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**By e-mail only**

28/03/2019

Dear Mr Crawford,

**RE: Sizewell C Nuclear Power Station Stage 3 Pre-Application Consultation**

Thank you for consulting us on the Stage 3 Pre-Application consultation for the proposed Sizewell C nuclear power station. Suffolk Wildlife Trust is the county's leading nature conservation organisation. We are a registered charity, set up in 1961 to safeguard the wildlife of Suffolk by managing nature reserves, influencing the management of land and water, recording sites of wildlife value, campaigning on wildlife issues and inspiring people to take action for wildlife.

We previously commented on this proposal at the Stage 1 consultation in 2013 and the Stage 2 consultation in 2017. During both previous consultations we expressed our disappointment and concern about the lack of information made available. Whilst we acknowledge that some areas of additional detail and clarification are provided as part of this Stage 3 consultation and the format has been updated to reflect that the consultation presents Preliminary Environmental Information (PEI), we retain our serious disappointment and concern about the continued limited nature of the information being presented. Insufficient detail on the scope and scale of the development has severely hampered the making of a robust consideration of the proposal. Notwithstanding this, the Trust wishes to make the following comments on the proposals and information included within the Stage 3 consultation documentation:

**1. The principle of new nuclear development at Sizewell**

The National Policy Statement (NPS) for Nuclear Power Generation (EN-6) identifies that Sizewell is a potentially suitable location for the deployment of a new nuclear power station. The impact assessment (NPS for Nuclear Power Generation (EN-6) Volume II – Annexe C) which supported the inclusion of this site within the NPS (EN-6) identified a number of potentially significant environmental issues, including significant adverse impacts on sites designated for their European and UK nature conservation importance, which must be addressed and resolved in advance of any decision on the proposed power station. We do not consider that the information included within the Stage 3 consultation justifies the design of the proposed nuclear power station at Sizewell or adequately addresses the issues raised in the impact assessment.

We also note that the 'Project Vision' (Volume 1, paragraph 1.1.4) remains as it was at the time of the Stage 2 consultation. We must therefore reiterate the concerns we set out at that time that although the Vision recognises that the site is within an environmentally sensitive location, the statement that "*EDF Energy will ensure that the power station is designed and delivered in such a way as to limit any adverse effects on the environment and on local communities as far is reasonably practical*" is of significant concern. Given the environmental importance of the area, significant impacts must be avoided; mitigated, or as a last resort compensated. We consider that it is not acceptable to only follow these steps "*as far is reasonably*

*practical*". The NPS identifies the broad ecological difficulties associated with this scheme, however we do not consider that these difficulties are adequately reflected in the consultation documents.

Consultation document Volume 1, Table 7.2 sets out the Design Principles and Brief for the project. We are concerned that Principle 8 (Environmental Legislation) states that the "*development will be designed having regard to best practice*" and that "*best environmental practice will be taken into account*". We do not consider that following best practice should be an aspiration for this project's design and assessment, it should be the minimum level which is met. We are also concerned by the wording of Design Principle 10 (Biodiversity) which states that "*where likely significant effects cannot be avoided or reduced then mitigation measures will be applied, as necessary*". Whilst this recognises the first two steps of the mitigation hierarchy (avoidance and mitigation), no reference is made to the use of compensation measures where mitigation is not possible. This is contrary to NPS EN-6 which recognises that the compensation step in the hierarchy forms part of the assessment of residual impacts from the proposal (e.g. section C.8.63), particularly in relation to non-creatable habitats. Principles relating to this approach were set out in the Joint Local Authority Group (JLAG) Sizewell C Ecology Principles (January 2014).

In addition to the above, we note that point 10d in Table 7.2 states that the Design Brief will seek to minimise land take from the Site of Special Scientific Interest (SSSI). It appears that the proposed SSSI land take has increased from 4.6Ha at Stage 1, to between 5.04Ha and 5.55Ha at Stage 2, to 6.06Ha permanent loss (paragraph 7.4.112) and an estimated 3.2Ha 'temporary' loss (estimated from Figure 7.29 as no amount stated in the consultation documents) at Stage 3. We remain unconvinced that any loss of SSSI has been adequately justified in any of the consultation documents to date and remain extremely concerned about the direct and indirect impacts that would arise from the development which would result in the proposed loss. Whilst Figures 7.28 and 7.29 in Volume 1 show the changes in SSSI loss to platform construction between Stage 2 and Stage 3, and paragraph 7.4.112 states that "*essential requirements mean that a small proportion of the SSSI will be permanently lost*", there does not appear to be any adequate justification for either the increases in the areas to be lost or for the overall loss. Please find further detailed comments relating to this in section 3 below.

**1.1 Imperative Reasons of Overriding Public Interest (IROPI)**

With regard to paragraph 3.3.8 of consultation document Volume 1 which states that the case for (IROPI) is made in section C.8.57 of NPS EN-6 Annex C, it must be noted that EN-6 Annex A (section A.6.7) states that:

"*The Government's findings in respect of Article 6(4) of the Habitats Directive and this NPS do not automatically transfer directly to individual projects and the Nuclear NPS does not in any way reduce the duty on the IPC now (PINS) to fulfil the legal requirements of the Habitats Directive*."

It is therefore essential that this proposal is fully assessed under the requirements the Conservation of Habitats and Species Regulations (2017), which transpose the requirements of the Habitats Directive into UK law. The proposed development cannot be considered to meet the requirements of IROPI based on the conclusions of the NPS alone.

**2. Presentation of the Stage 3 Consultation**

Whilst paragraph 1.5.1 of consultation document Volume 1 states that this consultation is in accordance with the Statement of Community Consultation agreed with Suffolk Coastal District Council and Suffolk County Council, as we set out in our Stage 2 consultation response, we have significant concerns that all three of the public consultations undertaken to date lack sufficient information to make them worthwhile. We are again very disappointed with the level of ecological information and assessment included with this consultation and feel that this significantly hampers stakeholders and interested parties in making their responses.

To make robust and accurate assessments of the likely environmental impacts of this proposal a much greater level of detail must be made available to interested parties. Whilst paragraph 1.5.5 identifies that "*as part of the DCO process PINS will encourage the submission of views from interested parties*", we consider that leaving significant amounts of detail to be included as part of the DCO submission with no

pre-application consultation is contrary to the advice provided by the Planning Inspectorate (PINS)[1] and means that adequate pre-application consultation has not been undertaken. Paragraph 93 of the guidance issued by PINS also states that at the PEI pre-application consultation (this consultation) "*the key issue is that the information presented must provide clarity to all consultees*". We do not consider that the documents forming this consultation do that.

In addition to the above, we note that section 3.6 (b) (paragraph 3.6.6) of Volume 1 of the Stage 3 consultation documents refers to the Suffolk coast and Heaths AONB as a 'local designation'. This is incorrect, the AONB is a national designation and should be recognised as such.

## 3. Main Development Site (permanent development and construction and temporary development)

### 3.1 Marine and Coastal Impacts

The proposed main development site outlined in the Stage 3 consultation documents includes a number of elements which could result in adverse impacts on marine and coastal ecology. These impacts include damage to marine food webs from construction and operational activities, disturbance of marine species including those for which European nature conservation sites are designated, direct loss of sensitive coastal habitats and changes to coastal processes resulting in changes in coastal geomorphology.

#### 3.1.1 Offshore Statutory Designated Sites (SPA and SAC (SCI)) and marine ecology

The sea off Sizewell is designated as part of the Outer Thames Estuary Special Protection Area (SPA), it also forms part of the Southern North Sea Special Area of Conservation (SAC) which is currently a Site of Community Importance (SCI) as it has been adopted by the European Commission but not yet formally designated by the Government. The SPA is designated for wintering red-throated diver and breeding little tern and common tern and the SAC is designated for harbour porpoise. UK Government policy indicates that sites proposed for designation or at SCI stage should receive the same level of consideration in the planning process as those which are designated.

Chapters 2.15 and 2.16 of Volume 2A set out the PEI for marine water and sediment quality (2.15) and marine ecology and fisheries (2.16), Chapter 2.16 recognises the presence of the SPA and SAC offshore of Sizewell. Tables 2.16.3 and 2.16.4 in Chapter 2.16 set out the summary of effects for the construction and operational phases of the development. Table 2.16.3 states that the increase in underwater noise during construction is not considered to be significant subject to the implementation of embedded mitigation measures, although it is noted that such measures are not clarified in the document. The assessment of effects within the table then goes on to state that noise assessments for the new Beach Landing Facility (BLF) design are still being undertaken and that additional mitigation measures may be required for marine mammals. We therefore query how the conclusions of "no significant effects predicted" can be reached in the absence of this information and assessment?

We are also concerned about the reference to the potential use of acoustic deterrents to avoid harm on marine mammals. Whilst such devices may be used for this purpose, they will displace animals from the area which in itself may result in an adverse impact on them. Given the designation status of the site for harbour porpoise, the effects of the proposed construction, operation and any mitigation techniques (including any residual impacts arising from these) must be assessed as part of the Habitats Regulations Assessment (HRA).

Table 2.16.4 identifies that further assessments are underway on the potential impacts from the operation of the power station on fish which form the prey species of marine birds. The initial conclusion in the PEI is that no significant effects are predicted, however in the absence of these additional assessments we do not consider that it is yet reasonable to draw such conclusions. Also, in addition to marine birds, the assessments must consider whether the impacts on fish would also then impact on harbour porpoise. This must include assessment of cumulative and in-combination effects that may arise from the power station outputs resulting in reduced prey species in the area and the subsequent potential displacement of marine

[1] Department for Communities and Local Government. (March 2015). Planning Act 2008: Guidance on the pre-application process. Accessed 11/02/2019 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/418009/150326_Pre-Application_Guidance.pdf)

birds and marine mammals to other areas in the Southern North Sea.

Finally, we note that paragraph 2.16.12 identifies that *Sabellaria spinulosa* has been recorded on the Coralline Crag south of the red line boundary of the site. As recognised in 2.16.12, when in reef aggregations *Sabellaria spinulosa* is an Annex I habitat under the EU Habitats Directive and therefore the further surveys identified must be undertaken to determine whether it is present in this form.

3.1.2 Construction Impacts on Coastal Habitats

The power station will require a new sea defence along its frontage (Volume 1, paragraph 7.4.78). This part of the Suffolk coast is designated as the Suffolk Shingle Beaches County Wildlife Site (CWS) in recognition of its vegetated shingle, a habitat which is rare and declining in both Britain and Europe. The stretches of shingle beach along the Suffolk coast are of national conservation importance for a range of shingle plants, including species such as the Nationally Scarce sea pea (*Lathyrus japonicus*) of which Suffolk holds the bulk of the British population[2].

As recognised in Volume 2A, Table 2.3.1, the construction of the power station will result in the loss of the habitats for which the CWS is designated. The embedded mitigation measures proposed involve stockpiling material from the CWS for reuse on the new sea defences. However, despite this mitigation the proposed development would still result in a significant adverse impact on the CWS and the habitats for which it is designated. It is also unclear how "creation of Suffolk Sandlings habitat" quoted as embedded mitigation in Table 2.3.1 is intended to compensate for the loss of shingle beach vegetation?

Also, it is noted that paragraph 2.14.36 of Volume 2A Chapter 2.14 (coastal geomorphology and hydrodynamics) states that it is expected that beach recharge will be required during the life of the power station in order to prevent the exposure of the hard sea defences. The need for such recharge would mean that the shingle flora habitat would have been lost from this area, with the presence of the hard defences meaning that it could not retreat naturally with the coastline. This suggests that, even if shingle flora could recover to its current condition post construction, it would be lost in the long term as a result of the presence of the hard sea defences.

3.1.3 Coastal Processes

Volume 2A Chapter 2.14 identifies that both the proposed BLF and sea defences will result in an impact on coastal processes, although Tables 2.14.1 and 2.14.2 set out that subject to embedded mitigation there would be no significant effects. However, we are concerned that this conclusion has been reached in the absence of complete assessment work, including on the impact of the proposed temporary rock platform for the BLF (paragraph 2.14.21) and on the current shingle transport system (paragraph 2.14.39).

We are also significantly concerned about the statement in paragraph 2.14.47 that "continued persistent erosion north of Sizewell C would lead to a shallow embayment in this area". Immediately north of Sizewell C is the southernmost part of the Minsmere-Walberswick SPA, Minsmere-Walberswick Heaths SAC, Minsmere-Walberswick Ramsar site and Minsmere-Walberswick Heaths and Marshes SSSI. Embayment in this area would result in the loss of habitats within these designated sites and also potentially changes to freshwater regimes (particularly surface water flows from Sizewell Marshes SSSI) which in turn could significantly impact on parts of these sites further to the north. It is also unclear what impacts such embayment could cause on Minsmere Sluice, however any significant change in the function of the sluice is likely to result in significant impacts on habitats within the designated sites north of the Minsmere New Cut.

**3.2 Terrestrial Ecological Impacts**

Consultation document Volume 1, Chapter 7 sets out the details of the main development proposed for Sizewell C, identifying that approximately 350Ha of land is required for the build (paragraph 7.1.5). Volume 2A, Chapter 2.3 sets out the terrestrial ecology and ornithology PEI for the main development site. The proposed development has the potential to result in a range of significant adverse ecological impacts which must be fully assessed and publicly consulted on ahead of the submission of any Development Consent Order (DCO).

[2] Sanford, M. and Fisk, R. (2010). *A Flora of Suffolk*.

3.2.1 Habitats Regulations Assessment (HRA)

To the north and south of the proposed site of Sizewell C lie areas designated for their international nature conservation value. These include the Minsmere-Walberswick SPA; Minsmere Walberswick Heaths SAC and Minsmere-Walberswick Ramsar site to the north and the Sandlings SPA to the south. The PEI report (Volume 2A, chapter 2.3) identifies the potential for adverse impacts on receptors from the Minsmere-Walberswick SPA, including breeding marsh harrier and wintering wildfowl and waders, and introduces some potential mitigation measures for them. However, the PEI does not address any of the other receptors identified in the HRA Evidence Plan[3] and therefore it is unknown whether impacts on them can be successfully mitigated as part of the development proposals. Also, given the time that has passed since the Evidence Plan was undertaken, we consider that it needs to be revisited to ensure that its assessments remain accurate.

Table 2.3.1 of the PEI also states that there will be no direct loss of habitat from the Minsmere-Walberswick SPA; Minsmere Walberswick Heaths SAC or Minsmere-Walberswick Ramsar site. However, Volume 1, Figure 29 shows an area of loss at the top of the very eastern boundary of the development area which appears to be related to the beach landing facility. We consider that any loss of internationally important nature conservation sites is unacceptable and must be avoided.

In addition to impacts on the identified designated sites from construction activities, we also consider that there is the potential for existing recreational uses on the Sizewell Estate to be displaced as a result of the development (particularly during the construction period). Whilst Table 2.3.1 of the PEI considers that this impact is not likely to be significant, as no details of the assessment behind this conclusion are provided, we do not consider that this conclusion is currently justified. It is essential that the HRA includes full assessment of the likely impacts of such displacement on both the identified designated sites and those further afield. Significantly increased recreational disturbance pressure at other designated sites has the potential have a significant adverse effect on these sites and it is therefore essential that full assessment of this is undertaken as part of the HRA.

3.2.2 Sizewell Marshes Site of Special Scientific Interest (SSSI)

Sizewell Marshes Site of Special Scientific Interest (SSSI) lies to the west and north of the proposed platform and separates that area from the proposed construction lay-down areas (including the contractor's compound areas, accommodation campus, stockpile areas and borrow pits). As recognised in the consultation documents the site supports a range of nationally important habitats, including fen meadow, wet ditches and reedbed. As part of our response to the Stage 2 consultation we raised significant concerns about the potential adverse impacts that the proposed development would have on Sizewell Marshes SSSI, we do not consider that the information provided as part of the Stage 3 consultation provides any certainty that these concerns have been, or can be, addressed.

Figure 7.29 identifies that parts of the SSSI will be lost to the proposed development. In principle, we object to any loss of SSSI to development. Whilst we recognise that this is a Nationally Significant Infrastructure Project (NSIP), NPS EN-1 paragraph 5.3.11 states that "*Where a proposed development on land within or outside an SSSI is likely to have an adverse effect on an SSSI (either individually or in combination with other developments), development consent should not normally be granted. Where an adverse effect, after mitigation, on the site's notified special interest features is likely, an exception should only be made where the benefits (including need) of the development at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs. The IPC* (now PINS) *should use requirements and/or planning obligations to mitigate the harmful aspects of the development and, where possible, to ensure the conservation and enhancement of the site's biodiversity or geological interest*".

This makes it clear that SSSIs can only be damaged where there is no alternative location for the development, and the benefits of development at the site clearly outweigh both the impacts on the features of the SSSI itself and any broader impacts on the national network of SSSIs. The paragraph also

[3] EDF Energy. (October 2014). Sizewell C Proposed Nuclear Development HRA Evidence Plan.

clearly states that compensation is a last resort which should only be considered when it has been proven that no alternatives to the proposal exist, and that the benefits outweigh the harm to the SSSI and the national network of SSSIs.

Whilst the Stage 3 consultation documents set out the broad range of SSSI loss, we do not consider that it adequately justifies that any loss meets the tests set out in paragraph 5.3.11 of NPS EN-1. In addition to our concern about the principle of SSSI loss, the sections below set out our concerns regarding the information provided in the Stage 3 consultation.

3.2.2.1 Direct SSSI Loss

Sections 7.4 (F); 7.5 (D) and Figure 7.29 of consultation document Volume 1 and chapter 2.3 of consultation document Volume 2A set out that the proposed development would result in the permanent loss of 6.06 hectares of SSSI, along with temporary loss of approximately a further 3.64 hectares (Volume 1, paragraphs 7.5.119; 7.5.120 and 7.5.121). This is an increase in the total area of impact shown at Stage 2. The permanent loss includes that for the SSSI crossing, where a structure with a greater footprint than some of the others presented at Stage 2 has been selected. As recognised in the consultation documents, development would result in the loss of areas of reedbed; wet woodland; ditches and fen meadow from within the SSSI boundary. It is noted in Volume 2A, section 2.3, paragraph 2.3.18 (i) that EDF consider that the habitats recently created at Aldhurst Farm will form compensation for the loss of a number of these habitats. However, we consider that the Stage 3 consultation documents do not demonstrate that the first two steps in the mitigation hierarchy, avoidance and mitigation, have been applied in considering the current design of the proposed development. Instead the design has moved straight to step three and is seeking to find compensation for the proposed losses.

It may be possible to provide a degree of compensation for some of the habitat losses within the SSSI. However, without the provision of significant detail on the condition of the new habitats at Aldhurst Farm and the existing habitats within the SSSI areas to be lost, it is impossible to be able to determine whether what has been provided is in any way comparable to what is required. The absence of a plan showing, in detail, the proposed losses further hampers accurate assessment.

We also note that Volume 2A, section 2.3, paragraph 2.3.18 (i) makes reference to a "*fen meadow strategy being developed to identify a derelict area of fen meadow in Suffolk which could be restored to compensate for the permanent loss of fen meadow habitat*". We consider that, whilst bringing areas of derelict fen back into conservation management is beneficial, this does not constitute true compensation as there is still likely to be a net loss of this nationally rare habitat type. Nor is it possible to compensate for the loss of fen meadow through creation of new habitat. This type of habitat requires complex geological and hydrological conditions, alongside long-term suitable management, which cannot be recreated.

In relation to the area of SSSI proposed to be permanently lost against that which is identified as temporary land take, from the information provided we do not consider that any of the loss will be temporary. The works described for these areas, particularly for land reinforcing along the northern edge of the SSSI, all appear likely to have a permanent damaging impact on the SSSI and should therefore be assessed as such. The proposed development will therefore have a much greater impact on the SSSI than is currently considered in the PEI, particularly on habitats such as fen meadow where identified losses will more than double from 0.5 hectares (Volume 2A, section 2.3, paragraph 2.3.18) to 1.11 hectares (0.5Ha + 0.61Ha of 'temporary' loss quoted in Volume 1, paragraph 7.5.121).

It also remains unclear if the proposed loss factors in the area that will be damaged by the re-routing of Sizewell Drain. We consider that the area between the eastern bank of the re-routed drain and the sheet piling is unlikely to form a functional part of the SSSI once the replacement drain is constructed. This area should therefore be included within the calculation of the total area of the SSSI to be lost.

3.2.2.2 Indirect Impacts on the SSSI

In addition to the direct loss of SSSI, the consultation documents also identify a number of factors which could result in indirect impacts on the site. In particular, we have significant concerns regarding the impacts on hydrology that could result during both construction and operation of the power station.

Volume 2A sections 2.10 (Groundwater) and 2.11 (Surface Water) identify that the there is a connection between the surface water and groundwater regimes within Sizewell Marshes SSSI (Volume 2A paragraphs 2.10.11 and 2.11.6) and paragraph 2.10.15 recognises the that the ecological receptors for which the SSSI is designated are vulnerable to changes in both groundwater and surface water. We have significant concerns that the introduction of the proposed sheet piling and cut-off wall, along with the realignment of the Sizewell Drain (paragraphs 2.10.23 and 2.10.24) will dramatically, adversely, change the hydrological conditions within the SSSI.

From the information provided this appears likely to happen in two ways. Firstly, dewatering during construction will reduce water levels within the SSSI, drying out the sensitive fen habitats which are present closest to the main platform site. Secondly, and most significantly, the presence of a completed cut-off wall and SSSI crossing structure would radically change the pathways that groundwater currently has to move through the site. This would in turn result in groundwater being forced up to mix with surface water, significantly raising water levels across a large part of the SSSI and irreversibly damaging many of the sensitive habitats (especially fen meadow which is particularly sensitive to hydrological change) for which it is designated. Raising of the water levels will also impact on the ability to manage the remainder of the site to maintain its favourable condition. Whilst the consultation documents make reference to mitigation for these impacts using water control structures (paragraph 2.11.27) and by potentially breaching the cut-off wall at the end of the construction period (Volume 2A, paragraph 2.10.24) there is no further detail or modelling provided on these that offers any certainty of them proving successful. We are also concerned by the reference in Volume 2A, paragraph 2.10.23 to the use of a "sheet piling or equivalent" construction technique and query what is meant by this?

As recognised in Volume 2A sections 2.10 (Groundwater) and 2.11 (Surface Water), there is an observed continuity between the groundwater and surface water regimes within the SSSI. Given this connection, we are also concerned that changes in the surface water regime arising from the proposed development could significantly, adversely, impact on the habitats within SSSI which would be sensitive to such changes. Increases in surface water may also impact on the existing management practices of the SSSI and make it impossible to maintain water levels at their optimum. Paragraph 2.11.41 states that "*Based upon currently available information, it is concluded that the main construction could potentially lead to significant effects on Sizewell Drain, Leiston Drain and IDB Drain DRN163G0201 through a variety of mechanisms. The adjacent drainage units, namely Sizewell Marshes and Sizewell Belts, could also be affected*". Paragraph 2.11.42 goes on to state that "*It is however thought likely that with ongoing design embedded mitigation, it will be possible to avoid significant effects on surface water features*". Whilst we are pleased that the potential for significant impacts on the SSSI from changes to the surface water regime is acknowledged, given the potential for cumulative impacts through changes to the groundwater regime we do not consider that it can yet be demonstrated that embedded measures will mitigate impacts on the SSSI. We therefore agree with the conclusion of paragraph 2.11.42 that there "*remains the potential for significant adverse effects on the SSSI*".

3.2.3 SSSI Crossing

Sections 7.4 and 7.5 of consultation document Volume 1 set out EDF's rationale for the proposed SSSI crossing option. Paragraphs 7.4.58 and 7.4.59 identify that a design comprising of causeway with culvert is the preferred option. All crossing options will result in permanent losses from Sizewell Marshes SSSI, however the causeway option proposed will result in the loss of 0.25 hectares more SSSI than the bridge options also considered at Stage 2. We have a number of concerns about the ecological impacts of the crossing option proposed, most significant of which is that the selection of this option is primarily based upon the speed and ease with which it can be constructed, the financial saving which it offers over other crossing options and the potential for it to be adapted for future coastal resilience (paragraphs 7.4.61, 7.5.35 and 7.5.36), ahead of using an option which results in the least damage to a nationally designated nature conservation site.

3.2.3.1 Loss of SSSI

Although the Stage 3 consultation documents do not appear to provide a specific figure for the total SSSI loss that will arise from the crossing, from the information provided at Stage 2 and that provided in Figure 7.29 and paragraph 7.4.60 it appears that the total loss will be around 1.09Ha. As with the loss of other areas of SSSI to these proposals, we do not consider that any SSSI loss as been adequately justified in

accordance with the requirements of NPS EN-1 (see section 3.2.2 above).

Both Volumes 1 and 2A of the Stage 3 consultation identify that the predominant habitat types which would be lost are reedbed and wet woodland (e.g. Volume 1, paragraph 7.4.63). We note that EDF consider that compensation for the loss of reedbed can be delivered at Aldhurst Farm, however whilst habitat creation works have been undertaken at that site no details are provided within the consultation documents about their condition or suitability to compensate for the loss of reedbed within the SSSI. There is also a significant difference in the age of habitats and soil types within the SSSI and the habitat creation area which impacts on their respective ecological values and means that any new habitats at Aldhurst Farm will not deliver like for like compensation.

With regard to wet woodland, whilst it is acknowledged that this type of habitat is not specifically included on the SSSI citation, it is part of the habitat mosaic of the site and helps support a number of the species assemblages (such as invertebrates) for which the SSSI is designated. It should also be noted that whilst wet woodland is a Suffolk Priority species (as identified in Volume 1, paragraph 7.4.64 and Volume 2A, paragraph 2.3.30), it is also a UK Priority habitat under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). The plans and assessments available to date do not adequately consider the loss of wet woodland or make any proposals for compensation, the Environmental Statement must recognise this when assessing the significance of this impact.

3.2.3.2 Hydrological Impacts

As with the construction of the main platform (section 3.2.2.2 above), from the information provided it appears that there is the potential for a crossing to result in changes to the hydrological regime (groundwater and surface water) which could in turn result in significant adverse impacts on the SSSI. Whilst Volume 2A chapters 10 and 11 acknowledge the potential for the scheme as a whole to significantly impact on groundwater (Volume 2A, paragraph 2.10.33) and surface water (Volume 2A, paragraph 2.11.42), it appears that modelling of the impacts has not yet been completed and therefore it is not possible to determine whether it will be possible to mitigate for the hydrological impacts of the proposed development.

3.2.3.3 Ecological Connectivity

The crossings are proposed to be located in an area where the existing SSSI narrows between the man-made ground north of Sizewell B and the higher ground of Goose Hill, the Sizewell Drain and Leiston Beck both run through this area. The area is likely to provide an important ecological corridor for a range of species, linking Sizewell Marshes SSSI to the designated sites around Minsmere to the north.

Paragraph 7.4.66 in consultation document Volume 1 states that the proposed crossing "*has been designed with ecology in mind*", with the culvert "*significantly larger that is required for operational purposes*" to provide "*sufficient dimensions to leave bank and channel of the Leiston Drain completely intact*". It goes on to state that "*the culvert would be of sufficient size to facilitate the passage of bats and water voles through the structure and retain its function as an ecological corridor. A ledge would also be installed to enable the passage of otters*".

We have significant concerns over the how much connectivity this type of structure will actually provide, both for the species identified in the paragraph and for other species known to use the area. Whilst otters may use a ledge or bank alongside the culvert, we are not aware of any evidence of water voles using a structure of this length (culvert at least 65m). In the absence of any demonstration that water voles will use the culvert it has to be concluded that the proposed crossing structure would prevent animals moving from Sizewell Marshes and the Minsmere South Levels, potentially resulting in fragmentation of the population. With regard to bats, again whilst they may move through a culvert of this size, as no construction or operational lighting or noise details are presented in Stage 3 it is not certain that the culvert will be kept dark enough for use by bats. In the absence of details on these matters there can be no certainty that the proposed crossing structure will allow the movement of bats through this part of the SSSI. Also, the consultation documents make no reference to assessing the impact of the proposed crossing on other ecological receptors, such as the aquatic and terrestrial invertebrate assemblages for which the SSSI is in part designated. A structure of the size and style proposed has the potential to prevent movement of these species between Sizewell Marshes and the Minsmere South Levels resulting in fragmentary effects on

populations.

3.2.3.4 Future Uses

We note that Volume 1, paragraph 7.4.68 makes reference to the potential for future adaptation of the causeway to provide additional flood defence for the power station. The paragraph ends with the statement that "*unlike the bridge options, this adaptation could take place with no additional loss of SSSI land*". We find this conclusion disingenuous. If EDF consider the existing flood protection proposals are robust (as stated earlier in paragraph 7.4.68), then the need for potential future adaptation should not need to be used to justify a more damaging type of crossing which results in a greater loss of SSSI.

If, as now appears likely, the crossing structure is in fact intended to serve dual purposes as a crossing and flood defence, then it should be set out and assessed as such. This assessment should be under both the Environmental Impact Assessment process and the Habitats Regulations Assessment process given that the crossing has the potential to impact on ecological receptors which require assessment under both regimes.

3.2.4 Additional Land Take

Volume 1, Figure 7.2 sets out the main onshore development site area and shows the changes in this area between the Stage 2 and Stage 3 consultations, with Table 7.1 summarising these changes. At the time of the Stage 2 consultation it was stated that the approximate size of this area was 240Ha, this has now increased to 350Ha (paragraph 7.1.5). This area includes a range of habitats, with part, including the area for the proposed new training centre, being within the Sizewell Levels and Associated Areas CWS. Whilst the information included in Volume 2A (Table 2.3.1) states that the loss of habitats within the CWS is not significant, due to the retention of woodland in Kenton Hills, the creation of alternative habitat elsewhere and the proposed restoration scheme for the site, this conclusion does not appear to take account of the length of time which construction will take and the impact that this will have on species which these habitats support (please see section 3.2.9 below for comments on individual species). The assessment also does not appear to consider that permanent buildings and a car park are now proposed on Goose Hill which would mean that less area would be available for habitat restoration.

A significant change to the construction masterplan between Stage 2 and Stage 3 is the introduction of additional Water Management Zones (WMZs), particularly on the eastern side of the construction area (east of Goose Hill) and north of the borrow pit areas at Black Walks. The WMZ east of Goose Hill is within the Southern Minsmere Levels CWS and it appears it would result in the loss of a considerable part of the CWS and the species that it supports (see section 3.2.9 below). Loss of part of this CWS is not assessed in the PEI (Table 2.3.1). As well as the direct loss of habitat to these zones, it is unclear how they will function, what management they will require and what impacts this will have on habitats and species. It is essential that these matters are considered as part of the EIA process.

Finally, the Stage 3 plans show development encroaching into the habitat creation area at Aldhurst Farm, with a large part of the northern part area now to be taken up by the realigned Lovers Lane and a WMZ. It was previously understood that this area was created with the intention of it forming compensation habitat for that being lost at Goose Hill and north of Kenton Hills. It was also understood that the area was to provide translocation habitat for reptile species. Given the amount of this area which is now proposed to be used for development during the construction period, we query whether effective compensation for habitats to be lost elsewhere on the site can be achieved at Aldhurst Farm?

3.2.5 Rail

The proposed construction options for the power station are now divided into either a road-led option or a rail-led option. Both options include a degree of rail use and the construction of facilities associated with this (Volume 1, Table 8.1). The road-led strategy includes the use of either the existing Sizewell Halt rail terminal or the construction of a new rail siding on land east of Eastlands Industrial Estate (LEEIE), along with possible upgrades elsewhere on the East Suffolk rail line. The rail-led strategy would include either the use of Sizewell Halt or a new siding on the LEEIE, upgrades on the East Suffolk rail line and the construction of a new rail route (the 'Green' rail route) linking the Saxmundham to Leiston rail line with the main development site.

We note that chapter 3.3 of Volume 2A presents the PEI for the Green rail route and identifies the potential

for significant adverse impacts on great crested newts and bats, even after the inclusion of embedded mitigation. However, without detailed ecological survey information it is impossible to determine whether the embedded mitigation measures identified are likely to be acceptable in mitigating impacts on other species and habitats identified in the PEI.

Also, the information presented in chapter 3.3 does not appear to be for the whole of the Green rail route. Whilst Figure 8.1 in Volume 1 shows the Green route extending from the Saxmundham to Leiston railway in the west to north of Kenton Hills in the east, the red line drawings shown in Volume 3 (Figures 3.3.1 and 3.3.2) show the eastern edge of the assessed area as stopping at Abbey Road. Whilst paragraph 8.4.34 of Volume 1 states that Volume 1 Chapter 7 includes information on this part of the route, it is unclear whether the full ecological implications for this area have been considered.

There appears to be no assessment of the likely impacts of the Green rail route, both during construction and operation, where it runs through the area of woodland known as Fiscal Policy. While Volume 1, paragraph 8.4.34 states that the rail line would turn north-east passing close to Fiscal Policy, Figure 8.1 shows it passing through this piece of woodland. The woodland at Fiscal Policy is part of Sizewell Levels and Associated Areas CWS and is known to support a range of species, including bats such barbastelle (*Barbastella barbastellus*) (Volume 2A, Chapter 2.3, paragraph 2.3.16). Whilst construction and operational impacts on such species from lighting and noise do appear to be included for assessment within the PEI (Volume 2A), the impacts of vibration on bat roosts is not considered. We consider that the impact of vibration on bat roosts must be assessed as part of the EIA.

With regard to the LEEIE, although Volume 1 Chapter 7 includes it within the Main Development Site area it does not appear to be referenced in Volume 2A Chapter 2.3 (Main Development Site terrestrial ecology and ornithology). It is therefore unclear whether impacts on the habitats and species present within the area have been considered. In the absence of any ecological survey or assessment information it is unclear what impacts would arise from development of this area and whether they can be adequately mitigated.

3.2.6 Borrow Pits and Stockpiles

The proposed borrow pit and stockpile areas are located primarily on the western, north-western and northern sides of the main construction area, with additional areas at LEEIE.

All of the borrow pit areas and many of the stockpiling areas are in close proximity to both the Minsmere South Levels (part of the Minsmere-Walberswick Heaths & Marshes SSSI) and the area which EDF propose to establish as compensatory habitat for foraging marsh harrier (Volume 2A, paragraph 2.3.18). As recognised in the PEI (Volume 2A, Chapter 2.3) this part of the construction has the potential to result in significant adverse impacts on species such as marsh harrier and wildfowl and waders which use these areas. The primary cause of these impacts is likely to be disturbance and displacement caused by noise and visual impacts. Volume 2A, Table 2.3.1 recognises these potential impacts, however we do not consider that the information provided gives sufficient certainty that the identified embedded mitigation measures will be sufficient to address these impacts. It should also be noted that “monitoring of marsh harrier mitigation to ensure effective” is not “additional mitigation”, it should be part of the embedded mitigation measures.

Volume 1 (paragraph 7.5.60) identifies that the borrow pits will be excavated to no more than 2m above the water table. Whilst this would appear to be sufficient to avoid any hydrological impacts, particularly on nearby designated sites, we also note the proposal to stabilise the material that the borrow pits are being filled with using measures such as lime treatment. There does not appear to have been any assessment of the potential impacts that could arise from the filling of the borrow pits with the materials proposed, whether there is a need for any additional mitigation measures or whether the treatment proposed will in itself have any potential adverse impacts, particularly through leached materials reaching groundwater or nearby designated sites.

Figure 7.42 also shows that stockpiling is proposed west of the woodland known as Fiscal Policy and that the haul route from LEEIE also runs through this area. As set out in section 3.2.5 above, Fiscal Policy is part of the Sizewell Levels and Associated Areas CWS and is known to be an important area for foraging and roosting bats. We are concerned the activities proposed in this area have the potential to significantly

impact on the woodland; the species it supports and ecological connectivity from the Sizewell Belts out into the wider countryside.

3.2.7 Hydrology

In addition to comments made elsewhere in this response regarding potential hydrological impacts from the proposed development, particularly on Sizewell Marshes SSSI, we note that Figures 7.31 and 7.32 and paragraphs 7.5.102-104 make reference to the use of WMZs to control surface water run-off. No details on the existing ecological value of the areas proposed for WMZs is provided in the consultation document, nor is any information on the form that the proposed WMZs will take or on the potential for the use of WMZs to affect the existing hydrology of the Sizewell Marshes SSSI provided. In the absence of sufficient information and assessment of the likely impacts of these features, it cannot be concluded that they will not result in an adverse impact on designated sites or protected and/or UK and Suffolk Priority species.

From the Stage 3 consultation document it is unclear what the demand for potable water will be. From the construction methods required, it appears likely that a significant volume of non-saline water will be needed. It must be established what the required quantities are and whether these are available without having adverse impacts on sensitive sites both within the immediate catchment and elsewhere in the country. Given the presence of ecologically important wetlands within and around the development site we are concerned by the statement in Volume 1, paragraph 7.5.104 that "*for sustainability, water or dewatered groundwater, instead of potable water, may be re-used for construction activities*". If this approach is to be taken, then it must be ensured that the removal of this water from the system does not result in ground or surface water recharge impacts on any designated sites.

It is also unclear how much non-saline water is required for the operation of the power plant. Again, it must be established that the required quantities are available without having adverse impacts on sensitive sites both within the immediate catchment or elsewhere in the country.

3.2.8 Noise; Vibration and Air Quality

Volume 2A, Chapters 2.7 (noise and vibration) and 2.8 (air quality) set out the PEI for impacts caused by noise, vibration and impacts on air quality during construction and operation of the power station. Tables 2.7.6 and 2.7.7 set out the summaries of impacts for noise and vibration during construction and operation respectively. Tables 2.8.5 and 2.8.6 set out the summaries of construction and operational impacts on air quality.

With regard to noise and vibration, whilst we note that there is some crossover with the PEI presented in Chapter 2.3, particularly in relation to impacts on statutory designated sites to the north of the borrow pit and stockpile areas (please see comments in section 3.2.6 above in relation to this), Chapter 2.7 only considers noise and vibration impacts on human receptors and therefore does not provide any additional information for judging ecological impacts arising from these sources. We consider that there are a number of locations, beyond those identified in Chapter 2.3, where noise and vibration could result in significant adverse impacts on ecological receptors. In particular, the road and rail (under the rail-led strategy) routes through Fiscal Policy have the potential to result in significant adverse impacts on bats. Whilst Table 2.3.1 in Chapter 2.3 identifies noise and lighting as having the potential to significantly impact on bats, the impacts of vibration do not appear to be considered. Also, whilst noise disturbance on the bird interest of the Minsmere to Walberswick SPA, Minsmere to Walberswick Ramsar site and Minsmere to Walberswick Heaths and Marshes SSSI is identified as a potential impact, impacts from this source on the Southern Minsmere Levels CWS (which is contiguous with the statutory sites) is not.

Chapter 2.8 (Tables 2.8.5 and 2.5.6) does include PEI for the impacts on air quality and subsequent adverse impacts on ecological receptors. During construction it is considered that no significant impacts on ecological receptors are likely, subject to the implementation of mitigation measures including the use water suppression of dust. As set out in section 3.2.7 above, we are concerned that the availability of water required for such uses has not been fully assessed and therefore it is not known whether such mitigation measures will be available to prevent the impacts on ecological receptors associated with dust emissions.

We also note that Table 2.8.6 identifies that there is the potential for significant effects on some ecological receptors from atmospheric $NO_X$ and deposited nitrogen arising from the commissioning emissions from

the Emergency Diesel Generator (EDG) plant, but that with "additional monitoring and management to be determined" the residual impact is considered not significant. We do not consider that a conclusion of no significant effect can be arrived at in the absence of this information.

Finally, we note that the proposed helipad remains to be located to "*the southern part of the EDF Energy Estate in the Sizewell Gap area*" (Volume 1, paragraph 7.4.100). Helicopters have the potential to have a significant adverse effect on a range of ecological receptors and we therefore request that more detail on the levels of proposed use is made available to fully inform the required Environmental Impact Assessment.

3.2.9 Protected and/or UK and Suffolk Priority Species

The Sizewell C development area (including construction areas), the Sizewell Estate and the wider area of the Suffolk coast support a wide range of species, many of which are either protected species and/or UK or Suffolk Priority species (under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006)). Whilst Volume 2A, Chapter 2.3 of the recognises reptiles, natterjack toads, nesting birds and bats as ecological receptors, we are concerned that there are both receptors that have not been identified and that of those identified the impacts have not been fully assessed. We have the following specific comments on ecological groups which we consider are at risk from the proposed development:

3.2.9.1 Bats

The bat assemblage of the area is recognised as a receptor in Chapter 2.3, and Table 2.3.1 identifies the potential for significant adverse effects to occur as a result of loss of roosting resource and disturbance from noise and lighting. As with many of the other ecological receptors survey and assessment information on bats is severely lacking in the Stage 3 consultation, however from the information provided (and from that provided at Stage 2) it is known that the Sizewell Estate supports an important assemblage of bats, with at least 10 species recorded. Volume 2A, paragraph 2.3.13 recognises that the site supports a nationally important population of barbastelle bat (*Barbastella barbastellus*) and a population of Natterer's bat (*Myotis nattereri*) of at least county importance.

The construction of the power station will bring both a direct loss of habitat, particularly for roosting and foraging/commuting, and activities that will be disturbing to bats, both in their roosts and when foraging or commuting. Whilst Table 2.3.1 identifies that impacts on roosting resources and those arising from noise and light disturbance will be significant adverse, we do not consider that sufficient information has been provided on mitigation for the impact on roosting habitat to be able for it to be concluded that the residual effects will be not significant. Whilst we understand that a Natural England licence will be required, the EIA must include this detail in order to demonstrate that it has been fully assessed.

With regard to disturbance impacts arising from construction noise and lighting, we note that the conclusion is that this will result in medium term significant residual effects. Given the importance of the bat assemblage present we do not consider that this is outcome is acceptable and it is contrary to the requirements of NPS EN-1 (Section 5.3) and NPS EN-6 (Section 3.9). Also, as set out is section 3.2.8 above the PEI does not appear to consider the impact of vibration on bats and this should therefore be included as part of the assessment.

The PEI also does not appear to fully consider the cumulative impacts of the proposed development, and the potential spatial and temporal impacts that the proposals will have on bats. As currently presented, we have no confidence that adequate mitigation measures for bats can be achieved as part of the proposal and therefore it will have a significant adverse impact on this assemblage, which the consultation documents recognise includes elements of national importance. Whilst we acknowledge that the restoration and management proposals for the wider estate will introduce new habitats suitable for bats in the long term, the short- and medium-term impacts identified as probable from the construction will result in catastrophic impacts on this species group.

3.2.9.2 Natterjack Toad

The PEI identifies that the construction of a WMZ will result in the loss of foraging habitat for natterjack toad, with a mitigation strategy and the creation of new habitat being required to avoid a significant effect on this receptor. However, no details on this are provided and therefore there is no confidence that this can be achieved. The natterjack toad population at Sizewell is reliant on a single breeding pond with

terrestrial habitat connected to this. The loss of a significant proportion of this habitat to a WMZ puts the population at significant risk of local extinction. It is also unclear if construction activities have the potential to result in indirect impacts on the breeding pond or other areas of terrestrial habitat. From the information available we therefore do not agree with the conclusion that impacts on this species are not significant.

3.2.9.3 Reptiles

We recognise that EDF have undertaken considerable work on preparing habitat suitable for use for translocating reptiles away from the construction area. However, whilst potentially a sufficient area of habitat is in the process of being created, what is not demonstrated is that this land has not already been colonised by reptiles. Whilst the translocation sites need to provide suitable habitat for reptiles, including sufficient prey resource, they also need to be free of existing populations. The ES must be able to demonstrate that the proposed receptor areas are in suitable condition to receive translocated reptiles ahead of any site works (including site clearance) starting.

3.2.9.4 Water Vole and Otter

Volume 2A paragraph 2.3.12 identifies that Sizewell Marshes SSSI supports a nationally important population of water voles and a locally important population of otters. Whilst paragraph 2.3.18 then identifies that a water vole mitigation strategy will be implemented as part of the proposed development, no mention is made of a similar strategy for otters. It is also concerning that, despite the acknowledgement of the importance of the water vole population on the site, they are not included as a receptor in Tables 2.3.1 or 2.3.2. We consider that the impacts predicted on Sizewell Marshes SSSI, particularly in relation to water levels (see section 3.2.2.2; 3.2.3.2 and 3.2.7 above), have the potential to have a significant effect on the water vole population present. This has not been adequately considered as part of the PEI and must form part of the ES.

In addition to the above, the proposed SSSI crossing structure is likely to significantly impact on connectivity for water vole (see section 3.2.3.3 above). Whilst otter may use the culvert structure if it is designed correctly, we are not aware of any evidence of water vole using a culvert of this length. A break in the existing connectivity between Sizewell Marshes SSSI and habitats to the north (including Minsmere South Levels and Minsmere RSPB reserve) would isolate the water vole and otter populations within Sizewell Marshes SSSI as there is no functional connectivity to the west towards the reedbeds at Aldhurst Farm. We are concerned that trapping these species in this way would result in a significant decrease in the functionality of their populations and seriously risk their survival.

Paragraph 2.3.18 also makes reference to translocation of water voles from Sizewell Marshes SSSI to Aldhurst Farm. Whilst we note that an area at Aldhurst Farm has been fenced to "*minimise the risk of water voles colonising naturally ahead of translocation*", no information on the presence of any existing water vole population at Aldhurst Farm is provided and it is therefore unclear whether this proposed measure would be successful.

3.2.9.5 Badgers

We note that Volume 2A, paragraph 2.3.12 makes reference to the presence of badgers on the site, but paragraph 2.3.20 concludes that any adverse impact on this species would not be significant and are therefore not considered further in the PEI. However, without further evidence on the use of the site by badgers we do not see how they can be scoped out. As set out in paragraph 2.3.20 it is essential that the impact on them is fully assessed as part of the ES.

3.2.9.6 Breeding Birds

In addition to the identified impacts on bird species which are features of the Minsmere-Walberswick SPA and Minsmere-Walberswick Ramsar site (section 3.2.1 above), the PEI also identifies the potential for impacts on the breeding bird assemblage of the site. Table 2.3.1 recognises that that this impact will come through the loss of nesting and foraging habitat during construction but concludes that the impact is not significant subject to the implementation of embedded mitigation measures. This mitigation includes the provision of new nesting and foraging habitat, although it is unclear where or when this provision will be made. Whilst Table 2.3.2 concludes that the operational phase of the development will have a significant beneficial impact on nesting birds, through habitat restoration on the temporary construction area and

wider estate, if the habitat creation referenced in Table 2.3.1 is not undertaken until construction is complete it cannot be concluded that the construction phase will not result in a significant adverse impact on this receptor.

Also, in addition to direct habitat loss, the EIA should consider indirect impacts on breeding birds such as those arising from construction noise and lighting.

3.2.9.7 Invertebrates

In addition to the important invertebrate interest recognised in the designation of Sizewell Marshes SSSI, the site also supports a range of other invertebrate species. Of particular note are the assemblages of butterflies and moths (some of which are UK Priority species) and the presence of the rare antlion (*Euroleon nostras*) which is also a UK Priority species.

Information provided by the Suffolk Branch of Butterfly Conservation identifies that the survey tetrads covering the site (Upper Abbey Farm and Sizewell Belts) show records of 25 and 26 butterfly species. This compares against an average of 15.3 species per survey tetrad across the county and a total of 34 resident and regular migrant species recorded in Suffolk. The Sizewell tetrad results include at least four UK Priority species (white admiral; grayling; white-letter hairstreak and small heath), of the seven recorded in Suffolk. With regard to moths, a large number of species have been recorded in tetrads around the site, including a number of rare, nationally notable and UK Priority species such as the white-mantled wainscot and Fenn's wainscot.

Antlion is a rare species of lacewing with a UK range restricted to this part of the Suffolk coast and one site in Norfolk. Given this very limited range they are very vulnerable to habitat loss or alteration, such as that which could arise as a result of the proposed development.

Given the importance of the area for a range of invertebrate groups and species these impacts must be appropriately assessed as part of the ES. The mitigation hierarchy must then be applied to ensure that any impacts can be avoided, mitigated or lastly compensated.

3.2.10 Relocation of Sizewell B Facilities

Volume 1, Chapter 7 Section 4(c) sets out the proposed works required to relocate Sizewell B facilities ahead of the construction of Sizewell C. To prevent delay to the Sizewell C program, paragraph 7.4.35 states that it is intended to apply for consent for these works under the Town and Country Planning Act (TCPA) (1990). Paragraph 7.4.37 goes on to state that the relocation works will also be included in the Sizewell C DCO application. The proposed facilities relocation has the potential to result in a significant adverse impact on a range of ecological receptors, in particular through the loss of Coronation Wood and the proposed footpath from the outage car park in Pill Box Field to Sizewell B. If these works are to be included in the DCO then their impacts must be assessed as part of the EIA. From the PEI presented in Volume 2A this does not appear to be the case.

3.2.11 Management of Existing Habitats

Suffolk Wildlife Trust manages Sizewell Marshes SSSI, part of the Minsmere-Walberswick Heaths & Marshes SSSI, the Southern Minsmere Levels CWS and part of the Sizewell Levels and Associated Marshes CWS, on behalf of the owners, EDF Energy. The management operations are conducted from Upper Abbey Farm. We therefore request that the requirement for ongoing management of wildlife habitats is taken into account during the construction period. In particular, safe access to the Sizewell Marshes will need to be arranged for livestock and agricultural machinery along with provision of suitable workshops, welfare facilities and storage. Failure to achieve this could result in the required management of the designated sites not being able to be undertaken, with an adverse impact on their condition being the outcome.

**3.3 Estate Vision and Permanent Masterplan**

Volume 1, Chapter 7 and Figure 7.27 make reference to a masterplan for the post construction uses of the Sizewell Estate. Whilst, in principle, it may be possible to restore areas of the wider estate to the habitat mosaic described, we disagree with the statement in paragraph 7.4.106 that this can be used to mitigate impacts. As creation of these additional habitats will occur after construction is complete we do not consider that they will form mitigation for impacts caused by construction, instead they should be

considered as enhancements. Any such habitat creation must be phased to occur as early as possible in the construction timetable in order to maximise the potential ecological benefits.

Restored habitats must ensure that connectivity for bats is retained and enhanced and integrated within the habitat mosaic. The main access road will continue to pass through this area and it is essential that it must be unlit. It is strongly recommended that the road is subject to speed restrictions as it will be passing through areas of semi-natural habitat. The establishment of the semi natural habitat as part of the restoration of the site should be subject to a management plan and should be monitored to evaluate its success. Provision must be made to maintain and manage these semi-natural areas in perpetuity.

The Masterplan should also incorporate a recreational strategy for the whole estate to ensure that the potential nature conservation benefits are not constrained by inappropriate public access. Such a strategy should also incorporate access to Aldhurst Farm to ensure that a holistic approach to this issue is taken.

**4. Associated Development Sites**

In addition to the proposed developments around the main site, the Stage 3 consultation includes a range of offsite associated developments. In particular, significant developments are proposed related to the Two Village Bypass; the Sizewell Link Road/Theberton Bypass; the northern park and ride facility; the southern park and ride facility and highways improvements for a roundabout at Yoxford. The ecological PEI for these developments appears to be based upon desktop assessment and no ecological survey information is provided. It is therefore not possible for interested parties to provide detailed comments. However, we have the following comments on the information provided.

**4.1 Two Village Bypass**

Volume 1, Chapter 12 describes the route of the proposed Two Village Bypass, which includes crossing the River Alde south of the villages of Stratford St Andrew and Farnham. Volume 2B, Chapter 7, Section 7.3 sets out the terrestrial ecology and ornithology PEI for the Two Village Bypass, based on a desktop assessment and data search of the route.

The PEI assessment concludes that the construction of the proposed road has the potential to result in significant adverse impacts on great crested newts, bats, otters and water vole, but then concludes "*no residual effects*" based on the implementation of "*potential mitigation measures under Natural England licence*". Impacts on other ecological receptors, such as reptiles, breeding birds and the River Alde and its surrounding habitats are scoped out as embedded mitigation measures will form part of the proposal. However, without further surveys and assessment of the habitats and species present along the route of the proposed road we consider that it is not possible to be confident that mitigation can be achieved in this way. The proposed bypass has the potential to result in significant adverse ecological impacts during both construction and operation and as currently presented the measures referenced do not appear to be adequate to mitigate such impacts.

**4.2 Sizewell Link Road/Theberton Bypass**

Volume 1, Chapter 10 describes the route of the proposed Sizewell Link Road, running from the A12 to the B1122. Volume 2A, Chapter 5, Section 5.3 sets out the terrestrial ecology and ornithology PEI for the Sizewell Link Road. Volume 1, Chapter 11 describes the route of the proposed Theberton Bypass, which would run south of the village of Theberton. Volume 2A, Chapter 6, Section 6.3 sets out the terrestrial ecology and ornithology PEI for the Theberton Bypass. It is understood that the Sizewell Link Road will be built if the 'road-led' construction option is selected and that the Theberton Bypass will be built if the 'rail-led' construction option is selected. The ecological assessment of both routes presented in the Stage 3 consultation is based upon a desktop assessment and data search and no field surveys have yet been undertaken.

The PEI assessment for the proposed Sizewell Link Road concludes that its construction has the potential to result in significant adverse effects on great crested newts and bats but that "*potential mitigation measures under Natural England licence*" will reduce residual effects to "*not significant*" (Table 5.3.1). Impacts on other ecological receptors, such as reptiles, breeding birds, woodland and watercourses are scoped out as embedded mitigation measures will form part of the proposal. However, without further surveys and assessment of the habitats and species present along the route of the proposed road we consider that it is

not possible to be confident that mitigation can be achieved in this way.

The PEI assessment for the proposed Theberton Bypass concludes that its construction has the potential to result in significant adverse effects on great crested newts and bats but that "*potential mitigation measures under Natural England licence*" will reduce residual effects to "*not significant*" (Table 6.3.1). Impacts on other ecological receptors, such as reptiles, breeding birds, woodland and watercourses are scoped out as embedded mitigation measures will form part of the proposal. However, without further surveys and assessment of the habitats and species present along the route of the proposed road we consider that it is not possible to be confident that mitigation can be achieved in this way.

Also, the routes of both the Sizewell Link Road and the Theberton Bypass are within approximately 2km of the Minsmere-Walberswick SPA. Whilst Volume 2A Tables 5.3.1 and 6.3.1 recognise this in relation to a potential pathway for watercourse pollution entering the designated site, they do not include consideration of whether the land within the proposed route provides any habitat for species for which the SPA is designated (such as foraging habitat for marsh harrier). This must be considered as part of the HRA for the proposal.

**4.3 Northern and Southern Park and Ride Facilities**

Two park and ride locations are proposed as part of the Sizewell C project, a northern one at Darsham and a southern one at Wickham Market. Volume 1, Chapter 13 sets out the details for the northern park and ride and Volume 1, Chapter 14 sets out the details for the southern park and ride. Volume 2B, Chapter 8, Section 8.3 and Chapter 9, Section 9.3 set out the terrestrial ecology and ornithology PEI for the two park and ride locations respectively.

Paragraphs 8.3.30 and 9.3.30 identify that full ecological assessment of these sites is still to be completed, however Tables 8.3.1; 8.3.2; 9.3.1 and 9.3.2 set out the summaries of effects for the construction and operation of both sites. These do not identify any significant impacts on ecological receptors due to the inclusion of embedded mitigation measures within the developments. However, in the absence of complete ecological survey and assessment it is not possible to conclude that the embedded mitigation measures proposed are sufficient to ensure that the proposals will not result in significant adverse impacts on the ecological receptors identified.

**4.4 Highways Improvements for Yoxford Roundabout**

Volume 1, Chapter 16 sets out the highways improvements for the proposed Yoxford roundabout, the terrestrial ecology and ornithology PEI for this scheme is set out in Volume 2B, Chapter 11, Section 11.3. As with the other associated development sites, paragraph 11.3.25 recognises that the PEI is not informed by complete ecological survey and assessment. However, Table 11.3.1 identifies that there is potential for significant adverse impacts on bats and great crested newts to arise, even after embedded mitigation measures have been taken into account. However, it is then concluded that "*potential mitigation measures under Natural England licence*" will reduce residual effects to "*not significant*". Impacts on other ecological receptors, such as reptiles, breeding birds, and woodland and hedgerows are scoped out as embedded mitigation measures will form part of the proposal. However, without further surveys and assessment of the habitats and species present in the area we consider that it is not possible to be confident that mitigation can be achieved in this way.

Also, we note that it is concluded that impacts on Roadside Nature Reserve (RNR) 197, which lies on the southern side of the B1122, will not be significant if design of the roundabout allows the RNR to be retained in situ (Table 11.3.1). If retention in situ is not possible the conclusion is that translocation of the species which the RNR supports is possible. However, no evidence is provided that such translocation is feasible, particularly as the RNR is designated for a protected species. We therefore do not consider that the residual effects of the development can be concluded to be "*not significant*" as it has not been demonstrated that the RNR can be protected.

**5. In-combination Impacts**

Whilst it is acknowledged that the proposed Sizewell C development is a Nationally Significant Infrastructure Project (NSIP), it is essential that its impacts are not considered in isolation. A range of other NSIPs are in various stages of the planning process along the Suffolk coast, including a number of offshore

wind farm schemes, and there are also a range of other residential and commercial developments being undertaken in the area. The combined construction and operational impacts of all of these proposals must be assessed to ensure that they are adequately understood, ahead of a decision being made on the Sizewell C Development Consent Order. Failure to do this will result in long term adverse impacts arising, with insufficient mitigation and compensation measures secured to prevent them.

**6. Conclusion**

Whilst we acknowledge that there has been further refinement and assessment of the Sizewell C proposal since the time of the Stage 2 consultation, we remain of the opinion that given its scale and location, it is unquestionable that the proposed development will have significant adverse ecological impacts which it will be very difficult to adequately address. We remain disappointed that there is still limited information available on a range of key ecological matters and are concerned that this shows a lack of acknowledgement of the difficulties associated with the project.

As set out in full above, we maintain significant concerns about the potential ecological impacts of the proposed development which are summarised under the following topics:

- Principle of the proposed development and national policies;
- Main development – coastal and marine impacts (impacts on designated sites and protected and Priority species);
- Main development – terrestrial impacts (impacts on designated sites; SSSI loss; impacts on protected and Priority species);
- Hydrology – raising of groundwater and surface water levels, impacts on water availability in the catchment and the wider area;
- Associated development – park and ride facilities (impacts on protected and Priority species);
- Associated development – highways improvements, including new road proposals (impacts on protected and Priority species and habitats).

In order for a robust and accurate consideration of the Sizewell C project to be undertaken it is essential that these matters are addressed ahead of the submission of any Development Consent Order for the project.

We are happy to engage with EDF Energy on the assessment of the ecological impacts of this proposal and would be happy to discuss any of the issues raised above in more detail.

Yours sincerely

Ben McFarland
Head of Conservation