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Suffolk County Council

Suffolk Coastal District Council

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Dear Ms Allen

Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) – Regulations 8 and 9

Application by EDF Energy for an Order Granting Development Consent for the Sizewell C Proposed Nuclear Development

Scoping consultation and notification of the applicant's contact details and duty to make available information to the applicant if requested

Further to your letter dated 24th April 2014, please find below a joint response of both Suffolk County Council and Suffolk Coastal District Council to this request.

EXECUTIVE SUMMARY

The approach set out to the Environmental Statement (ES) is generally satisfactory and we are pleased that it reflects the nature of, and progress in, discussions the local authorities have had with EDF Energy on the undertaking of assessments to date.

However, we draw particular attention to the following matters:

- Further discussions are required with EDF in describing the magnitude of impacts, in particular the spatial extent and duration of effect that are used to derive the corresponding magnitude. As currently described, the ES is likely to underreport localised impacts of significant duration. A better acknowledgement of the longevity of the temporary, but long-term construction period is required.
- We are concerned that alternatives are being scoped out of the process at an early stage, without a full appreciation of the effects of EDF's preferred option. Alternatives should be appraised having regard to the respective socio-economic and environmental effects alongside consideration of operational requirements. The ES should clearly articulate how alternatives have been evaluated in a balanced way.
- The ES should clearly articulate the cumulative effects of all individual elements of the project as many receptors will be impacted by separate developments. This needs to be fully acknowledged.
- The phasing of the construction programme needs to be provided and sensitivity testing in the timing of the delivery of mitigation proposals, such as the MOLF, accommodation, campus, park and rides and rail extension undertaken so that they are delivered at the

optimum time having regards to the impacts associated with their construction, and their ability to reduce impacts on local communities and the environment.

Some general, introductory comments are made immediately below, followed by some more detailed comments relating to the specific sections in the Scoping Report.

1. GENERAL COMMENTS

1.1. Structure of the Environmental Statement

1.1.1. It is proposed that Volume 2 of the ES focuses on 'Project-wide considerations', namely socio-economics and transport, whereas environmental matters are to be considered on a site-specific basis.

1.1.2. The ES should acknowledge the scale and the geographic extent of the development is such that it will have very wide ranging environmental effects over a large area, particularly when one considers:

- The environmental effects of the offsite associated development sites
- The environmental effects of transport movements, terrestrially and at sea
- The environmental effects associated with the deflection or displacement of recreational users to wider/alternative areas.

1.1.3. Consequently, we would not wish the environmental impacts to be presented in such a way that the full scale of effects is not readily appreciable. In addition to interactions with other projects or programmes Volume 9 (Cumulative assessment) therefore needs to consider the cumulative effect of all the individual elements of the project, particularly where they impact on the same receptor (for example the rail line extension, site entrance works and the campus will all separately impact on Leiston Abbey). It would also, in this vein, be useful for the ES to explain the interrelationship with the Habitats Regulation Assessment.

1.1.4. Conversely, we would not wish the *localised* transport and socio-economic impacts to be underplayed. For example, the campus will have localised impacts by virtue of its proximity to other communities which may be presented in such a way that other socio-economic impacts on the labour market or accommodation availability take dominance.

1.1.5. There is a particular case to consider whether the impacts of the campus development (currently wrapped in to the 'Main Development Site') need to be specifically isolated within the ES, because of the particular sensitivities, environmentally and socio-economically, associated with EDF's preferred site, and the existence of alternative site locations. While the campus offers mitigation in some respects (6.3.59), it will give rise to others of its own making. In particular, the ES should assess the impact on nearby residential properties and mitigation measures included as necessary.

1.2. Magnitude of impacts – Temporary and permanent

1.2.1. The ES should clearly distinguish between temporary impacts and permanent impacts and also be consistent with how the duration of impact relates to significance of effect.

1.2.2. Table 5.2 sets out the generic guidelines for the assessment of magnitude. We have some concerns with the definitions used here. With a construction project of such magnitude, duration and geographic spread, terms such as "permanent/irreversible" and "whole development area" need to be carefully defined. A literal interpretation of this table would suggest it is not possible for a temporary

(albeit of 10 year lifespan) associated development site to result in a high magnitude effect. The table also implies a degree of rigidity in structure and conflation of the terms 'scale', 'duration' and 'certainty'. For example, wider-scale effects of temporary duration within any one of the red line areas should still be able to derive a high magnitude effect.

1.2.3. Clarity on the interpretation of likely/unlikely would be helpful. It is noted the Ecology chapter is more quantitative in this respect (7.2.28), but it is debatable that something with a 49% probability of occurring could be described as 'unlikely'.

1.2.4. So, while Table 5.2 is described as generic guidelines it could better reflect the specific circumstances of the project. It is noted that in some chapters, some of these definitions are refined – for example in Ecology and Surface Water chapters 'temporary' is further subdivided (short term <2 yrs; medium term 3-5yrs; long-term >5 years), though the Landscape chapter uses a different scale for duration of effect (short term <2 years; medium term 2-10 years; long term >10 years).

1.2.5. Above all, the ES should be consistent on how these terms are used or explain very clearly why any inconsistencies do arise.

1.3. Value and sensitivity

1.3.1. The ES, for example Table 5.1 uses these terms synonymously, whereas this may not be the case. It is possible for sites to be designated for their landscape or ecological value, i.e. be of high value, but nevertheless have capacity to accommodate change (i.e. low sensitivity). The ES should recognise this – in particular because, as written, the ES will not focus on impacts on receptors of low value, for example local nature reserves – which may nonetheless by very sensitive.

1.4. Significance of effect

1.4.1. As a result of the issues outlined above, we are concerned that impacts may be defined as of less than moderate/major significance and therefore not significant, when that is not the case. This table should continue to reflect the precautionary principle so that the burden of proof remains on EDF demonstrating robustly that impacts will be not significant.

1.5. In-combination effects ("interrelationships")

1.5.1. Consistency in terminology is particularly important to facilitate the measurement of in-combination effects. We are concerned that the ES could underreport these effects if it does not acknowledge the potential for accumulation of effects of minor significance. The ES should explain how the significance of an in-combination effect will be determined – for example, for a given receptor, is the significance of a moderate noise impact plus a moderate air quality impact moderate or major?

1.5.2. We would also expect the ES not to overlook opportunities to mitigate effects of minor significance so that they rather become 'negligible'.

1.6. Cumulative impacts

1.6.1. Paragraph 5.5.1 suggests that only cumulative effects with projects in the *vicinity of* the development site will be considered. The geographic scope will need to be considered on a case by case basis. In the case of socio-economics the approach in paragraph 6.2.42 is acknowledged, though this could overlook localised cumulative effects, for example decommissioning of Sizewell A.

1.6.2. The ES should recognise that as a consequence of the Sizewell C development, the impact of existing development may change. For example if Coronation Wood is used (3.3.6/3.4.1), this may affect the mitigation it offers for the existing Sizewell A and B developments. Consequently the assessment of the

cumulative impacts should reflect any changes in the future baseline that would heighten the impact of existing development. The onshore elements of the consented Galloper Offshore Windfarm are also relevant in this respect.

1.6.3. Paragraph 2.1.9 confirms that while Sizewell is connected to the National Grid's high voltage network, local modifications and wider network reinforcement is required – the local authorities understand this to be reconductoring of the Sizewell to Bramford line, and additionally a new line between Bramford and Twinstead – registered with PINS as the 'Bramford to Twinstead Overhead Line project'. The most up to date Need Case for that project, confirms that, based on the currently contracted connection dates, Sizewell C, alongside the East Anglia Array, is a significant contributor to that need – however it is the Sizewell C project that currently triggers the need for the Bramford to Twinstead project[1].

1.6.4. The Environmental Statement should address the wider environmental implications of development elsewhere necessitated in whole or in part by the Sizewell C project.

1.6.5. Furthermore, paragraph 6.3.58 states EDF will provide "support to Network Rail to deliver a new passing loop on the East Suffolk Line near Wickham Market station. This is not discussed further in the Scoping Report (for example as offsite associated development). The impacts of this should be presented in the ES. The location of this development is adjacent to a new housing development and consideration should therefore be given to minimising train waiting times during passing manoeuvres, or exploring other engineering options (such as lengthening the loop) to minimise impacts on those residents.

1.7. Future baseline

1.7.1. With regard to the future environmental baseline, it should be noted that all non-agricultural land within the Main Development Site is managed by Suffolk Wildlife Trust on behalf of EDF Energy (7.9.15). Consequently, the ES should not underestimate the environmental quality of the future baseline without development, and thus underestimate the impacts of the development.

1.7.2. Furthermore, the ES should recognise that the projected future baseline case includes consideration of how the Sizewell A and B sites will change under decommissioning over the construction life of SZC.

1.8. Construction Programme

1.8.1. The ES should provide a phasing programme for construction so it is clear which activities are occurring when, and when mitigation will be delivered – for example the park and ride sites, rail routes, jetty and accommodation campus. The timing of these will have a significant bearing on the impacts of the development and the local authorities suggest very careful thought will be needed to ensure that they are delivered at the optimum time in the construction programme.

1.8.2. We note (3.4.7) that the main construction could take seven to nine years following site preparation – which would include main site earthworks construction of a new access road, new bridges, and a jetty (3.4.2). The ES should ensure that the full duration of activity is reported accurately.

[1] http://nationalgrid.opendebate.co.uk/files/20131114_Need_Case_2013_FINAL.PDF Figure 4.1

1.8.3. Along with the phasing, the ES will need also need to detail the location of all major engineering tasks to be carried out (for example excavation work, dredging, dewatering, piling, stockpiling of soil/peat, road building, demolition of existing buildings, use of explosives, construction of new buildings, borrow pit workings *et cetera*). It should be clear where engineering works are contingent on offsite constraints, such as the receiving capacity of Wallasea Island to accommodate any peat winnings (3.4.5). A worst case in terms of the need for stockpiling should be assumed.

1.8.4. ES will need to detail the hours of working both onsite and at any offsite facilities and the timing of all anticipated transportation movements to and from the site or to any offsite facilities. It is noted that 24 hour working shift patterns are likely to be used and consideration will need to be given to mitigating noise from night time and weekend works.

1.9. Alternatives

1.9.1. We welcome the intention (paragraph 4.2.1) to review alternatives for land required during construction (taken to mean not just the laydown land, but also all the associated development) – this consideration should of course not just include layout, but overall scale and location. With particular regard to sea defences (4.3.2), consideration also needs to be given to the north and south of the site, if coastal erosion and flooding affect these areas as may be predicted. The ILWS is taken to be included on this list under Main Development Site.

1.9.2. With reference to the construction laydown land adjacent to the main site, particular regard should be had to alternative options which reduce the impact on the AONB, for example using existing employment land in the vicinity. Similarly, the alternative of siting the Visitor Centre outside the AONB will need to be considered.

1.9.3. The local authorities are concerned that in some cases EDF has not sufficiently justified its preferred option and is therefore prematurely curtailing more detailed assessment of alternatives. Of particular relevance are the proposals for freight management. Paragraph 4.4.6 indicates that EDF does not propose to consider Freight Management Site further, given it 'anticipates' HGV movements could 'potentially' be managed through electronic/camera based systems which 'could' reduce the need for further associated development sites.

1.9.4. Given the evident uncertainty and lack of discussions/agreement with the local authorities on this matter, we do suggest it is premature to scope out the potential need for such a facility. Consequently, we suggest the ES should report should report on alternative measures to manage freight and their comparative effects. Other alternatives should include rationalising the use of land across all three nuclear sites, sharing facilities, for example parking wherever possible.

1.9.5. In presenting how EDF has come to its preferred alternative it should be clear how it has weighted the various determining factors – for example environmental impact, transport impact, cost.

1.10. Health Impact Assessment

1.10.1. The production of an HIA is welcome, however it should aim to *maximise the potential positive* health and wellbeing impacts of the proposed development', rather than solely *reduce or remove potential adverse* impacts on health and wellbeing (2.3.10). It will also need to identify *all* significant impacts on health (2.3.12).

1.10.2. The HIA should follow a similar format to that set out in Section 5.3. In terms of mitigating the adverse effects of development, the hierarchy set out in Section 5.4, namely: 1. Prevention; 2. Reduce or abate effects, is appropriate for HIA, though repair and compensation are less relevant. The plan to seek identification of

mitigation opportunities throughout the evolution of the proposed development is also applicable to health impacts. Prevention of course remains the priority for significant health impacts.

1.10.3. The sections in the ES on air quality and noise and vibration will be particularly relevant to the HIA.

1.10.4. Monitoring and evaluation of possible health impacts should be conducted to inform ongoing assessment of the health impact.

1.11. Life span of the development/decommissioning

1.11.1. The ES should be clear on the duration of effects for which it is assessing – does the 'lifetime of the site' (for example 2.1.9) include the decommissioning phase? How does this also relate to the ISFS and ILW, and their respective design lives (section 3.8)? The design life for the ILW and LLW stores should also be clarified.

1.11.2. The ES should, as far as is possible detail a programme for the decommissioning of the site. This should include;

- The types of works that will be undertaken,
- The removal of existing structures,
- The disposal of all remaining waste material,
- The suitability of the site for restoration or future use.

1.12. It is noted that a separate Flood Risk Assessment (FRA) will be produced for the decommissioning phase (2.3.4); any mitigation actions arising from this FRA may have implications for the design of the Sizewell C site – so thought needs to be given at this stage to the decommissioning FRA.

2. TOPIC SPECIFIC COMMENTS

2.1. Transport

2.1.1. The transport assessment (TA) will need to be prepared in line with the DfT's Guidance on Transport Assessments (2007). The TA, like the rest of the ES (as discussed above) should also pull together the cumulative impacts of the individual elements of the development, both the construction of the main development site, the associated development sites and any mitigation schemes.

2.1.2. The TA will also need to recognise that the benefits of highway mitigation will not apply to all stages of the development (due to the timing of their delivery) and consequently there will be phases of the development where impacts on the highway network will need to be reported in the absence of such mitigation being in place. For example, the construction of the rail line extension and MOLF will ostensibly require all HGV movements arriving by road, as opposed to later phases of the development where materials will be delivered by a combination of road, rail and sea.

Approach & Methodology

2.1.3. The scenarios assessed within the TA should include construction, operation, decommissioning and the impact of outages, of both Sizewell C and B reactors. Tourism is an important part of the Suffolk economy and the impact of construction vehicle movements on the summertime traffic movements should be assessed. A method of assessing seasonal impacts needs to be agreed. The impact on significant local events, for example the Latitude Festival also need to be considered and measures put in place to accommodate the impact that these events have on the network.

2.1.4. The report refers to the use of Visum modelling to determine impacts on the highway network, SCC considers that the use of modelling is only one way of assessing impacts and other methods should be considered. Modelling should not be relied upon as the only method of assessment.

2.1.5. The report suggests that the impacts of construction traffic are 'temporary'; the ES needs to fully acknowledge the likely duration of the construction period and report the effects accordingly.

2.1.6. The report should state the years of assessment.

2.1.7. The baseline information makes no reference to the collection of data for non-motorised users (NMU's), i.e. pedestrians, cyclists and equestrians using the highway network, this should include the Public Rights of Way network.

2.1.8. The report refers to using shift patters to assess the timings of commuter travel. However, no information was provided on how HGV/OGV movements would be managed to inform an assessment of impact.

Types of Impact

2.1.9. The report sets out the types of impact that will be examined with respect to the traffic generated. These include severance, pedestrian amenity, driver delay and accidents and safety.

2.1.10. The assessment should consider the effect the increase in traffic will have on cyclists and equestrian road users and consider the anxiety and intimidation the increase in traffic will impose. It should be noted that equestrians are sensitive to smaller increases in traffic and this group may cease to use parts of the network affected by significant increases in traffic and make established horse-riding routes untenable.

2.1.11. The types of impact should include the effects that vehicles and in particular HGV's will have on pedestrians and residents (see below).

2.1.12. The report makes no reference to the transportation of hazardous materials. The ES should clarify whether hazardous materials will be transported on the highway network to and from the site either/and during construction and operation. If hazardous material will/may be used then details need to be provided on how the impact will be assessed and mitigated.

Sensitivity of receptors

2.1.13. A classification of possible receptors and their likely sensitivity is set out in Table 6.3.1. It is unclear where these categories are derived from. This table does not refer to equestrians and cyclists, focussing on pedestrians as the only NMU's. Cyclists need to be considered either as local road users or recreational tourist based users. The latter group are likely to include family groups that would be considered more vulnerable road users with respect to increased traffic flows. It is not unreasonable to assume a higher level of recreational activity in the area considering its location to the coast and the AONB.

2.1.14. It should also be noted that the National Cycle Network regional routes 31, 41 and 42 intersect the B1119 to the west and the B1122 to the north of Leiston - in addition to intersecting the A12 at a number of locations within the study area. Impacts on users of these routes need to be assessed. More generally, rights of way crossing points should be identified a sensitive receptor and the effects of severance thereon assessed.

2.1.15. There is a further category of receptors to be considered. These are residents of dwellings likely to be affected by anxiety and intimidation from traffic passing close to their homes. This will be an issue in areas additional to the

Farnham bend. The ES should identify residential dwellings that are located close to the edge of the carriageway and categorise these as a separate category of receptor. Estimates should be made of the population of communities affected by severance due to traffic, taking into consideration the location of community facilities, including schools, relative to the road causing severance.

Magnitude of impact

2.1.16. The magnitudes of impact are set out under "Types of Impact" within the report, where the impacts are allocated to one of four categories: Negligible, Minor, Moderate and Substantial. These categories relate to those suggested in the IEMA guidelines and the DMRB, where the impact referred to here as "Minor" is termed "Slight".

2.1.17. There is some concern over the large proportion of effects that will rely on the application of "Professional Judgement" within Table 6.3.2 of the report. To inform this judgement and assist in reaching agreement, it is proposed that the assessment is informed and supported by quantifiable (evidence-based) analysis as detailed below.

Severance

2.1.18. In addition to the IEMA Guidelines, a more detailed scale of impacts is set out in DMRB 11.3.8.7 Table 1, distinguishing between Built-Up and Rural areas and providing more detail as to their application. It is recommended that reference is made to this table.

2.1.19. Furthermore, areas where a 10% increase in flows is considered significant should be identified and agreed.

2.1.20. It is noted that the categories adopted relate to changes in traffic flows along existing roads and are not related to any absolute measure of existing levels of severance. DMRB 11.3.8.6 defines three categories of severance; Slight, Moderate and Severe. Although technically these relate to new severance, i.e. new highway schemes, they provide one possible way of quantifying severance in absolute rather than relative terms. To quantify existing levels of severance, it is suggested that reference is made to these categories.

Pedestrian delay

2.1.21. The use of a threshold of 1,400 vehicles per hour is supported by IEMA guidelines, though unilaterally applying these guidelines should be avoided – regard should be had to the health impacts on reducing pedestrian amenity or increasing delays in travel. We expect the figure of 1,400 vehicles per hour to relate to an exceedance in any hour, not to represent an average.

2.1.22. To assist in some quantification of impacts above this threshold, DMRB 11.3.8.7 figure 1 should be referred to where mean pedestrian delays associated with different road crossing situations are presented in graphical form.

Pedestrian amenity

2.1.23. It is proposed that this will be assessed using professional judgment on links where there is an increase of more than 100% in either total or HGV flows. The use of a threshold of 100% does not appear consistent with the other thresholds. Using this criterion for assessing impact and risks will result in almost all of the impacts being dismissed as "Negligible".

2.1.24. It is proposed that the percentage criteria adopted for "Severance" should be used to inform the assessment of pedestrian amenity. This would mean adopting a threshold of 30% above which impacts would be assessed as Minor/Slight, Moderate

or Substantial. The 10% threshold should also be used for specifically sensitive areas.

2.1.25. The existing levels of pedestrian amenity on the network should be assessed using DMRB 11.3.8.4

Driver delay and accidents & safety

2.1.26. - The driver stress section of the DMRB 11.3.9 should be consulted as the use of the DMRB Driver Stress methodology would allow a more detailed assessment with respect to driver delay and road safety. DMRB 11.3.9.4 should inform the process of professional judgement.

Specifically sensitive areas

2.1.27. This should include areas where there is an increase of 10% or more in HGV flows, not just total flows.

Injury and death

2.1.28. In addition to the above, the TA should include an assessment of the impact of different transport options on the incidence of transport related injury and death. This should inform the Health Impact Assessment.

Construction

2.1.29. As mentioned, the impact of Sizewell outages and other local events, for example the Latitude festival, need to be assessed/accommodated within the assessment of impacts.

Assumptions and limitations

2.1.30. The ES will need to detail the assumptions it has made on the approximate quantities of all incoming materials to be stored on site or at offsite facilities, including how this material will be transported to the site and, proportionately, by which mode.

2.1.31. The assessment of impact of construction related traffic should also consider contingency measures, for example the implication of extended bad weather preventing the use of the MOLF.

2.1.32. Sensitivity testing should also be undertaken to reflect an uncertainty of delivery of materials by rail and sea. This should include alternative plans for the delivery of Abnormal Indivisible Loads (AILs).

Potential impacts and effects

Construction

2.1.33. Clear distinctions needs to be made on the longevity and reversibility of impacts.

2.1.34. The TA will need to include an assessment of recreational trips made by residents of the campus accommodation.

2.1.35. The report refers to impacts on the A12 down to Ipswich; this should refer to the A12 down to its junction with the A14 (Copdock Interchange, Junction 55). The Highways Agency may have concerns around the management of HGV traffic on the A14, in particular at the Seven Hills (Junction 58) and Copdock junctions and over the Orwell Bridge. In the case of the closure of the Orwell Bridge, methods to manage additional HGV traffic on the diversion route through Ipswich will need to be considered.

2.1.36. In response to the Stage 1 consultation, concerns were raised about the impact of construction and commuter traffic on the B1122. This needs to be assessed.

2.1.37. Furthermore, information is required on how HGV deliveries and departures to/from the main site will be managed, together with the volumes and timing of movements associated with the accommodation campus and on-site car park. These issues should be considered within the TA.

Operation

2.1.38. This section of the report refers to the impact of the outage work for each reactor. Clarification is needed on whether this should also refer to Sizewell B and how the outages will be coordinated (if it is possible to do so). The ES will also need to describe how the outage staff will be accommodated and transported to/from the site –for example the level of additional parking.

2.1.39. Consideration should be given to assessing the traffic related to the outage works as a permanent increase on the road network during the operation phased due to their frequency and duration of its occurrence.

2.1.40. The decommissioning phase should also be assessed, as far as is possible, as it will result in an impact over an extended period of time. It may also overlap with the elements of the decommissioning programme of Sizewell B - more information is required.

Potential mitigation

2.1.41. The detail of mitigation provided in the report is considered an early estimate and is not considered exhaustive. An assessment using the criteria set out in Section 6.3, with the additional assessment requirements detailed in this response is likely to identify the need for additional mitigation measures, which will require environmental assessment. In particular reference should be made to the active transport options for the workforce, for example cycle routes to/from park and ride sites. We have also at Stage 1 indicated broad parameters for a Travel Plan, which will need to be provided within the ES.

2.1.42. An effective method of managing the timing of HGV and OGV movements will be required to manage the impact on the network during peak times and any maximum flow quota for key routes. We are yet to be presented with evidence of the efficiency of managing HGV traffic using electronic/camera based systems.

2.1.43. The park and rides will result in a reduction of commuter traffic originating from the north, south or west of the A12 on the local road network and to local villages east of the A12. However, the proposed provision of a 1,000 space car park to accommodate commuters from destinations east of the A12 will result in an increase in traffic on the local network and villages/towns east of the A12 and this will need to be assessed thoroughly and mitigation provided as necessary.

2.1.44. The report does not refer to mitigation of impacts on the B1122 from its junction with the A12 to the site entrance and then to Leiston. This was a concern raised at the Stage 1 consultation. This route should also be assessed against the sensitivity criteria discussed above to ensure the full range of possible effects are examined, as the B1122 has been identified as the primary delivery route.

2.1.45. The current mitigation measures reflect the outcome of assumptions relating to the gravity model, transport model and construction programme and delivery assumptions. There are likely to be cumulative inaccuracies within this process and sensitivity testing should be undertaken to ensure that variability in these assumptions is fully considered.

2.2. Socio-economics

Gravity model

2.2.1. As acknowledged in 6.2.31, the socio-economic environment is of a dynamic nature, underlining the need for sensitivity testing of the gravity model to different economic circumstances. This should then provide a better understanding of the likely need for/nature of appropriate triggers for contingency measures as part of the mitigation proposals.

2.2.2. The sensitivity testing should be informed by appropriate data refreshing to ensure the most up to date information will inform the application at the point of submission.

2.2.3. The ES should also explain all the assumptions used in the Gravity Model – for example around the rates of pay, length of contracts and terms and conditions that will prevail and thus contribute to the attractiveness to prospective employees. Such factors will have a significant bearing on the potential for displacement of the labour force.

Supply chain

2.2.4. The ES should set out how EDF Energy proposes to engage with the supply chain locally and increase its capacity to respond to the demands of the project. This will increase the proportion of labour sourced locally with significant socio-economic benefits. Leakage of benefits outside the area is a major concern of the local authorities.

2.2.5. The development of the Economic Strategy is welcomed, though consideration should be given to the opportunity to engage with other relevant stakeholders.

Skills/employment

2.2.6. The ES should recognise the barriers to employment faced by unemployed/under-employed people in the region. Early identification of these needs can lead to a more effective package of mitigation developed with relevant stakeholders.

2.2.7. The report uses the level of JSA claimants as a measure of unemployment but it would also be useful to recognise that the pool of people who are economically inactive, but wanting to work, is often significantly greater than the numbers who are registered as unemployment benefit claimants.

2.2.8. With reference to paragraph 6.2.35 and Table 6.2.4, whilst there will be a positive impact from direct and indirect job creation, there is a risk that this will create displacement elsewhere in the economy as the construction competes for the same local workforce and skills alongside other sectors, for example construction, manufacturing, engineering. This could make it more difficult for local companies to recruit and retain their workforce and this should be considered in the ES in the terms EN-1 requires.

2.2.9. With respect to mitigation, measures should be put in place for the operational and construction phases. For example, the skills and training strategy should aim to maximise the opportunities for local residents at all stages – in particular enabling local people to secure the long-term operational employment opportunities.

Other effects

2.2.10. Consideration should be given to a public attitudes survey aimed at understanding in particular the less tangible social effects such as local anxiety associated with a major development prior, during and following construction. EN-1 (5.12.3) identifies the potential for impacts on social cohesion. Such concerns warrant analysis and mitigation as necessary.

Accommodation provision

2.2.11. The ES needs to consider the impacts of temporary as well as permanent staff on accommodation provision in the local area during the *operational* phase of development (6.2.38). Paragraph 3.5.1 indicates approximately 1,000 additional staff would be employed during outage work, which, for each reactor, occurs for up to three months every 18 months.

2.2.12. Consideration should be given to the likely cumulative impacts where there are coincident outages on reactors, either both the Sizewell C reactors or Sizewell B, or indeed all three. While it is understood that this would not be planned – unplanned outages do occur and are indeed part of EDF's justification for being unable to rationalise some infrastructure (for example parking) across the A, B and C sites.

Tourism

2.2.13. The ES should recognise the potential for wider impacts on the tourism sector than just the take up of tourist accommodation. The spending patterns of, and use of local facilities by, incoming workers will be different to that of tourists, so that should be assessed. There will also be wider perceptions over the attractiveness of the area during the construction, and potentially operational, period which may have an impact on tourism. Equally, however, it is acknowledged that major construction programmes can be an attraction in themselves.

2.2.14. The discussion on study areas in (6.2.5) should recognise the existence of the Suffolk Coast Destination Management Organisation (DMO) area[2] as a relevant unit for the purposes of assessment. The Suffolk Coast Tourism Strategy[3] describes this area.

2.3. Terrestrial ecology & ornithology

2.3.1. The issue of definition of permanent and temporary impacts has been discussed earlier, though with particular reference to this chapter, while paragraph 7.2.29 subdivides temporary impacts in to further phases, it is not clear how that is then reflected in an assessment of the magnitude of impact (Table 7.2.6).

2.3.2. It is important that the study area reflects the actual extent of the impacts – and that includes those impacts associated with the displacement of recreational activity which may intensify activity on other SSSIs and County Wildlife Sites (Table 7.2.1). For the same reasons the Deben Estuary SPA should be included in Table 7.2.2.

2.3.3. Additionally, we have concerns that the proposed 5km study area for bats (Table 7.2.1) may be insufficient to fully understand the significance of development area for bats – this will need to be justified through further survey.

2.3.4. As indicated earlier, we have some concerns that the ES could underplay impacts on features/resources classified as being of local value (7.2.25). As National Policy Statement EN-1 states, the ES must set out clearly any effects on locally designated sites of ecological importance, and on habitats and species identified as being of importance to the conservation of biodiversity. We would expect therefore to see a thorough assessment of the impacts of the development on local Biodiversity Action Plan (BAP) priority habitats and species. Table 7.2.5 omits reference to the latter.

2.3.5. Consequently, while we welcome the commitment to making full use of the mitigation hierarchy (5.4), in order to do this a comprehensive and robust assessment

[2] www.thesuffolkcoast.co.uk – with area described

[3] Page 10 http://www.suffolkcoastandheaths.org/assets/Projects--Partnerships/BALANCE/TourismStrategy.pdf

of the impacts, including on BAP species will be required. With reference to the proposed loss of the SSSI, we suggest that the Defra biodiversity offsetting pilot metrics are applied[4].

2.3.6. In terms of impacts during construction and operation, those listed (7.2.38/39) do not explicitly identify ecological impacts associated with transport movements. The ecological consequences of the displacement of maritime activity, for example recreational sailing, should also be considered.

2.3.7. It is important that the proposed mitigation strategies across the environmental disciplines are closely aligned to ensure the mitigation proposals are complementary, for example for landscape, ecology and recreation. There will be a particular need for them to make provision for ongoing monitoring with associated trigger points for a review of the mitigation as necessary.

Errors/omissions

2.3.8. Southern Minsmere Levels CWS is incorrectly labelled on Figure 7.2.4 (Number "1" is positioned on Goose Hill which is part of Sizewell Levels and Associated Areas – listed as CWS Reference "2" in key).

2.3.9. In Table 7.2.3 Southern Minsmere Levels CWS text is incorrect as this is mainly grazing marsh - this could be due to mislabelling of this site on Fig ure7.2.4.

2.3.10. The Annex II status of Barbestelle (*Barbastella barbastellus*) should be noted in Table 7.2.4. Also missing is reference to BAP habitats and species - except for breeding birds.

2.3.11. Paragraph 7.2.11 and Fig 7.2.5 should refer to the north east corner of Sizewell Marshes.

2.3.12. Shingle habitat is missing from identified habitats in Figure 7.2.1.

2.4. Landscape & visual

2.4.1. The proposed scope of the LVIA and the methodology is broadly acceptable, though we again emphasise the need to address terminology with respect to the duration of impact as discussed above. In particular, we welcome the three pieces of work that are ongoing - that is a) a review of the landscape seascape baseline; b) ZTV and LVIA/SVIA viewpoints and c) the development of the Landscape Strategy. We also note that discussions on the 'special qualities' of the AONB[5] remain ongoing (7.3.2).

2.4.2. It is however important to clarify that at this stage, viewpoints have been agreed for the operational platform only (7.3.3) and not for the whole of the *"main development site"* as defined on Figure 3.2.1. Further viewpoints will need to be agreed for example for the rail routes taking account of the proposal to store materials adjacent to the line (3.3.3).

2.4.3. We note the recognition of the risks to the purpose of the designation of the AONB identified in EN-6, Volume 2. This statement (7.3.8) and section 7.3.49 should consequently acknowledge that the need for offsetting residual impacts is highly likely, a precedent for which exists with the Sizewell B Dry Fuel Store[6].

2.4.4. We note and welcome that landscape should be taken also as seascape as set out in EN-1 (7.3.6) and that it is recognised that there will be offshore visual receptors (7.3.17 should therefore refer to LVIA and SVIA). An LVIA and SVIA

[4] https://www.gov.uk/biodiversity-offsetting

[5] The glossary reference to AONBs should refer the reader to http://www.landscapesforlife.org.uk/

[6] http://www.suffolkcoastandheaths.org/assets/Grants--Funding/AAF/AAF-leaflet.pdf

assessment to reflect the seasonal changes, and a night time assessment in both cases, will also be needed (lighting from the Operational Service Centre is a particular concern). The ES should therefore provide an indication of the locations, height, design, sensors and luminance of all construction site floodlighting (including the jetty) and all permanent site lighting, together with details of any mitigation measures used to;

- Limit obtrusive glare to nearby residential properties including the extent of light reduction achieved,
- Minimise sky-glow.

2.4.5. Regional seascape units were used for the assessment of the Galloper wind farm, and suggest that these may also inform discussion of the seascape character of the study area.

2.4.6. The ES will need to consider seascape and visual impacts associated with shipping and rail *activity* (i.e. not just the existence of the jetty and the rail line, but the associated transport movements), respectively, during construction. The impacts of the stacks associated with the fuel store and reactor domes along with those related to the permanent beach landing facility need to be reported.

2.4.7. With reference to cumulative effects (7.3.51) Galloper Wind Farm substation *will* need to be included in this assessment. The existing Gabbard onshore infrastructure forms part of the baseline.

2.5. Amenity & recreation

2.5.1. The ES should present a fuller understanding of the likely impacts on recreational activity as a consequence of the development than the Scoping Report suggests. In particular, there needs to be a better appreciation of impacts of the incoming construction workers associated with the campus and, furthermore, the indirect effects arising from changing habits of existing recreational users in response to the development.

2.5.2. While it is understood that high quality leisure facilities would be provided within the campus accommodation, with up to 3,000 bed spaces, some workers will undoubtedly make use of the high quality environment during their residency at the campus.

2.5.3. While the Scoping Report touches on deflection (7.4.22), the study area of 2km (7.4.12) does not have a clear logic and will not be sufficient to address this – it does not even include the entirety of the blue rail route – omission of Aldeburgh/Thorpeness is also particularly noticeable.

2.5.4. The ES will need to present a thorough understanding of how people are using the area at the moment and how those habits are likely to change during the construction and operational phases of development.

2.5.5. In particular, it needs to examine where people may be deflected to and the sensitivity of those sites to increased recreational pressure – for example increased dog walking on SSSIs. It will also need to look at how workers, both in the construction and operational phases may access the site using the rights of way network and how this access may be affected and enhanced to offset this. For example, Bridleway 19 is currently used by commuting workers as well as for recreation. Its temporary closure could deflect cyclists on to busier roads (or indeed participation in cycling/walking may decrease) so this will need to be assessed and mitigated for to ensure a similar standard of recreational opportunities remain available during and post-construction. The findings of this work should also inform the HIA.

2.5.6. These are key construction impacts that are not adequately captured (7.4.35). It should also be recognised any changes to patterns of recreational use could have wider economic consequences, given that high quality recreational opportunities are a significant driver of the local tourist economy (with trails promoted nationally). So, with displacement of recreation is potentially displacement of income. The surveys planned (7.4.16), in addition to capturing quantitative and qualitative data on the use of publics rights of way, should attempt to capture information on local spending. Additionally, there may be actual physical damage to rights of way including that caused direct by the construction work itself and by possible increased level of use by construction workers.

2.5.7. The ES should assess impacts on open access land – this is omitted from further baseline research (7.4.18) and as a possible impact of the development (7.4.35). Paragraph 7.4.13 should also refer to *restricted* byways in its description of a right of way, and carriage driving should be included within list of extra rights. Figure 7.4.1 also has a number of errors that need to be addressed - Roads Used As Public Paths should be shown as Restricted Byways, for example.

2.5.8. In terms of mitigation (7.4.40), it is especially important that long distance routes are kept open during the construction phase. We would also suggest that, in line with the EN-1, the ES should set out opportunities to enhance green infrastructure in the locality by, for example, creating new public access, be it a right of way or open access land, having regard to other constraints, such as ecology.

2.5.9. Re-establishment of rights of way should be to a level commensurate with expected increased use – for example by staff accessing the site during operation.

2.6. Terrestrial historic environment

2.6.1. The impact on Leiston Conservation will need to be assessed – Sizewell B is clearly visible from within and adjacent to it (7.5.20).

2.6.2. It should be noted that English Heritage has now listed at Grade II several WWI, WWII and Cold War military structures at Orford Ness (7.5.22).

2.6.3. An assessment in association with Conservation Officers is welcome, though should include non-designated heritage assets in addition to designated ones (7.5.26).

2.6.4. Table 7.5.1 relies heavily on criteria drawn from the DMRB and its appropriateness beyond road schemes is questionable – reference should be made to English Heritage's Conservation Principles and the new British Standard. In respect of paragraph 7.5.29, reference to '*Standards for Field Archaeology in the East of England* '(Gurney 2003, East Anglian Archaeology Occasional Paper 14)[7] and the Suffolk County Council Archaeology Service Conservation Team documents '*Requirements for Trenched Archaeological Evaluation 2012 Ver 1.3' and 'Requirements for Archaeological Excavation 2012 Ver 1.1*'[8] should also be made

2.6.5. While Table 7.5.1 refers to historic buildings (which clearly could include non-designated as well as designated heritage assets) and historic landscapes, Table 7.5.2 refers exclusively to impacts on designated heritage assets. As mentioned above, non-designated heritage assets should not be excluded from an assessment of the magnitude of change and should therefore be reflected in paragraphs 7.5.45/47/52/53.

2.6.6. The proposed terminology used in assessing significance (7.5.39) could usefully reflect that used in the Section 12 of the NPPF, i.e. 'substantial' and 'less

[7] http://www.eaareports.org.uk/Regional%20Standards.pdf
[8] http://www.suffolk.gov.uk/libraries-and-culture/culture-and-heritage/archaeology/

than substantial'. These are the tests that are applied on a daily basis to heritage assets and are terms in widespread use. 'Less than substantial' could be graded into differing kinds of effects that are not substantial. It is noted that there is some mapping of terms in the Ecology section (Table 7.2.8) to maintain consistency with industry-standard terminology and this could equally be applied here.

2.6.7. In addition to the assessment of inter-relationships and cumulative effects, which is welcome, it may be that individual heritage assessments are required to be undertaken of those designated heritage assets of the greatest importance (and, therefore, sensitivity) within the Historic Environment Study Area - such as Scheduled Monuments and Grade I and Grade II* listed buildings, in order that impacts arising from the proposal can be most fully understood.

2.7. Marine historic environment

2.7.1. No comment

2.8. Noise and vibration

Traffic – related impacts

2.8.1. It is important that the Noise & vibration and Air Quality Assessments are based on the information contained within the Transport Assessment (TA). Data in the TA should therefore be presented in the format that it will be used in the noise and air quality assessments for example 18 hour, 8 hour, hourly, 24 hourly flows, together with proportions of heavy goods vehicles and average speeds to allow transparency and cross checking.

2.8.2. The noise level monitoring locations look to be comprehensive, though consideration should be given to the need for additional points on routes likely to be used by construction workers, such as the A1120. Any short term monitoring of road traffic noise should be carried out strictly in accordance with the "Shortened measurement procedure" as set down in the Calculation of Road Traffic Noise methodology, and be carried out over a full three hour period within the stated hours and not over shorter snapshot periods.

2.8.3. It is acknowledged that road traffic noise monitoring is useful for any noise model calibration and verification work, but that noise level changes during the construction period and once the site becomes operational would be established by calculation and direct comparison of the relevant scenarios.

2.8.4. The number of noise sensitive properties affected in each scenario should be included, so that the overall impact and scale of effects can be assessed. Rather than following the Design Manual for Roads and Bridges to the letter, which may result in the worst affected façade subject to change being counted which is not always the façade facing and closest to the route, the ES should provide a simple assessment of noise level changes for the façade that is closest to the route to allow residents the opportunity of gauging the potential direct effect.

2.8.5. Inclusion of a preliminary programme of construction activities and plant use, to identify impacts and variability throughout the construction period, would clarify impacts. Also, whether night-time traffic movements would be necessary, either for workers or construction vehicles, and any shift working and changeover times, if significant.

2.8.6. It is noted that the currently proposed length of the construction period is estimated to be seven to nine years (plus time for site preparation). The definition of "long term" and criteria for the assessment of magnitude should follow recommendations in the most up to date versions of BS5228 with respect to noise and also vibration, and any other relevant documents. As mentioned earlier, the ES

should generally maintain consistency in the definition of terms (temporary, long, medium short et cetera) unless there is a clear reason to depart from this.

2.8.7. It is noted that the NPPF and specifically the associated Guidance relating to Noise is not referred to and the validity of Table 7.7.3 is queried. Also, whether separate assessment of magnitude criteria should be applied to road traffic noise increases on the construction traffic routes, in accordance with the guidance for short term impacts contained in DMRB. The content of Table 7.7.5 is agreed.

2.8.8. The NPPF Guidance[9] refers to the Noise Policy Statement for England (NPSE), which includes the types of noise which are within its scope, which include:

- "environmental noise" which includes noise from transportation sources; .....
- "neighbourhood noise" which includes noise arising from within the community such as industrial and entertainment premises, trade and business premises, construction sites and noise in the street."

2.8.9. Consideration should be given to the appropriateness of referring to this Guidance (given its status in the NSIP regime) and the description of "Effect Levels" within the assessment. As mentioned above, it is noted that there is some mapping of terms in the Ecology section (Table 7.2.8) to maintain consistency with industry-standard terminology and this could equally be applied here.

2.8.10. The assessment of vibration from road traffic is welcomed. In accordance with guidance, cumulative effects are to be addressed, which is also welcomed.

2.8.11. Generally, the proposed methodologies are acceptable, however, since drafting of the Scoping Report, BS5228 has been updated to BS5228-1:2009+A1:2014 and as mentioned previously, the most up to date guidance available at time of assessment should be used. Furthermore, we note that where professional judgement is relied upon (7.7.9), this should be in the form of evidence-based judgements, rather than reasoning alone.

2.8.12. With respect to road traffic noise impacts, an indication of whether any dwellings adjacent to new or altered lengths of carriageway and also the construction traffic routes would qualify for noise insulation under the Noise Insulation Regulations 1975(as amended), with appropriate explanations, should be included. Any other mitigation measures or mitigation schemes identified for further consideration should be outlined.

2.8.13. With respect to the effects of noise and vibration on people and wildlife, the evidence of different noise levels on human physical and mental health, both of acute and chronic noise exposure has a robust evidence base. This potentially includes comparative studies with non-human species exposed to different noise levels. For example there is a large evidence base on the physiological and behavioural effects of different noise exposure levels on rodents (7.7.15).

Construction-related impacts

2.8.14. The 33 measurement locations and measurement protocol described in the Scoping Report has been agreed with the Environmental Protection Team at Suffolk Coastal District Council. The ES should present the noise monitoring data together with an assessment of magnitude of impact and sensitivity of receptor.

[9] http://planningguidance.planningportal.gov.uk/blog/guidance/noise/noise-guidance/

2.8.15. Where noise or vibration from site construction working is anticipated to have adverse effects on occupiers of nearby residential properties, based on the prevailing background noise levels, utilising BS:5228:09 and BS:4142:90; the ES should detail all such construction and demolition works (for example diggers, excavators, piling, riveters, mixers, explosives, pneumatic breakers, drills, dewatering pumps, boring equipment, compressors, generators etc.) and indicate the mitigation measures to be taken either;

- At source,
- By way of barrier or shielding,
- Any other form of mitigation.

2.8.16. The ES should also detail the degree of noise reduction likely to be achieved by the mitigation measures by way of comparison with the existing background and ambient noise levels, measured as part of the scoping process. Methods of noise or vibration attenuation should be specified for each specific construction activity so as to achieve 'Best Environmental Practice' within the ES. Any other acoustic or vibration data in respect of confined tones or low frequency noise propagation should also be made available within the ES.

2.8.17. All site transportation movements or essential construction works (e.g. dewatering, dredging, marine landing operations etc.) which may be adversely affect nearby noise sensitive properties during the evening or at night should be particularly highlighted as these may cause sleep loss. Mitigation will be particularly important in these circumstances.

2.8.18. It is noted and agreed that BS:8233 will be used as design criteria for the new campus accommodation.

Noise & vibration – operational impacts

2.8.19. Projected levels for general site noise from the newly constructed Sizewell C power station should be calculated and represented as a $L_{Aeq\ (1hour)}$ value during daytime hours and $L_{Aeq\ (5\ minute)}$ value during night time hours at all nearby noise sensitive properties. If noise from the site is anticipated to adversely affect occupiers of any nearby residential properties based on the prevailing background noise levels, then proposed methods of noise attenuation should be specified to achieve 'Best Environmental Practice'.

2.8.20. Projected noise levels for grid reconnections following reactor trips and outages shall be calculated and represented as a $L_{Aeq\ (5\ minute)}$ value at all nearby noise sensitive properties. If this noise is anticipated to adversely affect occupiers of any nearby residential properties based on the prevailing background noise levels, then proposed methods of noise attenuation or time limitations on reconnection should be specified to achieve 'Best Environmental Practice'.

2.8.21. Projected noise levels for the proposed 'Stand-by Diesel Generators' shall be calculated and represented as a $L_{Aeq(5\ minute)}$ value at all nearby noise sensitive properties. If this noise is anticipated to adversely affect occupiers of any nearby residential properties based on the prevailing background noise levels, then proposed methods of noise attenuation or time limitation's on testing times should be specified to achieve 'Best Environmental Practice'.

2.8.22. A proposed 'Complaints Procedure' detailing who will undertake investigations of noise complaints on behalf of the site operators and the scope of amelioration in the event that complaints are justified should be provided.

2.9. Air quality

Traffic-related impacts

2.9.1. No reference has been made to the National Planning Practice Guidance relating to Air Quality. Consideration should be given as to whether this is relevant.

2.9.2. The air quality monitoring regime is acceptable. The Scoping Report advises that Suffolk Coastal District Council is in the process of consulting with the Department of Environment, Food and Rural affairs (DEFRA) on the need to declare an Air Quality Management Area (AQMA) in Stratford St Andrew (7.8.12). DEFRA has now confirmed the need for an AQMA to be declared at this location and, following a Public Consultation currently underway, the AQMA Order will be made in June 2014.

2.9.3. Impacts at locations such as Yoxford, and along the B1122, such as Theberton and Middleton Moor where there are a relatively high number of properties in a rural location, should be specifically quantified. Numbers of properties affected should be included, as well as timescales and durations, which would be relevant to the National Objective Limit levels for the significant pollutants (including nitrogen dioxide and particulate matter (PM_{10}), as set out in the Local Air Quality Management Regime'). The road traffic assessment pollutants of nitrogen dioxide and particulate matter are agreed.

2.9.4. It is noted that traffic datasets derived from the Transport Assessment will be used.

2.9.5. The most up to date guidance available at the time of assessment should be used. A number of the relevant documents are under review at the present time. Reference could be made to the Suffolk Local Authorities Air Quality Management and New Development 2011 Planning Guidance[10].

Construction – related impacts

2.9.6. The ES should detail all potential construction site operations which may give rise to atmospheric concentrations of particulate matter (PM_{10}) or dust (e.g. excavation, demolition, use of explosives, movement of vehicles, loading operations, stockpiling of soil and rubble, crushing of material etc.). These should be specified together with the point source location and the particular methods of dust suppression to be used for each specific activity. The study area described in 7.8.19 should reflect that dust emissions may arise from transport modes other than road – i.e. by rail too and these may arise further than 500m from the site entrance.

2.9.7. The predicted concentrations of particulate matter (PM_{10}) and dust for each receptor should be formatted for comparison with the Local Air Quality Management Regime and the objectives included in the Air Quality (England) Regulations 2000 and Air Quality (England) Amendment Regulations 2002. The methodology as laid out in the Scoping Report for evaluating the magnitude and significance of air quality effects from construction is agreed.

2.9.8. If any of the above Air Quality Standards or Objectives is predicted to be exceeded by the above mentioned activities, further assessment will be required. This may include monitoring at relevant receptor locations, detailed computer modelling and investigations of solutions to reduce pollutant concentrations.

Operational impact

[10] http://www.suffolk.gov.uk/business/planning-and-design-advice/supplementary-guidance-air-quality-management-and-new-development-2011/

2.9.9. The ES should detail the atmospheric concentration of the seven pollutants included in the 'Local Air Quality Management Regime' namely; carbon monoxide; nitrogen dioxide; benzene; 1,3-butadiene; Lead; sulphur dioxide; and particulate matter (PM_{10}) which arise from site related Combustion Processes including stand-by equipment. These pollutants shall be predicted at the nearest relevant receptor locations. The predicted concentrations for each receptor shall be formatted for comparison with the objectives included in the Air Quality (England) Regulations 2000 and Air Quality (England) Amendment Regulations 2002. Again, Sizewell Beach should be included as a relevant receptor location for the pollutant objectives with averaging times of 15 minutes and 1 hour.

2.9.10. Predictions should also include the combined emissions arising from Sizewell B and C power stations at the nearest relevant receptor locations. It is important to also include emissions from standby equipment. The methodology for evaluating the magnitude and significance of air quality effects from site operation as laid out in the Scoping Report is also agreed.

2.9.11. Full details shall be submitted regarding the type, location, chimney height requirements and emissions from the Standby Diesel Generators. If any of the above Air Quality Standards or Objectives are predicted to be exceeded by the site related Combustion Processes, including stand-by equipment, further assessment will be required. This may include monitoring at relevant receptor locations, detailed computer modelling and investigations of solutions to reduce pollutant concentrations.

2.10. Soils & agriculture

2.10.1. Reference is made to returning land to agriculture (7.9.33); we would prefer, as part of the 'Estate Vision' to see the whole of the estate returned to semi-natural habitats with gradation of public access south to north.

2.11. Geology & land quality

2.11.1. A site survey including samples from 150 locations across the Sizewell C site has been undertaken for the presence of Contaminated Material. This survey has not indicated any significant forms of contamination and as such the site remains in a low to very low category of potential risk for contamination. Additional sampling will need to be undertaken during site excavation and any identified contamination will need to be safely removed or encapsulation on site. The assumption that there is no anthropogenic contamination beyond the normal application of fertilisers and pesticides should however be validated (7.10.24).

2.11.2. Details of any material (e.g. soil, peat, contaminated material *et cetera*) removed from site for disposal purposes or safely encapsulated on site shall be notified to both the Environmental Protection Team at Suffolk Coastal District Council and the Environment Agency. Validation shall be required following this remediation action to indicate the site is suitable for its new specified use.

2.11.3. Detailed evidence in the form of certification to 'CLEA standard' will need to be supplied to indicate the source and suitability of all imported material used on site.

2.11.4. With reference to the samples undertaken (7.10.5/13) it is not clear for which radionuclides they were tested or against what they were compared.

2.12. Ground water

2.12.1. The ES should identify the magnitude and any potential impact on hydraulic continuity caused by: dewatering, coffer dam construction, spoil heap/stockpile leachate, runoff or infiltration, which may adversely affect private water supply quality in the area, and specify proposed measures to protect the aquifer source.

2.12.2. We are particularly concerned that the potential impacts of the construction of the bridges and their ongoing impact on groundwater processes are assessed and managed.

2.12.3. Groundwater monitoring (including for radiochemicals) should be included within the mitigation plan and this should cover flows outside the cut-off wall in the SSSI. There should not be a complete reliance on modelling – this will need to be ground-truthed (7.11.40).

2.13. Surface water

2.13.1. With reference to Table 7.12.3, we suggest that watercourses in, and feeding into/adjacent to, protected sites should be assigned as being of high value.

2.13.2. During construction the cut off wall adjacent to Sizewell drain could impact on surface water hydrology.

2.13.3. As with groundwater, the ES should include provision for monitoring, during and post construction, which links to appropriate mitigation as necessary (7.12.38).

2.13.4. The ES should assess all temporary (for example for the campus) and permanent foul water drainage arrangements, with any sea water disposal discharge designed to;

- Minimise any harmful effect on sea life diversity,
- Control temperature and turbidity which may encourage algae blooms.

2.14. Coastal geomorphology and hydrodynamics

2.14.1. It is important that the study area is clearly defined – which is not the case in Figure 7.13.1. The study area must include the potential impact of interrupted 'natural' sediment flow on the coastline from the Blyth Estuary to at least Orford Ness. However, if the observed net sediment transfer is southwards (7.13.3), the southern boundary of the Telemac study needs to be moved further south to include Shingle Street to correct the current northern bias.

2.14.2. The ES should recognise that during the lifetime of the Sizewell C project rates of erosion could be significantly different to the current era. 7.13.6 notes that there has been high periods of erosion in the past but since 1925 it has been relatively low. However, 1925 is just 90 years ago and this development will last more than 100 years into the future and therefore the implication that erosion will stay low may be misleading. In this context, full consideration should be given to the predicted impacts of climate change including the potential for acidification / chemical change to the sea over the coming decades and its impact on the protective crag rock that the site depends upon for its protection.

2.14.3. The ES should ensure that it considers the impacts arising on a worst-case basis – for example, while the jetty is described as temporary, the ES should ensure that it assesses its maximum possible lifespan.

2.14.4. In the Marine Ecology section outfall structures are identified as potentially affecting sediment transport (7.15.32). This is not recognised in the corresponding section of the Coastal Geomorphology chapter.

2.14.5. As detailed in other sections of this report, we have concerns with the guidelines to be used to determine descriptions of magnitude, particularly so given the predominantly soft nature of the Suffolk coastline. In these circumstances impacts of the development may well be quite localised within the study area, but nonetheless have very material consequences if those impacts affect property frontages. Table 7.13 is constructed in such a way that, for example an effect of a ten year duration, affecting half the study area would be described as low magnitude.

2.14.6. With respect to assumptions and limitations (7.13.21), the ES should acknowledge that the baseline scenario and also the potential impacts of the new build and operation of the site will be difficult to predict with high confidence and so a range of potential outcomes need to be forecast and which will require ongoing monitoring to review and respond to in either a proactive or reactive fashion. The monitoring plan and associated interpretation / response liabilities are a critical issue for the local authorities.

2.14.7. The section on mitigation (7.13.27) should acknowledge the potential for the need for the protection of the Sizewell C site (possibly A and B sites too) prior to full / final removal, requiring interventions that disrupt 'natural' sediment movement across the frontage, which produces a negative impact on adjacent shorelines i.e. Thorpeness, Aldeburgh, Orford and (less likely) Minsmere and Dunwich. These impacts may cause significant effects and require mitigation, albeit decades hence. The ES should recognise this and create a process under which this risk is assessed and appropriate mitigation planned and delivered.

2.14.8. It is absolutely critical that the ES sets out how the impacts of the development will be monitored for the lifetime of the development and how that monitoring will inform any remedial action required.

2.15. Marine water quality and sediments

2.15.1. The ES should clarify which radionuclides have been measured (7.14.17). Furthermore, evidence has shown that radionuclides, through the process of adsorption, will concentrate in fine sediment area, for example in mud flats and salt marshes. Therefore, in terms of sediment analysis, further studies should be undertaken within the Alde and Ore estuary to establish the monitoring baseline on contaminate build-up.

2.16. Marine ecology

2.16.1. Underwater vibration should be identified as a potential impact (7.15.25), the mitigation for which should include monitoring.

2.16.2. It is reported that Sizewell B 'impinged' Sprat, herring band whiting 'in large numbers'; it is not clear how this would score against the degrees of magnitude in 7.15.16. The ES should report on the cumulative impacts on commercial fisheries through direct fish mortality and through loss of fishing grounds associated with Sizewell B, C (including jetty/outfall construction) and laying of offshore wind farm cables (and/or placement of turbines) for both Galloper and other windfarms within recognised commercial fishing areas.

2.16.3. Consideration should be given to aligning this study area with that related to the HRA process – as mentioned above the interrelationship between the EIA and HRA process should be clear.

2.17. Navigation

2.17.1. The ES should assess the potential for ecological effects to arise from rerouting of shipping traffic (7.16.22).

2.17.2. Recognition should be made of the opportunities on the Alde-Ore estuary (7.16.9).

2.18. Radiological

2.18.1. The ES should assess the need for monitoring (during appropriate conditions) of airborne radiological pollution through either aerosol (very fine spray) or sea spray dispersal – reference should be made to the research undertaken at North Uist.

2.18.2. The Scoping Report does not specifically rule out the future use of Mixed Oxide Fuels (MOX) at Sizewell C. The ES should either rule out the use of MOX fuel or comment on the radiological significance and justification for this fuel if it is intended to be used.

2.18.3. The ES should identify and compare baseline/existing terrestrial and marine radiological data with any projected data for the new Sizewell C site.

2.18.4. Detailed information should be provided as to the integrity of all radioactive material storage and any radioactive waste packaging facility on site. This should include comments on the suitability of storage over the proposed 'lifetime' of the site.

2.18.5. Any intended off-site storage of radioactive waste, whether interim or permanent, should be detailed in full, including location and capacity, together with the radiological significance and justification for storing this type of fuel off-site.

2.18.6. The issues surrounding the utilisation Sizewell C for the storing of radioactive waste derived from other sources, together with any impact of increased radioactive discharges that may arise in such circumstances, should be considered within the ES.

2.18.7. We would ask PINS to confirm through which process would the potential environmental effects of an incident involving radioactive material be assessed - for example impacts on ground water/surface water features should emergency cooling be required. The Scoping Report gives little attention to the potential environmental implications associated with the storage of spent fuel (section 3.8).

2.19. EMFs

2.19.1. The ES should identify any pylon or overhead power-line/cabling alterations to be undertaken in connection with this development, together with any likely increases of the Electro-magnetic radiation fields, which may adversely affect occupiers of nearby residential properties.

2.20. Health and Safety

2.20.1. The ES should detail a health and safety risk analysis for site workers and any members of the public which may be adversely affected by the constructional phase of the works. A further health and safety risk assessment should be provided to cover public safety for all access along the shore line and public areas surrounding the site once Sizewell C is operational.

2.21. Conventional waste

2.21.1. The ES should detail all non-radioactive wastes stored or disposed of on site, identifying and categorising material so as to indicate 'Best Environmental Practice' is being taken, for example storing fuel oil stored in double-bunded tanks etc.

3. ASSOCIATED DEVELOPMENT

3.1. For all sites:

3.1.1. the **amenity and recreation** studies should gather information on the extent to which local roads are used by all non-motorised users, particularly pedestrians. Generally, it should be noted that mitigation could also be achieved by *enhancing* local non-motorised access.

3.1.2. **Ecological studies** should have regard to Biodiversity habitats and species. The study area for bats in particular will need to be agreed.

3.1.3. Viewpoints will need to be agreed for the **LVIA**. Mitigation for landscape and visual effects should include advance planting and/or 'instant' hedging – else

mitigation is not likely to be effective during the lifetime of the associated development.

3.1.4. It is agreed that **noise and vibration** impacts should be assessed using the same methodologies as discussed above. Care however needs to be taken with the description of potential mitigation measures – there is reference in Tables 8.3 and 8.6 to "screening or planting" for noise and vibration mitigation. Planting would not necessarily provide adequate noise mitigation unless very dense and further explanation of this would be helpful.

3.1.5. environmental impacts on nearby residential properties (e.g. construction works, noise, dust, lighting, foul drainage etc) should be assessed and mitigation measures provided where necessary.

3.1.6. An Air Quality Assessment and calculated Traffic Predictions should be provided within the ES for the chosen park and ride sites and should any of the Air Quality Objectives (AQO) be predicted to be exceeded, then mitigation measures should be recommended.

3.2. Northern Park and Ride

3.2.1. The access details will need to be agreed with the Highways Authority. A solution is required to provide a layby area for long vehicles to pull in once they have crossed the East Suffolk railway line. There have been discussions with Network Rail but no proposals have been presented to date.

3.2.2. The impact of the new car park to the south of the rail station will need to be considered in any assessment.

3.3. Southern Park & Ride

3.3.1. The access details will need to be agreed with the Highways Authority. There are concerns about the safe egress of traffic from the existing slip road onto the A12 which will need to be assessed and appropriate mitigation proposed

3.3.2. In view of the likely need to close the existing bridleway through the site, local rights of way enhancements are particularly important for this site.

3.3.3. Reference is made to potential ecological impacts on the River Deben – this will need to be picked up through the HRA process.

3.4. Rail Line Extension

3.4.1. The proposed new rail routes into the site cross a number of Public Rights of Way. There appears to be an assumption within the report that these routes will be closed or diverted. Although this may be considered for temporary works, more sustainable mitigation will be required for the proposed construction period. Mitigation should include the potential for grade separation or combining with safe and convenient road crossings (Table 8.9).

3.4.2. Further information will be needed with respect to the impact of the proposed rail routes on the existing highway network, especially with respect to any proposals for new rail crossings.

3.4.3. The amenity and recreation study assess the use of open access sites in the area that may be affected.

3.4.4. The selection of viewpoints will need to have regard to the potential for soil storage alongside the rail line. Mitigation should therefore consider a means of minimising this storage.

3.4.5. Noise disturbance from unloading of materials may be a source of concern should the potential option of a terminal north of King George's Avenue, Leiston be used at unsociable hours.

3.5. A12 Improvement – Farnham Bend

3.5.1. The options presented in the report will need to be assessed in line with Section 6.3 of the report together with the additional assessment criteria identified in this response.

3.5.2. The options presented in the report remain as presented in the Stage 1 Consultation. Based on the evidence presented to date, these are not considered likely to be sufficiently extensive or acceptable and the local authorities maintain their support for a bypass of the four A12 villages of Marlesford, Little Glemham, Stratford St Andrew and Farnham. The ES will need to ensure that adequate mitigation is provided to address impacts arising in all of these locations.

3.5.3. The ES will need to assess the construction method and layout including timing of works and piling for example. Consideration should be given to noise and dust from construction works and noise from the new road layout. Mitigation measures such as screening, quiet road surfacing, speed limits that can reduce these impacts on local residents should be discussed within the ES. Air Quality modelling should also be included for this purpose and should any of the Air Quality Objectives (AQO) be predicted to be exceeded, then mitigation measures should be recommended.

3.5.4. Similar assessments would likely be needed for any other highway improvements.

3.6. Visitor Centre

3.6.1. The ES will need to detail at what point the Visitor Centre will be constructed and then become operational –cumulative impacts will arise with the other associated development sites as well as the main site development. It is likely that this facility will attract more pedestrians and cyclists to the area and sufficient mitigation will be required to accommodate this increase in vulnerable road users.

We trust that these comments are useful. If they require further clarification, please do not hesitate to contact us on the details above.

Yours sincerely

[redacted]

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[redacted]

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