until close to or after the end of the examination period as currently scheduled (14th October 2021). As outlined in our oral submission at ISH 7, the LoNIs themselves do not take much time to prepare and issue once a favourable conclusion has been reached."* **We note that we are still awaiting submissions for Great crested Newts and Bats. But to the best of our knowledge have received all other licenses which are currently under review.**					
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)**	**Context and background** This AD site supports a number of protected species as listed which will be impacted by the project. Potential impacts include: • Bats – Habitat loss • Badgers – habitat disturbance • Reptiles – habitat loss/disturbance • Breeding birds – direct disturbance Natural England was not given the opportunity to review the complete up-to-date survey information for each of these	**TBC**			Survey updates for the two P&R sites and the GRR were undertaken in 2020. The 2020 survey reports have been provided and have been taken into account in the ES addendum (January 2021). No substantive changes to the original assessments were required in relation to these baseline updates. Further surveys are being undertaken for all Associated Development sites in winter 20/21 for wintering birds (to address previous stakeholder comments) and in Spring 2021 for great crested newts (populations in ponds where previously recorded) and bat roosts (tree climb inspections where roost potential was detected in 2019). . The bat roost survey update report was submitted to examination and the great crested newt population survey report will be	Protected Species Licensing as relevant

			species at the pre-application stage alongside the respective mitigation strategies. It has not therefore been possible for us to provide extensive comments on protected species mitigation to date. We have advised EDF Energy on this issue a throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.8, 4.3 (iii) and 4.4 (iii and iv)); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.19 and throughout Annex 2 (see comments under 4.3, 4.4 and Annex 3 (see comments under 7.4.78, 7.4.84, 7.5.3, 7.5.58 – 7.5.60, 7.5.65, 7.8.6, 7.9.6, Table 9.3 and Table 10.3); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, paragraphs 3.9.16 – 3.9.20, 4.5.26, 4.5.44, 4.5.48 – 4.5.51 and 4.6.19.3). We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. the protected species which should be included within ES Chapter 14: Terrestrial Ecology Ornithology was omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission.				submitted at Deadline 7. Both are used to support the licensing approach but neither change the conclusions of the ES In summary, we do not consider there to be shortcomings in survey and certainly none that would alter the conclusions of the assessments presented. **September 2021** A tranche of updated draft licences were submitted to Natural England in July 2021 and all remaining updated draft licences have now been submitted. Once Natural England have reviewed all of the updated licenses and the related material, it is suggested that new commentary is provided and SZC Co. can respond accordingly. SZC Co has suggested to Natural England that they advise ExA, prior to examination close, whether there are any fundamental reason why the relevant licences would not be granted, even if formal LoNI are not available in this period. Discussions ongoing.	

			Comment of the DCO application - Relevant Representations, September 2020 ***Further Information Required*** All baseline survey data for the project, covering all habitats and species likely to be affected, should be acceptable in terms of methodologies, coverage and age. The recent Chartered Institute of Ecology and Environmental Management (CIEEM) Advice note on the Lifespan of Ecological Reports and Surveys states that, for surveys which are more than three years old, "*The report is unlikely to still be valid and most, if not all, of the surveys are likely to need to be updated*". Where the ecological survey data to inform the various Sizewell C impact assessments are not in line with this, we advise that clear justification must be provided on how the data remain valid and robust enough to inform conclusions. Further detailed advice for Wickham Market Park and Ride protected species is outlined throughout Appendix III to this letter, but to summarise: • **Bats:** More than 3 years has lapsed since the bat surveys were undertaken, Natural England strongly advises the applicant undertakes up to date surveys of the site. It is essential to have up to date survey information on what species may utilise the site and the potential impacts any construction on the site poses to any species present. This is essential to informing on any protected species licences that the applicant needs to apply for. • **Badgers:** If any badger setts or entrances are discovered on the site, the ECoW should be contacted to come out and survey the hole, any construction work in the meantime should stop immediately. If a badger sett and any entrance is confirmed, then a Protected species licence needs to be obtained from Natural England. Natural England recommends that the applicant undertakes a more recent walk over survey of the site for badger activity, given the close proximity of a main badger sett to the site boundary – this should be undertaken prior to					

			any construction taking place. If there is any badger activity found, then the applicant will need to apply for a European Protected Species Licence. • **Reptiles:** Whilst most of the site is considered sub-optimal for reptiles across the development site. The arable edges, where there is hedgerows and around pond 59 have potential for reptiles. The applicant should consider a phased vegetation clearance to encourage any reptiles that may be present on the site to move off the site. • **Birds:** The bird surveys data is currently more than 3 years old, Natural England expects all survey data to be a maximum of 3 years of age. Once the applicant updates the bird surveys for the site, the IEF for overwintering and breeding birds will need to revaluated based on the results of the recent survey data to ensure they are scoped in or out accordingly. **<u>Further comments on the DCO application, May 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. **August 2021** As outlined in our response to the ISH7 in July [REP5-160]. *"It is our understanding that for the proposed project this includes water voles, natterjack toads, bats, otters, great crested newts, badgers and Deptford Pink.* *As set out in our Relevant [RR-0878] and Written Representations [REP2-153], we advised the Applicant throughout pre-application that final draft licences for all relevant protected species should be submitted by them with or shortly after the submission of their Development Consent Order (DCO) application in May 2020. This was to ensure that the Examining Authority (ExA) has the certainty that is required in terms of Natural England reviewing each licence application and providing letters of no impediment (LoNIs) before any consent might be granted. We specifically created the LoNI process for this purpose to de-risk applications for developers in this regard. The advice given by the PINS Consents Service Unit in their Prospectus for developers document (page 8, Annex 2), which support developers in understanding the risks of not undertaking this process, states that "It is worth noting where developers choose to apply for non-planning consent later in the process, it may be difficult to provide the Examining Authority with reassurances about the likelihood of obtaining them".* *As outlined in our oral submission at ISH 7, Natural England started receiving the final draft protected species licence applications from the Applicant on the 9th July 2021 (water voles, Deptford Pink), and have also received an outline of when the Applicant intends on submitting the remaining applications to Natural England and the ExA as below:* ***Licence Title*** | ***Proposed Submission Date to Natural England*** | ***Submission to ExA***				

			Water Vole Method Statement: Main Development Site	*9th July (issued)*	*Deadline 5*					
			Natterjack Toad: Main Development Site	*20th July*	*Deadline 5*					
			Badger: Main Development Site	*16th July*	*Deadline 5*					
			Deptford Pink: Main Development Site	*9th July (issued)*	*Deadline 5*					
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			Great Crested Newt: Sizewell Link Road	*27th August*	*Deadline 7*					
			Great Crested Newt: Rail	*27th August*	*Deadline 7*					
			Bat	*27th August*	*Deadline 7*					
			As such, we have not yet had time to review and come to a conclusion on any of the applications and are therefore not in a position to issue any LoNIs to the ExA at this time. *We do not have a statutory response time on this element of our licencing work but ordinarily would aim for 30 working days, although staff are currently operating at 45+ working days due to resource constraints. Applications typically require multiple rounds of drafts being submitted per species before they reach a stage that they are considered satisfactory for Natural England to reach a conclusion. Without pre-judging the applications, given the scale and*							

			complexity of the Sizewell C project it may be that our response following initial review is to request further information for some or all of them, after which the review process is repeated. *We therefore wish to highlight that our conclusions on each licence application, and subsequent issuing of LoNIs to the ExA (if a favourable conclusion is reached), may not occur until close to or after the end of the examination period as currently scheduled (14th October 2021). As outlined in our oral submission at ISH 7, the LoNIs themselves do not take much time to prepare and issue once a favourable conclusion has been reached."* **We note that we are still awaiting submissions for Great crested Newts and Bats. But to the best of our knowledge have received all other licenses which are currently under review.**					
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>Context and background</u>** This AD site supports a number of protected species as listed which will be impacted by the project. Potential impacts include: • Bat – Habitat loss • GCN – direct disturbance Natural England was not given the opportunity to review the complete up-to-date survey information for each of these species at the pre-application stage alongside the respective mitigation strategies. It has not therefore been possible for us to provide extensive comments on protected species mitigation to date. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008:	**TBC**			Survey updates for the two P&R sites and the GRR were undertaken in 2020. The 2020 survey reports have been provided and have been taken into account in the ES addendum (January 2021). No substantive changes to the original assessments were required in relation to these baseline updates. Further surveys are being undertaken for all Associated Development sites in winter 20/21 for wintering birds (to address previous stakeholder comments) and in Spring 2021 for great crested newts (populations in ponds where previously recorded) and bat roosts (tree climb inspections where roost potential was detected in 2019). The bat roost survey update report was submitted to examination and the great crested newt population survey report will be submitted at Deadline 7. Both are used to support the licensing approach but neither change the conclusions of the ES In summary, we do not consider there to be shortcomings in survey and certainly none that would alter the conclusions of the assessments presented.	Protected Species Licensing as relevant

			• Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.8, 4.3 (iii) and 4.4 (iii and iv)); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.19 and throughout Annex 2 (see comments under 4.3, 4.4 and Annex 3 (see comments under 7.4.78, 7.4.84, 7.5.3, 7.5.58 – 7.5.60, 7.5.65, 7.8.6, 7.9.6, Table 9.3 and Table 10.3); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, paragraphs 3.9.16 – 3.9.20, 4.5.26, 4.5.44, 4.5.48 – 4.5.51 and 4.6.16.4). We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. the protected species which should be included within ES Chapter 14: Terrestrial Ecology Ornithology was omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required*** All baseline survey data for the project, covering all habitats and species likely to be affected, should be acceptable in terms of methodologies, coverage and age. The recent				The finalisation of the details of the great crested newt mitigation approach at Darsham will be through the submission of the draft protected species for this species, to be submitted shortly. A parallel District Level Licence Inquiry will also be submitted. **September 2021** A tranche of updated draft licences were submitted to Natural England in July 2021 and all remaining updated draft licences have now been submitted. Once Natural England have reviewed all of the updated licenses and the related material, it is suggested that new commentary is provided and SZC Co. can respond accordingly. SZC Co has suggested to Natural England that they advise ExA, prior to examination close, whether there are any fundamental reason why the relevant licences would not be granted, even if formal LoNI are not available in this period. Discussions ongoing.	

			Chartered Institute of Ecology and Environmental Management (CIEEM) Advice note on the Lifespan of Ecological Reports and Surveys states that, for surveys which are more than three years old, "*The report is unlikely to still be valid and most, if not all, of the surveys are likely to need to be updated*". Where the ecological survey data to inform the various Sizewell C impact assessments are not in line with this, we advise that clear justification must be provided on how the data remain valid and robust enough to inform conclusions. Further detailed advice for the Darsham Park and Ride is outlined throughout Appendix III to this letter, but to summarise: • **Bats:** Further consideration should be given to the placement of the buffer to avoid disturbance. 2015 surveys should be updated in advance of works • **GCN:** Natural England advises the applicant to consider the placement of the amphibian fencing. The amphibian fencing needs to prevent access onto the construction site by great crested newts in order to prevent any incidental injury or death. The applicant would need to obtain a European Protected Species Mitigation Licence in order to install the fencing. The fencing should enclose the entire development site, to prevent any newts venturing there. If it is not possible then the applicant should consider turn backs into the fencing in order to prevent newts coming onto the site. As it stands the development of the park and ride results in a severance of connectivity for great crested newts from pond 78 to pond 101. Natural England strongly advises to consider the design of mitigation to enable GCN to access the wider area. Any culverts or tunnels placed are only effective with directional fencing ensuring any newts are guided towards the tunnel. Another success factor comes from the either side of the tunnel having a water body within 100m of each entrance of the tunnel. The applicant should consider other options should as dropped curbs and offsetting gully pots to create GCN crossing points and linking these areas up using vegetation and hedgerows.					

			<u>Further comments on the DCO application, May 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. **August 2021** As outlined in our response to the ISH7 in July [REP5-160]. *"It is our understanding that for the proposed project this includes water voles, natterjack toads, bats, otters, great crested newts, badgers and Deptford Pink.* *As set out in our Relevant [RR-0878] and Written Representations [REP2-153], we advised the Applicant throughout pre-application that final draft licences for all relevant protected species should be submitted by them with or shortly after the submission of their Development Consent Order (DCO) application in May 2020. This was to ensure that the Examining Authority (ExA) has the certainty that is required in terms of Natural England reviewing each licence application and providing letters of no impediment (LoNIs) before any consent might be granted. We specifically created the LoNI process for this purpose to de-risk applications for*				

developers in this regard. The advice given by the PINS Consents Service Unit in their Prospectus for developers document (page 8, Annex 2), which support developers in understanding the risks of not undertaking this process, states that "It is worth noting where developers choose to apply for non-planning consent later in the process, it may be difficult to provide the Examining Authority with reassurances about the likelihood of obtaining them".

As outlined in our oral submission at ISH 7, Natural England started receiving the final draft protected species licence applications from the Applicant on the 9th July 2021 (water voles, Deptford Pink), and have also received an outline of when the Applicant intends on submitting the remaining applications to Natural England and the ExA as below:

Licence Title	***Proposed Submission Date to Natural England***	***Submission to ExA***
Water Vole Method Statement: Main Development Site	*9th July (issued)*	*Deadline 5*
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Great Crested Newt: Northern Park and Ride	*27th August*	*Deadline 7*
Great Crested Newt: Sizewell Link Road	*27th August*	*Deadline 7*
Great Crested Newt: Rail	*27th August*	*Deadline 7*
Bat	*27th August*	*Deadline 7*

As such, we have not yet had time to review and come to a conclusion on any of the applications and are therefore not in a position to issue any LoNIs to the ExA at this time.

We do not have a statutory response time on this element of our licencing work but ordinarily would aim for 30 working days, although staff are currently operating at 45+ working days due to resource constraints. Applications typically require multiple rounds of drafts being submitted per species before they reach a stage that they are considered satisfactory for Natural England to reach a conclusion. Without pre-judging the applications, given the scale and complexity of the Sizewell C project it may be that our response following initial review is to request further information for some or all of them, after which the review process is repeated.

We therefore wish to highlight that our conclusions on each licence application, and subsequent issuing of LoNIs to the ExA (if a favourable conclusion is reached), may not occur until close to or after the end of the examination period as currently scheduled (14th October 2021). As outlined in our oral submission at ISH 7, the LoNIs themselves do not take much time to prepare and issue once a favourable conclusion has been reached."

We note that we are still awaiting submissions for Great crested Newts and Bats. But to the best of our knowledge have received all other licenses which are currently under review.

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)**	**Context and background** This AD site supports a number of protected species as listed which will be impacted by the project. Natural England was not given the opportunity to review the complete up-to-date survey information for each of these species at the pre-application stage alongside the respective mitigation strategies. It has not therefore been possible for us to provide extensive comments on protected species mitigation to date. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.8, 4.3 (iii) and 4.4 (iii and iv)); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.19 and throughout Annex 2 (see comments under 4.3, 4.4 and Annex 3 (see comments under 7.4.78, 7.4.84, 7.5.3, 7.5.58 – 7.5.60, 7.5.65, 7.8.6, 7.9.6, Table 9.3 and Table 10.3); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, paragraphs 3.9.16 – 3.9.20, 4.5.26, 4.5.44, 4.5.48 – 4.5.51 and 4.6.20.2). We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did	**TBC**			We can confirm that a RAMS approach to the works as suggested by Natural England would follow for these works for great crested newts. A number of RAMS for greater crested newts are included for other sites as appendices to the ES and can be extended to include the other highway improvements work. Discussions ongoing.	Commitment to use a RAMS approach at these locations

			not reflect our previous advice in this regard (i.e. the protected species which should be included within ES Chapter 14: Terrestrial Ecology Ornithology was omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **Comment of the DCO application - Relevant Representations, September 2020** ***Further Information Required*** All baseline survey data for the project, covering all habitats and species likely to be affected, should be acceptable in terms of methodologies, coverage and age. The recent Chartered Institute of Ecology and Environmental Management (CIEEM) Advice note on the Lifespan of Ecological Reports and Surveys states that, for surveys which are more than three years old, "*The report is unlikely to still be valid and most, if not all, of the surveys are likely to need to be updated*". Where the ecological survey data to inform the various Sizewell C impact assessments are not in line with this, we advise that clear justification must be provided on how the data remain valid and robust enough to inform conclusions. Further detailed advice on Other Highway Improvements and protected species is outlined throughout Appendix III to this letter, but to summarise: • **GCN:** Natural England acknowledges that no access was granted for surveys on P005 and P161 however the HIS surveys were results were 'Good' for both water bodies. Natural England advises the applicant to take caution when making ruling out GCN presence on the site. The habitats within the proposed site although are arable and offer little benefit to GCN apart from areas of foraging when ploughed, there's habitat present within the wider area (500m). The habitat within the wider area are small pockets of woodland, with other waterbodies present within 500m. The road (Felixstowe Road)				

			and the railway line offer partial barriers of dispersal to GCN across the wider area. Natural England recommends the applicant working under a Reasonable Avoidance Measures (RAMS) method statement to work under as a precaution due to lack of access to the ponds (P005 and P161) for survey. **<u>Further comments on the DCO application, May 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. **August 2021** As outlined in our response to the ISH7 in July [REP5-160]. *"It is our understanding that for the proposed project this includes water voles, natterjack toads, bats, otters, great crested newts, badgers and Deptford Pink.* *As set out in our Relevant [RR-0878] and Written Representations [REP2-153], we advised the Applicant throughout pre-application that final draft licences for all relevant protected species should be submitted by them with*				

			or shortly after the submission of their Development Consent Order (DCO) application in May 2020. This was to ensure that the Examining Authority (ExA) has the certainty that is required in terms of Natural England reviewing each licence application and providing letters of no impediment (LoNIs) before any consent might be granted. We specifically created the LoNI process for this purpose to de-risk applications for developers in this regard. The advice given by the PINS Consents Service Unit in their Prospectus for developers document (page 8, Annex 2), which support developers in understanding the risks of not undertaking this process, states that "It is worth noting where developers choose to apply for non-planning consent later in the process, it may be difficult to provide the Examining Authority with reassurances about the likelihood of obtaining them". *As outlined in our oral submission at ISH 7, Natural England started receiving the final draft protected species licence applications from the Applicant on the 9th July 2021 (water voles, Deptford Pink), and have also received an outline of when the Applicant intends on submitting the remaining applications to Natural England and the ExA as below:*					

Licence Title	***Proposed Submission Date to Natural England***	***Submission to ExA***
Water Vole Method Statement: Main Development Site	*9th July (issued)*	*Deadline 5*
Natterjack Toad: Main Development Site	*20th July*	*Deadline 5*
Badger: Main Development Site	*16th July*	*Deadline 5*
Deptford Pink: Main Development Site	*9th July (issued)*	*Deadline 5*
Otter: Main Development Site	*21st July*	*Deadline 5*

Water Vole: Two Village Bypass	*16th July*	*Deadline 5*
Badger: Two Village Bypass	*16th July*	*Deadline 5*
Great Crested Newt: Northern Park and Ride	*27th August*	*Deadline 7*
Great Crested Newt: Sizewell Link Road	*27th August*	*Deadline 7*
Great Crested Newt: Rail	*27th August*	*Deadline 7*
Bat	*27th August*	*Deadline 7*

As such, we have not yet had time to review and come to a conclusion on any of the applications and are therefore not in a position to issue any LoNIs to the ExA at this time.

We do not have a statutory response time on this element of our licencing work but ordinarily would aim for 30 working days, although staff are currently operating at 45+ working days due to resource constraints. Applications typically require multiple rounds of drafts being submitted per species before they reach a stage that they are considered satisfactory for Natural England to reach a conclusion. Without pre-judging the applications, given the scale and complexity of the Sizewell C project it may be that our response following initial review is to request further information for some or all of them, after which the review process is repeated.

We therefore wish to highlight that our conclusions on each licence application, and subsequent issuing of LoNIs to the ExA (if a favourable conclusion is reached), may not occur until close to or after the end of the examination period as currently scheduled (14th October 2021). As outlined in our oral submission at ISH 7, the LoNIs themselves do not take much time to prepare and issue once a favourable conclusion has been reached."

We note that we are still awaiting submissions for Great crested Newts and Bats. But to the best of our

			knowledge have received all other licenses which are currently under review.					
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>Context and background</u>** This AD site supports a number of protected species as listed which will be impacted by the project. Potential impacts include: • Bat – Habitat loss and fragmentation • GCN – direct disturbance Natural England was not given the opportunity to review the complete up-to-date survey information for each of these species at the pre-application stage alongside the respective mitigation strategies. It has not therefore been possible for us to provide extensive comments on protected species mitigation to date. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.8, 4.3 (iii) and 4.4 (iii and iv)); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.19 and throughout Annex 2 (see comments under 4.3, 4.4 and Annex 3 (see comments under 7.4.78, 7.4.84, 7.5.3, 7.5.58 – 7.5.60, 7.5.65, 7.8.6, 7.9.6, Table 9.3 and Table 10.3); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March*	**TBC**			Survey updates for the two P&R sites and the GRR were undertaken in 2020. The 2020 survey reports have been provided and have been taken into account in the ES addendum (January 2021). No substantive changes to the original assessments were required in relation to these baseline updates. Further surveys are being undertaken for all Associated Development sites in winter 20/21 for wintering birds (to address previous stakeholder comments) and in Spring 2021 for great crested newts (populations in ponds where previously recorded) and bat roosts (tree climb inspections where roost potential was detected in 2019). The bat roost survey update report was submitted to examination at Deadline XX and the great crested newt population survey report will be submitted at Deadline 7. Both are used to support the licensing approach but neither change the conclusions of the ES. A parallel District Level Licence Inquiry for great crested newts will also be submitted. In summary, we do not consider there to be shortcomings in survey and certainly none that would alter the conclusions of the assessments presented. **September 2021** A tranche of updated draft licences were submitted to Natural England in July 2021 and all remaining updated draft licences have now been submitted. Once Natural England have reviewed all of the updated licenses and the related material, it is suggested that new commentary is provided and SZC Co. can respond accordingly. SZC Co has suggested to Natural England that they advise ExA, prior to examination close, whether there are any fundamental reason why the relevant licences	Protected Species Licensing as relevant

			2019 (our ref: 272181, dated 29th March 2019, paragraphs 3.9.16 – 3.9.20, 4.5.26, 4.5.44, 4.5.48 – 4.5.51 and 4.8.1.4 – 4.8.1.6). We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. the protected species which should be included within ES Chapter 14: Terrestrial Ecology Ornithology was omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **Comment of the DCO application - Relevant Representations, September 2020** ***Further Information Required*** All baseline survey data for the project, covering all habitats and species likely to be affected, should be acceptable in terms of methodologies, coverage and age. The recent Chartered Institute of Ecology and Environmental Management (CIEEM) Advice note on the Lifespan of Ecological Reports and Surveys states that, for surveys which are more than three years old, "*The report is unlikely to still be valid and most, if not all, of the surveys are likely to need to be updated*". Where the ecological survey data to inform the various Sizewell C impact assessments are not in line with this, we advise that clear justification must be provided on how the data remain valid and robust enough to inform conclusions. Further detailed advice on the Green Rail Route and protected species is outlined throughout Appendix III to this letter, but to summarise: • **Bats:** Insufficient information has been provided to enable an assessment method statement. It is recommended that Natural England pre submission screening service is used to enable us to fully assess				would not be granted, even if formal LoNI are not available in this period. Discussions ongoing.	

			and comment on proposals set out in a draft licence application. Bat Crossing points to be considered depending on results of further surveys**.** Additional surveys should be carried out where the route will bisect hedgerows or tree lines A number of trees to be lost have been assessed as having potential roost feature. Therefore activity surveys are required to determine roost status and species present. • **GCN:** Full population size class surveys were conducted for GCN within 500m of the site in 2014, whilst EDNA was undertaken in 2016. Since the survey data is older than 3 years old, Natural England recommends the surveys are updated to provide current information on the population sizes and presence of GCN across the site. Having current, up to date survey data is essential to understand the impacts the development proposes to the GCN population on the site and within 500m of the site boundary. If the applicant is to apply for a European Protected Species licence, then having survey data with a maximum age of 3 years is recommended. **<u>Further comments on the DCO application, May 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. **August 2021** As outlined in our response to the ISH7 in July [REP5-160]. *"It is our understanding that for the proposed project this includes water voles, natterjack toads, bats, otters, great crested newts, badgers and Deptford Pink.* *As set out in our Relevant [RR-0878] and Written Representations [REP2-153], we advised the Applicant throughout pre-application that final draft licences for all relevant protected species should be submitted by them with or shortly after the submission of their Development Consent Order (DCO) application in May 2020. This was to ensure that the Examining Authority (ExA) has the certainty that is required in terms of Natural England reviewing each licence application and providing letters of no impediment (LoNIs) before any consent might be granted. We specifically created the LoNI process for this purpose to de-risk applications for developers in this regard. The advice given by the PINS Consents Service Unit in their Prospectus for developers document (page 8, Annex 2), which support developers in understanding the risks of not undertaking this process, states that "It is worth noting where developers choose to apply for non-planning consent later in the process, it may be difficult to provide the Examining Authority with reassurances about the likelihood of obtaining them".* *As outlined in our oral submission at ISH 7, Natural England started receiving the final draft protected species licence applications from the Applicant on the 9th July 2021 (water voles, Deptford Pink), and have also received an outline of when the Applicant intends on submitting the remaining applications to Natural England and the ExA as below:*				

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As such, we have not yet had time to review and come to a conclusion on any of the applications and are therefore not in a position to issue any LoNIs to the ExA at this time.

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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>Context and background</u>** This AD site supports a number of protected species as listed which will be impacted by the project. Natural England was not given the opportunity to review the complete up-to-date survey information for each of these species at the pre-application stage alongside the respective mitigation strategies. It has not therefore been possible for us to provide extensive comments on protected species mitigation to date. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following	**TBC**			An extended Phase 1 survey of the route between Saxmundham and Leiston was undertaken in Spring 2021 to update the existing baseline and identify any potential licensing requirements. This report will be submitted to Examination at Deadline 7. In addition to this, eDNA and HSI surveys of nearby ponds were undertaken in accordance with the Network Rail approach to determine the licensing requirements for great crested newts. Population surveys were also undertaken as relevant. The main element of the required engineering work will be track laying and ballast replacement within the existing track bed. Whist the surveys proposed will inform any need for licensing, we do not consider that the survey results would alter the conclusions of the assessments presented, given the limited works required along this existing railway line.	Protected Species Licensing as relevant

			statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.8, 4.3 (iii) and 4.4 (iii and iv)); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.19 and throughout Annex 2 (see comments under 4.3, 4.4 and Annex 3 (see comments under 7.4.78, 7.4.84, 7.5.3, 7.5.58 – 7.5.60, 7.5.65, 7.8.6, 7.9.6, Table 9.3 and Table 10.3); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March 2019* (our ref: 272181, dated 29th March 2019, paragraphs 3.9.16 – 3.9.20, 4.5.26, 4.5.44, 4.5.48 – 4.5.51 and 4.8.2.3). We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. the protected species which should be included within ES Chapter 14: Terrestrial Ecology Ornithology was omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **<u>Comment of the DCO application - Relevant Representations, September 2020</u>** ***Further Information Required***				**September 2021** A tranche of updated draft licences were submitted to Natural England in July 2021 and all remaining updated draft licences have now been submitted. Once Natural England have reviewed all of the updated licenses and the related material, it is suggested that new commentary is provided and SZC Co. can respond accordingly. SZC Co has suggested to Natural England that they advise ExA, prior to examination close, whether there are any fundamental reason why the relevant licences would not be granted, even if formal LoNI are not available in this period. Discussions ongoing.	

			All baseline survey data for the project, covering all habitats and species likely to be affected, should be acceptable in terms of methodologies, coverage and age. The recent Chartered Institute of Ecology and Environmental Management (CIEEM) Advice note on the Lifespan of Ecological Reports and Surveys states that, for surveys which are more than three years old, "*The report is unlikely to still be valid and most, if not all, of the surveys are likely to need to be updated*". Where the ecological survey data to inform the various Sizewell C impact assessments are not in line with this, we advise that clear justification must be provided on how the data remain valid and robust enough to inform conclusions. Further detailed advice on the Other Rail Improvements and protected species is outlined throughout Appendix III to this letter, but to summarise: • Natural England strongly recommends the applicant undertakes an Extended phase 1 habitat survey of the site and identifies plants and habitats within the site and makes a note of any protected species. A desk survey is useful for providing background information of the site and identifying what may be present on the site, a Phase 1 habitat survey is needed to confirm the presence of any protected species/habitats on the site. Having survey data which informs on the status of any plants and habitats on the site is essential in understanding the impacts of the development and the impacts to any protected species on the site. • Natural England advises a review of the Important Ecological Features (IEFs) once survey data has been updated for GCN, bats, birds and badgers. It is essential the IEFs are updated to ensure the correct ones are scoped in or out to assess the impacts to the protected species on site and ensure there is adequate mitigation and compensation. • Natural England recommends bird surveys (breeding and wintering) are undertaken at the site to understand the species that utilise the site, this is essential in understanding the impact to the species				

			that may be present on the site. The information gathered from surveys is key to informing upon the methodology, and timings of any construction and to whether any mitigation and compensation is required due to the impacts. **<u>Further comments on the DCO application, May 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. **August 2021** As outlined in our response to the ISH7 in July [REP5-160]. *"It is our understanding that for the proposed project this includes water voles, natterjack toads, bats, otters, great crested newts, badgers and Deptford Pink.* *As set out in our Relevant [RR-0878] and Written Representations [REP2-153], we advised the Applicant throughout pre-application that final draft licences for all relevant protected species should be submitted by them with or shortly after the submission of their Development Consent*				

			Order (DCO) application in May 2020. This was to ensure that the Examining Authority (ExA) has the certainty that is required in terms of Natural England reviewing each licence application and providing letters of no impediment (LoNIs) before any consent might be granted. We specifically created the LoNI process for this purpose to de-risk applications for developers in this regard. The advice given by the PINS Consents Service Unit in their Prospectus for developers document (page 8, Annex 2), which support developers in understanding the risks of not undertaking this process, states that "It is worth noting where developers choose to apply for non-planning consent later in the process, it may be difficult to provide the Examining Authority with reassurances about the likelihood of obtaining them". *As outlined in our oral submission at ISH 7, Natural England started receiving the final draft protected species licence applications from the Applicant on the 9th July 2021 (water voles, Deptford Pink), and have also received an outline of when the Applicant intends on submitting the remaining applications to Natural England and the ExA as below:*					

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Bat	*27th August*	*Deadline 7*

As such, we have not yet had time to review and come to a conclusion on any of the applications and are therefore not in a position to issue any LoNIs to the ExA at this time.

We do not have a statutory response time on this element of our licencing work but ordinarily would aim for 30 working days, although staff are currently operating at 45+ working days due to resource constraints. Applications typically require multiple rounds of drafts being submitted per species before they reach a stage that they are considered satisfactory for Natural England to reach a conclusion. Without pre-judging the applications, given the scale and complexity of the Sizewell C project it may be that our response following initial review is to request further information for some or all of them, after which the review process is repeated.

We therefore wish to highlight that our conclusions on each licence application, and subsequent issuing of LoNIs to the ExA (if a favourable conclusion is reached), may not occur until close to or after the end of the examination period as currently scheduled (14th October 2021). As outlined in our oral submission at ISH 7, the LoNIs themselves do not take much time to prepare and issue once a favourable conclusion has been reached."

We note that we are still awaiting submissions for Great crested Newts and Bats. But to the best of our

			knowledge have received all other licenses which are currently under review.					
ASSOCIATED DEVELOPMENT SITE – Freight Management Facility								
62	**ECOLOGY:** Impacts on protected species • Bats • Breeding birds	Protected species' mitigation and compensation for freight management facility impacts **(C) and (O)**	**<u>Context and background</u>** This AD site supports a number of protected species as listed which will be impacted by the project. Potential impacts include: • Bat – Habitat loss • Breeding birds – habitat loss Natural England was not given the opportunity to review the complete up-to-date survey information for each of these species at the pre-application stage alongside the respective mitigation strategies. It has not therefore been possible for us to provide extensive comments on protected species mitigation to date. We have advised EDF Energy on this issue throughout our pre-application engagement, including on the following statutory consultations under Section 42 of the Planning Act 2008: • Natural England's response to the *Stage 1 Consultation: Initial Proposals and Options for Sizewell C Proposed Nuclear Development* (our ref: 71859, dated 6th February 2013, paragraphs 3.8, 4.3 (iii) and 4.4 (iii and iv)); • Natural England's response to the *Sizewell C – Stage 2 Consultation: 23 November 2016 to 3 February 2017* (our ref: 202551, dated 2nd February 2017, paragraphs 3.19 and throughout Annex 2 (see comments under 4.3, 4.4 and Annex 3 (see comments under 7.4.78, 7.4.84, 7.5.3, 7.5.58 – 7.5.60, 7.5.65, 7.8.6, 7.9.6, Table 9.3 and Table 10.3); • Natural England's response to the *Sizewell C – Stage 3 Consultation: 4th January 2019 to 29th March*	**TBC**			The FMF was surveyed in 2019 and the surveys are therefore up to date. Further surveys are being undertaken for all Associated Development sites in winter 20/21 for wintering birds (to address previous stakeholder comments) and in Spring 2021 for great crested newts (populations in ponds where previously recorded) and bat roosts (tree climb inspections where roost potential was detected in 2019). The bat roost survey update report was submitted to examination at Deadline XX and the great crested newt population survey report will be submitted at Deadline 7. Both are used to support the licensing approach but neither change the conclusions of the ES. A parallel District Level Licence Inquiry for great crested newts will also be submitted. The very limited semi-natural habitats on site and the retention of the boundary features indicate that a full breeding bird survey is unwarranted and the approach to baseline presented in the ES and the subsequent assessment is considered proportionate. In summary, we do not consider there to be shortcomings in survey and certainly none that would alter the conclusions of the assessments presented. The points made in relation to bats and lighting are noted, and measures to limit light spill would be incorporated in lighting design in the same way that has been achieved for the two park and ride sites. **September 2021** A tranche of updated draft licences were submitted to Natural England in July 2021 and all remaining updated draft licences have now been submitted.	Protected Species Licensing as relevant

			2019 (our ref: 272181, dated 29th March 2019, paragraphs 3.9.16 – 3.9.20, 4.5.26, 4.5.44, 4.5.48 – 4.5.51 and 4.7.2.4). We have further reiterated this advice through pre-application workshops and document reviews facilitated by EDF Energy. Despite this, the documents which were circulated to Natural England in December 2019 as part of EDF Energy's *Sizewell C – Stakeholder Review Process (draft DCO submission)* did not reflect our previous advice in this regard (i.e. the protected species which should be included within ES Chapter 14: Terrestrial Ecology Ornithology was omitted from review) which we again flagged in our response (our ref: 299823, dated 9th December 2019). We do not therefore consider that this issue was addressed by EDF Energy in sufficient detail at pre-application and we are seeing key information in this regard for the first time at formal submission. **Comment of the DCO application - Relevant Representations, September 2020** ***Further Information Required*** All baseline survey data for the project, covering all habitats and species likely to be affected, should be acceptable in terms of methodologies, coverage and age. The recent Chartered Institute of Ecology and Environmental Management (CIEEM) Advice note on the Lifespan of Ecological Reports and Surveys states that, for surveys which are more than three years old, "*The report is unlikely to still be valid and most, if not all, of the surveys are likely to need to be updated*". Where the ecological survey data to inform the various Sizewell C impact assessments are not in line with this, we advise that clear justification must be provided on how the data remain valid and robust enough to inform conclusions. Further detailed advice on the FMF and protected species is outlined throughout Appendix III to this letter, but to summarise our key concerns: • **Bats:** Natural England supports the applicant on wanting to prevent light spill into adjacent habitat. Natural England recommends the applicant considers other additional lighting options to prevent				Once Natural England have reviewed all of the updated licenses and the related material, it is suggested that new commentary is provided and SZC Co. can respond accordingly. SZC Co has suggested to Natural England that they advise ExA, prior to examination close, whether there are any fundamental reason why the relevant licences would not be granted, even if formal LoNI are not available in this period. Discussions ongoing.	

			light spill into any adjacent habitats and limit the disturbance and severance of bat commuting and foraging routes. The applicant should consider bat friendly lighting, hoods for the lights to prevent spill, low to the ground lighting and coloured filters to attached to any lighting hoods so the light spill is a different colour and less impactful to bats. • **Breeding birds:** Natural England acknowledges that the applicant has only undertaken a desk study of the site for ornithology. Desk studies are useful to providing a background to the site and are useful supplementary records however there have been no ornithological surveys undertaken on the site. With the habitat being mostly arable and the presence of hedgerows surrounding the site there is habitat on the site which is suitable for a number of bird species. Natural England strongly advises that ornithological surveys are undertaken at the site to determine the impacts of the development proposals to birds. The survey effort should cover the following periods: Breeding bird season (March – July), Wintering bird season (November – March) and Passage birds (March – October). **<u>Further comments on the DCO application, May 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. **August 2021** As outlined in our response to the ISH7 in July [REP5-160]. *"It is our understanding that for the proposed project this includes water voles, natterjack toads, bats, otters, great crested newts, badgers and Deptford Pink.* *As set out in our Relevant [RR-0878] and Written Representations [REP2-153], we advised the Applicant throughout pre-application that final draft licences for all relevant protected species should be submitted by them with or shortly after the submission of their Development Consent Order (DCO) application in May 2020. This was to ensure that the Examining Authority (ExA) has the certainty that is required in terms of Natural England reviewing each licence application and providing letters of no impediment (LoNIs) before any consent might be granted. We specifically created the LoNI process for this purpose to de-risk applications for developers in this regard. The advice given by the PINS Consents Service Unit in their Prospectus for developers document (page 8, Annex 2), which support developers in understanding the risks of not undertaking this process, states that "It is worth noting where developers choose to apply for non-planning consent later in the process, it may be difficult to provide the Examining Authority with reassurances about the likelihood of obtaining them".* *As outlined in our oral submission at ISH 7, Natural England started receiving the final draft protected species licence applications from the Applicant on the 9th July 2021 (water voles, Deptford Pink), and have also received an outline of when the Applicant intends on submitting the remaining applications to Natural England and the ExA as below:* ***Licence Title*** | ***Proposed Submission Date to*** | ***Submission to ExA***				

	Natural England	
Water Vole Method Statement: Main Development Site	*9th July (issued)*	*Deadline 5*
Natterjack Toad: Main Development Site	*20th July*	*Deadline 5*
Badger: Main Development Site	*16th July*	*Deadline 5*
Deptford Pink: Main Development Site	*9th July (issued)*	*Deadline 5*
Otter: Main Development Site	*21st July*	*Deadline 5*
Water Vole: Two Village Bypass	*16th July*	*Deadline 5*
Badger: Two Village Bypass	*16th July*	*Deadline 5*
Great Crested Newt: Northern Park and Ride	*27th August*	*Deadline 7*
Great Crested Newt: Sizewell Link Road	*27th August*	*Deadline 7*
Great Crested Newt: Rail	*27th August*	*Deadline 7*
Bat	*27th August*	*Deadline 7*

As such, we have not yet had time to review and come to a conclusion on any of the applications and are therefore not in a position to issue any LoNIs to the ExA at this time.

We do not have a statutory response time on this element of our licencing work but ordinarily would aim for 30 working days, although staff are currently operating at 45+ working days due to resource constraints. Applications typically require multiple rounds of drafts being submitted per species

			before they reach a stage that they are considered satisfactory for Natural England to reach a conclusion. Without pre-judging the applications, given the scale and complexity of the Sizewell C project it may be that our response following initial review is to request further information for some or all of them, after which the review process is repeated. *We therefore wish to highlight that our conclusions on each licence application, and subsequent issuing of LoNIs to the ExA (if a favourable conclusion is reached), may not occur until close to or after the end of the examination period as currently scheduled (14th October 2021). As outlined in our oral submission at ISH 7, the LoNIs themselves do not take much time to prepare and issue once a favourable conclusion has been reached."* **We note that we are still awaiting submissions for Great crested Newts and Bats. But to the best of our knowledge have received all other licenses which are currently under review.**					

Appendix I: Natural England's risk rating and associated colour coding system as applied throughout the SoCG

Natural England's Comment	Risk
Red Natural England considers that unless these issues are resolved it will have to advise that (in relation to any one of them, and as appropriate) it is not yet possible to ascertain that the project will not: • Have adverse effects on the integrity of internationally designated SAC, SPA or Ramsar sites; • Have adverse effects on European and/or nationally protected species • Have adverse effects on the cited features of nationally designated SSSIs; • Have adverse effects on priority habitats and species; • Otherwise comply fully with the Environmental Impact Assessment requirements, in particular with regards impacts on ancient woodland • Be detrimental to the conservation of the wildlife and beauty the Suffolk Coast and Heaths AONB **and/or;** • Have adverse effects on the use and enjoyment of the ECP That is unless the following are satisfactorily provided: • New/updated baseline data; • Significant design changes; and/or • Significant mitigation and/or compensation measures; Natural England consider that issues given Red status are sufficiently complex, or require the provision of so much outstanding information, that there is a strong possibility of them not being resolved during examination, and respectfully suggests that they be addressed beforehand.	
Amber Natural England considers that unless these issues are resolved it will have to advise that (in relation to any one of them, and as appropriate) it is not yet possible to ascertain that the project will not: • Have adverse effects on the integrity of internationally designated SAC, SPA or Ramsar sites; • Have adverse effects on European and/or nationally protected species • Have adverse effects on the cited features of nationally designated SSSIs; • Have adverse effects on priority habitats and species; • Otherwise comply fully with the Environmental Impact Assessment requirements, in particular with regards impacts on ancient woodland • Be detrimental to the conservation of the wildlife and beauty the Suffolk Coast and Heaths AONB **and/or;** • Have adverse effects on the use and enjoyment of the ECP That is unless the following are satisfactorily provided: • New/updated baseline data; • Significant design changes; and/or • Significant mitigation and/or compensation measures; Natural England considers that if these issues are not addressed or resolved by the end of examination then they would become a Red risk as set out above. Likely to relate to fundamental issues with assessment or methodology which could be rectified; preferably before examination.	
Yellow These are issues/comments where Natural England does not yet completely agree with the Applicant's position or approach. However, we are satisfied for this particular project that they do not make a material difference to our advice or the outcome of the decision-making process. It should be noted by Interested Parties that just because these issues/comments are not raised as part of our Relevant Representations in this instance it should not be understood or inferred that in other cases or circumstances Natural England will take this approach. Furthermore, these may become issues should further evidence be presented.	

Green Natural England supports the Applicant's approach but considers that the respective mitigation/compensation as proposed must be fully secured through the DCO.	