

TECHNICAL APPENDIX

Detailed framework for Suffolk Councils response to EDF Energy's Stage 1 consultation document for a Sizewell C Nuclear Power Station

Supporting Information

This Appendix sets out the details supporting the recommendations in the main Cabinet report dealing with the Suffolk Councils' response to EDF Energy's Stage 1 Consultation on Sizewell C proposals.

Economic Growth, Supply Chain and Skills

1. The main report identifies that the coverage of economic issues in the consultation document is quite modest in its scope at this stage, given the breadth of the opportunities created by this scale of development. In the absence of specific proposals, the local authorities would raise the following issues with EDF in future discussions. Many of these matters have been satisfactorily dealt with in the context of EDF's earlier proposals at Hinkley Point in Somerset and it is anticipated that such approaches can be adopted locally in Suffolk.

Supply Chain

1. Concerns have been raised that businesses which win contracts in France and Somerset for previous power station projects will simply roll their operations into east Suffolk rather than creating an opportunity for a more permanent legacy in Suffolk. In order to maximise the opportunities for local businesses to win a significant share of the contracts for Sizewell and other new nuclear projects, the following proposals are made:
2. Consultations need to take place between EDF and the business representative organisations such as the Federation of Small Businesses, Chamber etc as well as geographic communities. In particular:
 - a) The Chamber of Commerce website encouraging local firms to express an interest in supplying the project is a positive step but a more proactive approach is required to stimulate local interest. Good practice does exist in terms of maximising the local supply chain from the Olympic Park and we should press EDF to explore replicating this in Suffolk. Another example of good practice is the efforts made to ensure that local people and contractors are employed in the construction and operation of the Energy from Waste plant at Great Blakenham;
 - b) A local procurement presence or supply chain adviser would signal EDF's serious intention to maximise local economic benefit; and
 - c) Little reference to specific economic impacts of the development is provided i.e. what is the likely impact on local economies. The Olympic Park had a legacy programme in place prior to the event. EDF should have a similar programme that will help to ensure that the investment in Sizewell has a lasting and beneficial legacy. The

Council is committed to working as closely as possible with EDF to deliver such a legacy

3. **EDF will need to continue working with the local authorities and other bodies in the East of England to provide opportunities for local businesses to take advantage of this project most effectively both through the stimulation of the local supply chain and the development of a legacy programme to ensure that the benefits to the wider economy endure beyond the construction phase.**

Skills

4. EDF's commitment to local skills development is welcomed but its 34% target for local employment should be seen as the minimum expectation and the Council's ambition is to see as many local people as possible achieve high skilled employment. To this end:
 - a) EDF should work closely with local authorities and other agencies to ensure an economic legacy beyond the construction phase and have a strategy to deal with the potential 'boom and bust scenario';
 - b) The development has the potential to catalyse sustained improvements in education and skills attainment and EDF should be expected to engage with local authorities and others in the development of this; and
 - c) In particular, the local authorities wish to see close working with EDF on Suffolk's 'Raising the Bar' initiative.
5. **In pursuit of these objectives, following Stage 1 and prior to the application to the Planning Inspectorate, EDF needs to seek agreement with the local authorities on the following:**
 - d) **Development and implementation of education and workforce strategies relating to the construction and operational phases of the project, including how 'hard to reach' groups will be engaged;**
 - e) **The type of interventions and support projects required to maximise the opportunities for Suffolk people, including pathways to higher skilled occupations and the up-skilling and re-skilling of workers to sustain employment at each stage of the development and into the operational phase in association with the Council's Raising the Bar initiative. EDF will need to work with other companies in the energy sector in the region; and**
 - f) **The degree to which skills displacement as a result of the project can be mitigated.**

Community and Social Issues

6. At the time of the construction of the previous Sizewell power stations, there were a considerable number of social issues that arose due to the additional pressure on existing community resources and the nature of the construction workforce. Lessons have been learnt through extensive

research undertaken at that time and EDF recognises that it will need to produce measures to tackle these matters. However no evidence has been included in the consultation and EDF has said that it will work with local service providers to work up measures which it will include in the Stage 2 consultation. The Councils will be a key organisation to engage in such work.

Community benefits

7. While a considerable proportion of the population in the area around Sizewell will benefit from the economic advantages that the construction and operational phases of a new nuclear power station will bring, there will also be others who will not see those advantages and for whom the nuclear power station will only be seen to be a disadvantage. In these circumstances, community benefits have been seen as a way to compensate the wider population. Community benefits have been defined as “a payment in money or kind to a local community in recognition for hosting a development that, whilst delivering national benefits, imposes a particular environmental, financial or other burden upon the locality where it is sited” (New Nuclear Local Authorities Group May 2012).
8. In its National Infrastructure Plan 2011, in relation to new nuclear, the Government committed to: “engage with developers and local authorities on community benefit and bring forward proposals by 2012 for reform of the community benefit regime to provide greater certainty for all parties”. To date there has been no announcement on this subject.
9. **The Council will continue to work with other authorities on the New Nuclear Local Authorities Group (an LGA Special Interest Group representing nuclear “host” authorities) to lobby Government and the potential operators for a satisfactory outcome to this issue.**

Environment

Key Environmental Issues

10. The key findings of the Sizewell Appraisal of Sustainability and Shadow Habitats Regulations Assessment cited in the National Policy Statement (NPS) highlight areas of significance on, amongst other things:
 - g) the nominated site lies on the Suffolk Heritage Coast and is wholly within the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB);
 - h) potential adverse effects on a number of nature conservation sites of European and UK importance, including the Outer Thames Estuary, the Alde-Ore Estuary and Minsmere to Walberswick Heaths and Marshes European Sites as well as Sizewell Marshes and Leiston-Aldeburgh Sites of Special Scientific Interest (SSSIs); and
 - i) effects on water quality and fish/shellfish populations in nearby coastal waters due to the abstraction and release of sea water which will have been used for cooling.
11. More subsequent survey of the site and planned lay-down areas has also identified the potential for significant adverse impacts on European Protected Species, particularly bats.

12. Baseline surveys undertaken to date have highlighted a number of nationally designated archaeological sites and listed buildings, and sites of high archaeological significance and potential, which have the potential to be adversely affected by the proposals.
13. The documents accompanying the consultation provide an initial but superficial analysis of the environmental issues associated with the proposed development. The consultation summary document underplays the environmental impact, contrary to the National Policy Statement (NPS), by stating that [page 5]: “A range of potential impacts on the environment could arise from the construction and operation of the power station”. There is no doubt that a new power station at Sizewell will have a significant impact on the landscape, wildlife and amenity of the area; the question is to what extent.
14. **AONB:** As stated in the NPS, the proposed development will have a significant and long lasting visual impact on the landscape character and special qualities of the Suffolk Coast and Heaths Area of Outstanding Natural Beauty, part of which is also defined as Heritage Coast. Sizewell nuclear power station is wholly within both. The NPS also states that there will be limited potential for mitigation of these impacts, which could have an effect on the purposes of designation. The proposal lies at the narrowest part of the AONB and the building itself will be a permanent feature on the coast, seen for many miles north and south, for many decades. For the duration of the construction phase the lay-down area will cross the entire width of the AONB.
15. The design and layout of the previous B station, in particular the combination of colour choices, clean lines and lack of visible low level clutter has created an iconic building which goes a substantial way towards reducing the visual impact on the landscape character of the surrounding area. It is essential that the final proposal for the C station should complement the high standards of design met by the B Station and fit into the landscape as sympathetically as possible. Innovative approaches (such as the false dome on the B station) should be applied in order to ensure that the proposal has adequate respect for the nationally designated landscape in which it is located.
16. **Ecology:** The construction of the main site will involve the permanent loss of 4.6 ha of the nationally designated Sizewell Marshes Site of Special Scientific Interest (SSSI). There is a need to identify the minimum width for the remaining SSSI corridor to function ecologically and to ensure that at least this width is provided. Replacement habitat will be required to compensate for both direct and indirect impacts to SSSI features and this should be provided as close as possible to maintain ecological connectivity. As newly created habitats cannot function at the same level as SSSI habitats, offsetting proposals are likely to be required for residual impacts. In addition there are a wide range of other nationally and internationally designated wildlife sites in the vicinity which could be affected by the new facility or its construction. The NPS cites the Outer Thames Estuary, the Alde-Ore Estuary and Minsmere to Walberswick Heaths and Marshes European sites, as well

as Sizewell Marshes and Leiston-Aldeburgh SSSIs. In addition to these designated sites there are also a number of protected species in the area which are likely to be affected. The potential impacts will need to be assessed and the mitigation hierarchy applied, including biodiversity offsetting if residual impacts are identified.

17. The documents include varying levels of assessment for the different parts of the proposal. Evaluation of the environmental and heritage issues associated with the main site and lay-down area have been subject to extensive initial assessment including field work. However the detailed findings of this work are not included in the documentation and it is therefore difficult to check and comment on them. The level of assessment of the options for the associated development has not thus far been as detailed as that for the main site and further work will be needed before final choices are made on the locations selected.
18. For example, EDF will need to develop an ecological mitigation and management plan to minimise the impacts. Impacts on bats and reptiles particularly will need adequate mitigation. The documents accompanying the consultation provide insufficient information as to how the impacts on bats or reptiles will be mitigated or offset. Preferred options for lay-down and associated development including campus and railhead facilities will all be centred on the area of most importance for bats, particularly Barbastelle bat, a species specifically cited in EU Directives. It is unclear how these impacts will be mitigated, if indeed they can be. Also reptile mitigation habitat recently constructed will be lost if the preferred campus option is realised.
19. The environmental report makes assertions regarding the extent of impacts and the effectiveness of outline mitigation which are not robust. As noted above, the key issue will be the provision of sufficient information on how designated landscapes and sites (e.g. AONB and Sites of Special Scientific Interest) and protected species such as bats and otters, are likely to be impacted by all parts of the development, in order to identify an appropriate mitigation hierarchy to minimise significant effect. To this end it is essential to agree an evidence plan to ensure the process and data is robust before Stage 2 consultation.
20. As noted above, the NPS makes it clear that opportunities to mitigate impacts may be limited, so the principle of offsetting residual environmental impacts is an important one to establish at this point.
21. A landscape/biodiversity vision for the EDF estate has been developed amongst officers, wider environmental stakeholders and EDF Energy for some time and outline concepts are set out in the consultation. The broad principle of the landscape vision is to return the estate to a mosaic of heathland and woodland, with public access. This is a widely supported approach. While this will see the loss of some agricultural land, it should be noted that the landscape vision will form an important part of the mitigation strategy for the impacts on landscape character, wildlife and amenity of the area. It should also be noted that a return to a heathland/woodland mosaic will also be a more sustainable form of land management, as it will require no irrigation or inputs of fertiliser or

pesticide. The landscape strategy will also help to support wider initiatives including the development of ecological networks, linking Minsmere and Dunwich Heath to the north with Aldringham Walks and other important habitats to the south. The development of ecological networks in Suffolk is a strategy supported by the Green Economy Pathfinder, and through the planning system is a concept specifically cited in the National Planning Policy Framework, as a means to deliver Government's Natural Environment objectives. Finally of course it should be noted that heathland habitat has drastically declined over several decades, often giving way to intensive agricultural land. The landscape strategy presents an opportunity to develop a landscape for people and wildlife, in one of the most important wildlife areas in lowland England.

22. **EDF to be informed that the Council considers that, given the high quality of the landscape and ecology in the area, and in particular the national designations of both that will be affected, it is important that the company delivers the scheme as an exemplar of how major infrastructure schemes can be accommodated in an area with such constraints and how mitigation measures may be developed to overcome any remaining impacts. If this development is to be an exemplar, then a very high quality of design of the buildings and landscaping needs to be achieved and unavoidable impacts effectively mitigated. In addition, enhancements to the AONB and wider area should be achieved. This may partly be attained through a landscape vision for the EDF estate but may also require wider measures. Enhancements to the local biodiversity network should also be considered to facilitate climate change adaptation for wildlife and to improve the amenity value of the land around the site.**

Coastal Processes

23. The consultation documents contain very little detail on proposed works that may impact upon the coastal zone, yet the Sizewell C development site has potential to change the way in which the local shoreline evolves over the construction, operation and decommissioning phases. During the construction phase there is a particular concern through the temporary use of a Marine Offloading Facility (MOLF). The future design of the MOLF must minimise its impact (visual/ noise/ light/ coastal processes etc) of 24 hour working whilst in place. A clear process is required for either its removal with or without residual structures. In the longer term, the operational structures and their associated coastal defence structures have the potential for major impacts on a wide area of coast and in the light of potential sea level rise. There is also the potential for the permanent retention of some element of the MOLF for long term transport of replacement parts. It is known that EDF has been conducting surveys for some time on the coastal processes in this area.
24. The Councils' view is that the most effective approach to the management of impacts that could exceed or accelerate natural change (typically erosion) is a robust monitoring and impact assessment

process. This should be designed to provide a high level of understanding of the nature and variability of natural processes acting on the development site and adjacent coastline and a view on if and how the development may alter those processes. Where assessment shows there is forecast to be an impact that worsens natural change, then mitigation should be provided by avoidance or correction. The success of such an approach will depend on a commitment by the developer to undertake data gathering, analysis and actions that will inform management decisions. In this case, the process may need to be delivered by means of a formal agreement between the local authorities and the developer. Any structures to be included in this development should be designed to minimise impact on the wider coast, not just the frontage of the power station itself.

25. Communities in close proximity to the proposed and existing power stations will have a keen and vested interest in the assessment of the short and long-term impacts on coastal processes of the proposed Sizewell C site works. This should be recognised and consideration given to involving coastal communities, via nominated representatives, at the earliest time to share information.
26. The Stage 1 consultation process will raise awareness and therefore it may be helpful to proactively explore and agree with project partners EDF and the Environment Agency, a mechanism for topic-specific engagement prior to a formal EDF-managed consultation on coastal management.
27. The long term implications on coastal processes of any development at Sizewell, its potential impact on others and the potential impact of others actions or non action (e.g. future of Minsmere Sluice) requires a coastal strategy to be developed. This should cover the future management of not only the entire Southwold to Thorpeness bay but also south to include the communities at Thorpeness and Aldeburgh and the features of Slaughden and Orfordness.
28. **The Council considers that any structures that could have an effect on coastal processes should be specifically designed to minimise impact on the wider coast, not just the immediate frontage of the power station. There should be continued monitoring of processes and avoidance or correction if necessary. As a priority develop a coastal strategy for the entire Southwold to Thorpeness bay working through a partnership approach with a range of partners including District Council, Environment Agency, EDF consultants, other stakeholders and community representatives. There should be robust and continual monitoring of coastal processes with clear and agreed triggers for action to correct any consequential changes to the coastline throughout the development, operation and decommissioning of Sizewell C. There should also be continued and active involvement of local communities and stakeholders in sharing information and engagement of the local authorities with EDF and the Environment Agency in the development of coastal management proposals throughout the**

development, construction, operation and decommissioning stages.

Waste Management

Nuclear waste

29. Generally, the Consultation provides very little information about radioactive waste arisings or spent fuel management. EDF should ensure that for the Stage 2 consultation information about the likely volume, character and profile of radioactive waste arisings is provided, including throughout the decommissioning phase.
30. In addition, it would be helpful if EDF describes how it has considered consolidation of radioactive waste management between the B & C stations and if possible with the decommissioning A station.
31. Spent fuel used in the EPR (European Pressurised Reactor – as proposed for Sizewell C) will initially remain in a “wet pond” while it cools. The Consultation does not indicate how spent fuel that has cooled sufficiently to be removed from the wet pond will be managed. The recent proposals for the new Sizewell B fuel store favoured dry storage and planning permission for that has now been granted and commencement is imminent.
32. The Hinkley Point C application includes proposals for further wet storage. This decision was queried by the Nuclear Legacy Advisory Forum (NuLeAF – the Local Government Association special interest group of which both councils are members) particularly in the light of the decision to pursue dry storage at Sizewell B. In addition, the Royal Society produced a report in the aftermath of the Fukushima Tsunami examining the resilience of different types of spent fuel storage and concluded that dry storage was more resilient.
33. Earlier discussions with EDF suggested that it might pursue a wet store solution at Sizewell C. However this is not clear from the Stage 1 consultation. EDF should clarify its choice of spent fuel storage and explain why this solution has been selected. EDF should also explain how long any fuel would need to be retained in a wet store to provide sufficient cooling to allow the material to be transferred to a longer term storage facility.
34. The Interim Spent Fuel Store (ISFS) is likely to be on-site for a period well beyond the anticipated lifetime of the C station and will remain in the landscape potentially for decades afterwards. To an extent, this would be dependent on the Government’s progress on delivering a national Geological Disposal Facility for waste fuel. EDF should be asked to consider the contingency arrangements should it prove impossible to deliver such a geological repository or the period for delivering such a facility is significantly delayed.
35. Consideration needs to be given to the visual relationship between the B station Dry Fuel Store and the proposed C station ISFS especially as

these buildings, along with the legacy buildings from Sizewell A are likely to remain on-site well beyond decommissioning of the B and C sites.

36. Given the precedent set by the creation of a Sizewell B Dry Fuel Store Amenity and Accessibility Fund, it is considered that a similar requirement should be made in respect of the Sizewell C ISFS to reflect the delay that the presence of this building introduces to the potential restoration of the site and to the impact it will have on the amenity and accessibility of the AONB. However it may be appropriate for this to be included within a wider package of community benefits.
37. The proposals include a facility for the storage of Intermediate Level Waste (ILW). It would be helpful to seek assurances from EDF that the ILW store would only manage ILW arising from Sizewell. It is likely that the ILW store would remain on site until the Geological Disposal Facility referred to above is available. Again, opportunities should be considered for consolidation with ILW storage requirements at the Sizewell A & B Stations and, in design terms, with the proposals for the ISFS. It is likely that a number of discrete buildings will remain on site after decommissioning of the main stations and careful thought should be given now to how these would be disposed across the whole Sizewell site and within the landscape in future.
38. The destination for operational low-level waste is unclear. This should be set out in more detail at Stage 2 and reassurance sought from EDF that the intention on decommissioning is for the complete radiological clearance of the C site and for it to be fully de-licensed (excluding the ISFS and ILW store, in the interim).
39. There is no reference to the management of Low Activity LLW or VLLW arisings.
40. **With regard to nuclear waste arising from this development, EDF must:**
 - a) **clarify its choice of spent fuel storage;**
 - b) **clarify its contingency arrangements for fuel storage should it prove impossible to deliver a geological repository or the period for delivering such a facility is significantly delayed;**
 - c) **demonstrate the relationship of the fuel storage buildings on the B and C sites;**
 - d) **demonstrate what consideration has been given to consolidating spent fuel and ILW storage across the Sizewell estate; and**
 - e) **consider an element of the community benefit being related to the possible long term issues of hosting the work storage.**

Non-radioactive controlled wastes

41. The consultation makes plain that huge quantities of potentially surplus material will be generated by the construction. It is suggested either that

further assessment might reduce the overall estimate of waste arisings or that a greater proportion might be capable of beneficial use.

42. It is proposed that a proportion would go towards the creation of a bird reserve for the RSPB at Wallasea Island in Essex. No indication is given to what would happen to any remaining surplus material and this should to be firmed up in the Stage 2 submission. There are few permitted landfill sites within the immediate vicinity and those that do exist are primarily non-hazardous landfills, the capacity of which we would not wish to see taken up by disposal with inert wastes.
43. **EDF should be asked to provide greater clarity on the destination of any non-radioactive waste arisings consequent on the construction of the power station.**

Transport

44. This section initially considers the modelling and assessment work that has been carried out for EDF on the overall transport requirements and then looks at individual elements of the transport proposals.
45. An initial review of EDF's base traffic model has identified significant concerns relating to the traffic demand assumptions and matrix development, and the County Council's consultants advise that the current model does not comply with the standard form of assessment used for such modelling. Further information and clarification is also required on the information used to forecast employee travel to work and to forecast Heavy Goods Vehicle (HGV) and Light Goods Vehicle figures.
46. Part of the model predicts where employees will travel from (the gravity model) and this is a key part of estimating travel patterns and traffic volumes for the development. An initial review of the model has found that a number of assumptions are optimistic, which understates the volume of commuter traffic on the network. The review to date suggests a substantial underestimation of car traffic.
47. The Transport Strategy accompanying the consultation tends to focus on cost effectiveness of demand management measures and applying limited weight to residual impacts, rather than effective demand management, mitigation and negotiating an appropriate level of residual impact.
48. Insufficient information was provided on material quantities or the development programme to assist the Councils in the assessment of the likely traffic impacts of the development.
49. Access to the modelling information was received late in the day, compromising the Councils' ability to effectively assess it and provide a robust response within the Stage 1 consultation. Insufficient information has been provided to support the proposals put forward by EDF within the consultation. The responses provided below are therefore in large part qualitative and should not be seen to be exhaustive.

50. **Further work needs to be undertaken urgently between the local authorities and EDF to provide a more realistic assessment of the transport implications upon which more robust decisions on appropriate measures can be taken.**

Movement of the Construction Workforce

51. As stated above, an initial review of the gravity model suggests that the assumptions used underestimate the level of car traffic. This will impact on the assumptions used for the park and ride sites and on-site parking provision as well as overall traffic levels associated with the development.
52. The Councils do not agree with the information provided in the Car Usage section of the published Transport Strategy and this is not in line with the generation of an effective travel plan. This level of driving would not be acceptable. This is particularly the case in the area to the east of the A12 where there is also scope for providing more sustainable links by direct bus pick-up, and cycling and walking by improving and extending the existing rights of way.
53. Direct bus pick up and park and ride could be an effective way of minimising the level of traffic on the highway network, providing such sites are not located too close to the construction site. Park and ride sites should be located to minimise the impact on the network and should therefore be close to the main source of workforce and be managed to ensure that most of the workforce can only access the development by using these facilities.
54. The Councils are keen to maximise the use of non-car commuting to the site. Consideration should be given to the provision of a rail passenger service for workers during the construction phase of the development and to the opportunities for the “legacy” use of the line to provide a passenger rail service for Leiston. Discussions with Greater Anglia and Network Rail will be needed as part of this work.
55. EDF’s transport modelling assumes that there is a car share ratio of two for non-home based workers. Further information is requested from EDF to support such an assumption.
56. Inclusion of non-work related travel and support staff travel to and from the associated development sites is important and will need to be included in the modelling.
57. **The Councils consider that:**
 - a) **EDF’s forecasts currently under-estimate the potential level of car traffic to the site. Revised figures must be used in assessing impacts for what is required to support this development;**
 - b) **park and ride sites should not be located close to the construction site;**

- c) more sustainable links should be put in place to provide transport for workers residing east of the A12; and**
- d) rail has a greater role in providing access for construction works closer to the site and provision should be made for legacy use of the rail link to Leiston.**

Movement of Freight

- 58. Material quantities for other aspects of the development will depend on the type, location and extent of the works. The consultation material contains little information on this and no data has been provided as part of ongoing talks to support the total material volumes and the impact this will have on transport modes and numbers of HGVs. Therefore information relating to the quantities, type and profile of construction materials for the main site is requested as this will have an important impact on the assessment of the transportation of materials by different modes.
- 59. The Councils encourage the use of freight delivery by rail and sea as this will minimise the number of delivery vehicles on the highway network.

60. **The Councils encourage the use of rail and sea for freight deliveries but further information on quantities and modes should be urgently provided so that the full impact of the proposals can be assessed.**

Freight by Sea

61. The consultation material states that a jetty or Marine Offloading Facility (MOLF) will be provided adjacent to the construction site. However it provides no detail on the design, instead listing aspirations on using it to deliver "Abnormal Indivisible Loads" (AILs), bulk, containerised or pre-fabricated construction material and that it would have a roll-on-roll-off capacity. The ability of the jetty to manage the delivery of material, both quantity and type, is therefore unknown and the level of mitigation that this will provide to the option of delivery by road is therefore not quantifiable. (The impact of the MOLF on coastal processes is considered earlier in this report.)
62. Delivery by sea would be dependent upon weather. Therefore contingency measures need to be considered, in particular the additional impact this will have on the highway network. At this time, AILs can only be delivered on the A12 north of Yoxford coming from Lowestoft. Consideration should be given to assessing the A12 south of Yoxford as a potential route for heavy loads and AILs.
63. **Contingency measures should be considered to deal with freight deliveries in the event that weather and other events prevent delivery by sea.**

Freight by Rail

64. EDF proposes to make use of the existing branch line from Saxmundham to Leiston to deliver freight to the site. It would either develop a new rail terminal adjacent to Leiston, to the north of the existing rail terminal (Option 1) or build a new rail route directly into the main construction site (Option 2). Three alternative routes (red, blue and green) have been shown for such a route. In addition a new passing loop is proposed at Wickham Market station to allow an increase in capacity on the East Suffolk line.
65. The use of rail to deliver freight is supported as this has the potential to significantly reduce the level of HGVs on the highway.
66. The option to provide a new rail head and associated lay-down area adjacent to Leiston would result in a significant number of HGV trips on the local network from this site to the main construction area, a distance of some 2km. This would significantly impact on other trips in the area and recreational access.
67. In terms of the rail extensions outlined in Option 2, these would significantly reduce the number of HGVs on the local highway network. However, little evidence has been presented on the environmental

consequences of the different routes proposed, in particular on the Scheduled Ancient Monument of Leiston Abbey. Furthermore the red route would cross an area of land which could be considered as replacement habitat for the SSSI lost at the main site. Thus at this stage, the councils are not in a position to take a clear view on which route might be preferable. However it would appear that all routes have potentially significant ecological impacts and affect the Public Rights of Way network and may require new level crossings, bridges or diversions.

68. Treatment of existing level crossings and their impact on the highway network will need to be considered for all rail options.
69. Option 1 and the red route on Option 2 would still leave freight trains running through Leiston, significantly impacting the residents along this route and crossing the B1122 at the former Leiston Station. The timing of such deliveries will also be relevant.
70. More information is needed to enable meaningful comment on these proposals, including discussions with Network Rail.
71. Evidence is required to ensure that there will be sufficient capacity on the East Suffolk line and the wider rail network, taking into account passenger demand growth on the line and all predicted growth on the Felixstowe to Nuneaton line and the Great Eastern mainline.
72. The provision of a passing loop at Wickham Market is supported and this could have a “legacy” use for the East Suffolk line. Additional capacity improvements may also be required.
73. **The councils:**
 - a) **while welcoming the use of rail for freight deliveries, consider that Option 1 for the location of a railhead would add to traffic flows on the immediate local highway network and that this could be overcome by direct rail deliveries to the site (Option 2). However, in considering routes for any such new rail link, significantly greater detail on the environmental consequences, the impact on local residents and the effect on highways and public rights of way is required. The local authorities would wish to engage with EDF on this matter and there is a strong case for a further round of local public consultation once more detail is available. In addition, measures to reduce the impact of level crossings on the existing rail route needs to be given further consideration; and**
 - b) **welcome the proposals to increase the capacity of the East Suffolk line by providing a new loop at Wickham Market station, but further assurance is needed on the current and future capacity of the East Suffolk line and wider network to accommodate the extra freight movements without jeopardising other rail services.**

Freight by Road

74. EDF acknowledges that there are a range of uncertainties that will impact on final estimates for HGV movements generated by the Sizewell C development. Little evidence has been provided to support EDF's comments about levels of HGV traffic on the highway network. In particular, with no firm information on the delivery of materials by rail or sea, SCC Highways officers have little confidence in estimates of freight trips by road and the subsequent number of HGVs on the highway network.
75. Despite the uncertainties above, EDF assumes that there will be between 100 and 300 HGVs a day in each direction and that this could increase by a further 50% on individual days. Therefore, by EDF's own estimates this could result in an additional two-way flow of 900 HGVs a day; this is more than a 40% increase over 2006 HGV levels on the single carriageway section north of the Wickham Market bypass. Given the uncertainties about how much material will be moved by what transport mode, it is quite possible that the EDF assumptions understate the HGV demand with a potentially greater impact.
76. EDF should recognise in planning for freight access and in particular in modelling the impacts on traffic flows, it should not assume that there will be 24 hour deliveries to the site.
77. The use of the highways network for freight deliveries will require significant mitigation. It is anticipated that improvements will be required on the A12, A12/A14 junctions, B1122 and the local network to Sizewell.
78. Further work needs to be undertaken to understand the in combination traffic impacts of other developments proposed along the A12 e.g. potential major housing development at Adastral Park, Martlesham.
79. The Councils believe that due to the cumulative impact of traffic increases related to Sizewell C and other proposed developments along the A12 that this will justify a significant upgrading to the Seven Hills roundabout.
80. The Councils strongly believe that the minor roads west of the A12 should be protected from substantial increases in traffic flows and that the strict enforcement of HGV controls both to and from the site will provide such protection
81. **The Councils consider that despite the inadequacies of the traffic data that has been provided, it is already evident that HGV movements will increase substantially and that in order to mitigate the severe impacts of this traffic, significant improvements will be needed to the road network used by such vehicles. Further work will be required to identify the locations affected and the mitigations required.**

Freight Management Facility

82. EDF proposes that there will be a need for a range of management systems to control the timing and number of HGV movements through the local road network. These may require the construction of a lorry

park for 50-100 vehicles. It would prefer to see such a lorry park on one of the southern park and ride sites, but as an alternative it is looking at three options for a separate lorry park adjacent to the A14. The merits of the various options are dealt with under the Associated Development section below (paragraphs 157 – 163), but the principles are dealt with in this section.

83. The provision of this type of facility is supported by the Councils, with a strong preference for sites directly off the A14, allowing maximum mitigation of impact on the A12 travelling north, particularly through Martlesham and around Woodbridge, which is congested at peak times. Co-locating this facility on the southern park and ride site would not provide mitigation to this section of the highway network.
84. This type of facility could also be considered for freight consolidation, reducing the number of delivery vehicles.
85. More information needs to be provided on the option suggested by EDF of using monitoring and communication systems. Use of this type of system as a stand alone system to manage HGVs would require all delivery suppliers to have equipment fitted and sites for vehicles to safely pull over to enable them to keep to delivery windows at the site; sites to enable HGVs to pull over are limited on the A14 and A12 (south). An effective system for managing HGVs is essential to minimise impacts on the county's highway network.
86. There is a legacy potential for any such facility adjacent to the A14 to accommodate Operation Stack. This is identified within the County Council's Local Transport Plan as a medium to long term strategic improvement.

87. **The Councils support the provision of a freight management facility and have a strong preference for sites off the A14 rather than as part of the southern park and ride sites. Such sites should also be considered for freight consolidation purposes and for their possible legacy potential. More information is required on the effectiveness of other proposals for managing freight deliveries.**

Traffic Impact from Sizewell C

88. EDF's proposals are weak with regard to the traffic impact from Sizewell C. The most notable weakness is in the treatment of the single carriageway section of the A12 between Marlesford and Farnham, but this is not the only area where proposals for improvement need to be identified.

Four Villages Bypass

89. There have been long-standing proposals to build a bypass for the A12 around the four villages of Farnham, Stratford St Andrew, Little Glemham and Marlesford. Without producing any evidence to support its position, EDF has argued that the growth in traffic created by the construction traffic does not justify the building of a four village bypass. However it does accept that interventions may be necessary to deal with the narrow bend in Farnham and proposes three options for solutions here:
- a) a short bypass purely for that one village;
 - b) widening the road through the village by demolishing some houses; or
 - c) traffic management.
90. Good access along the A12 is seen as a high priority for businesses in the Suffolk Coastal and the Waveney area including Lowestoft. Any delay resulting from increased traffic, congestion and potentially accidents along the A12 due to Sizewell C traffic could have a significant impact on business and economic growth in the county.
91. Tourism is an important part of the Suffolk economy. Delays and congestion could jeopardise tourism, altering the perception of an uncrowded county and impacting on businesses large and small.
92. Increases in traffic, in particular the very high increase in HGV traffic, will have multiple implications. Access onto the A12, from side roads and properties, will become more difficult, potentially causing more accidents. Increased traffic numbers will also cause severance, a barrier to local movements, within communities along the A12. This will have a negative impact on local communities and individual residents' quality of life over a number of years. Air quality has also been identified as a potential concern in Stratford St Andrew and Farnham and there are concerns amongst residents about increased noise and vibration.
93. To date there has been little information available to enable the assumptions of traffic growth and HGV traffic to be confidently assessed.

The base model has been reviewed by SCC and does not adequately reflect the traffic impacts. There are no firm proposals for the jetty design or sufficient consideration of the future rail capacity to provide certainty about the impacts of those facilities on traffic levels.

94. EDF also claims that background growth will be more significant than that from the development. This increases the impact of Sizewell C related traffic rather than minimising it.
95. Little evidence has been presented by EDF within the consultation material to support the estimated impacts or EDF's assertion that a bypass of the four villages is not required. The proposals for Farnham are considered inadequate and currently unsupported by evidence. The lack of evidence has impeded the Highways Authority's opportunity to provide an informed response at this point. It is therefore essential that EDF carries out more work in this area before coming to a view. In the meantime the Highways Authority has re-commissioned consultants to review and update the study which was undertaken for the four villages in 2006 in the light of the Sizewell proposal (it should be noted that the Sizewell C proposal completely transforms the context of the earlier report). It is recommended that this updated study be sent to EDF in support of the Council's views when it is completed.
96. EDF has suggested three options for dealing with the situation at Farnham. It states that proposals to introduce a traffic control system are a less attractive option and would exacerbate the potential for congestion affecting all traffic using the A12. The Council supports this view. The option to widen the road in Farnham would involve the demolition of a Grade II listed building, have a significant impact on the local community and would not remove traffic through the village. In addition, the layout shown appears to reduce the already narrow footpaths in Farnham. A number of accesses in Farnham would be affected and potentially higher traffic speeds resulting from such an improvement will increase the risk of accidents.
97. The provision of a short Farnham by-pass would create significant environmental problems in its own right, in terms of the severance of Farnham from Stratford St Andrew, the loss of amenity to the villages and ecological and landscape damage.
98. The additional traffic associated with the construction of Sizewell C will significantly exacerbate the problems already affecting communities along the four villages which include air pollution, noise and vibration, severance and loss of amenity. The potential addition of 900 daily HGV movements, or more, along the A12 the Council believes amply justifies the call for EDF to invest in a full bypass of the four villages. There has been support for this position from residents, the district councils, MPs and businesses.
99. **The Councils:**
 - a) **strongly believe that a bypass for all four villages along the A12 (Farnham, Stratford St Andrew, Little Glemham and Marlesford) is necessary as a consequence of the additional**

traffic that will come from the Sizewell C construction project and that proposals for this should be included as associated development in any application to the Planning Inspectorate. All three options currently proposed by EDF are inadequate and not supported by the Council. Further local consultation will be required to look at other options for this area;

- b) A study prepared by the County Council's consultants updating the 2006 study on the Four Villages Bypass will be submitted to EDF in support of the case.**

Impacts on Yoxford and B1122

100. The B1122 has been identified as the main access road to the Sizewell C site and will therefore carry all HGV and delivery traffic in addition to construction worker traffic and park and ride vehicles. The potential impact on the communities along this road, in particular Theberton and Middleton Moor will be significant and serious proposals need to be presented for consideration and assessment. While this was the route used for access to the Sizewell B construction project, the scale and duration of this project will be significantly greater.
101. Improvements to and provision of footways and safety measures within the villages along the B1122 should be considered.
102. The impact of traffic growth on Yoxford will also need greater consideration and in particular the junction of the A12 and the B1122 where EDF proposes a new roundabout.
103. **The Councils recognise that there will be serious impacts on the B1122 and considers that further information is necessary on the traffic volumes likely on that road and through Yoxford and the mitigation necessary to deal with any impacts on the communities or environment. This may include road schemes considered for previous Sizewell projects.**

Other Transport Impacts

104. It is recognised that other roads within the county will be affected by the development, including roads around Leiston and the A1120. However, no information was provided on how this will be considered.
105. The Suffolk lorry route network should be complied with, ensuring HGVs use appropriate routes.
106. More consideration needs to be given to the use of rights of way in the area. In particular, measures are required to ensure that the recreational use of the rights of way network is not negatively impacted by the development. Use of this network is important to tourism in the area.
107. Use of the existing road network by an increased volume of HGVs in particular is likely to have an adverse impact on the condition of the road itself. There will need to be agreement with EDF on the company's

responsibilities to resource on-going maintenance and remediation of any damage caused during the construction phase.

108. **The Councils consider that further work is undertaken on the impact of the proposals on the wider highway and rights of way networks and possible mitigation. In addition there will need to be resources made available for continued maintenance of the existing road network during the construction phase.**

Comments on Site Specific Proposals

Main Site

109. The main development site lies within the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) and on designated Heritage Coast. The highest standards of design and layout should be expected in such a location and, as with the B Station, an exemplar of good design that will make a positive contribution to the AONB landscape should be called for.
110. Any final building design and layout, when allied to suitable landscaping and landforms, needs to attempt to minimise the impact on the AONB landscape. Detailed designs of the permanent buildings are not shown at this stage of the consultation. However from the limited information available, it appears that the proposals could have a more dominant impact on the landscape than, for instance, Sizewell B. Considerable work will need to be done by EDF to ensure that the final scheme is acceptable in the AONB.
111. The current proposals will affect approximately 6.4 hectares of the adjacent Site of Special Scientific Interest (SSSI) in terms of disturbance and approximately 4.6 hectares would be lost permanently. The amount of land taken for the permanent development should be minimised. In essence the less land needed on the main site, the less the direct impact on the SSSI.
112. Greater consideration needs to be given to the way in which the water courses adjacent to the development are affected. At present it is likely that these act as an important ecological and hydrological corridor between the Sizewell Marshes and Minsmere to Walberswick Heaths and Marshes SSSIs. There is no evidence that the proposals will ensure that this continues into the future.
113. Work is at an early stage in terms of the impacts on coastal processes and flood defence, both of which need more detailed assessments before a final view can be taken as to the acceptability or otherwise of the development.
114. EDF should be required to have regard to the overarching theme of retaining public access to the beach and to the Suffolk Coast Path, minimising the impact on the character of the AONB and people's enjoyment of it, and preventing any adverse impacts on coastal process.
115. Closer to the site, any landscaping needs to be suitably robust and well maintained to provide a setting and, where possible, screening for low level buildings and security fencing. This works well for the B Station and there seems no reason not to replicate this approach.
116. Lighting should be shielded and screened in order to minimise sky glow and impact on bats, albeit acknowledging the need for adequate security and safety lighting.
117. **The Councils consider, with regard to the main site:**

- a) **that the building should be seen as an exemplar of good design, both in terms of the buildings themselves and the lighting and landscaping around them;**
- b) **the area of land taken for permanent development should be minimised to limit the impact on the SSSI;**
- c) **the important ecological corridor between SSSIs must be retained, and the impact on coastal processes and flood defence minimised; and**
- d) **public access to the beach and the Suffolk Coast Path should be retained during the construction process.**

Construction and Temporary Lay-Down Areas

118. Land adjacent to the main development site will be required for lay-down and construction purposes. The main area for this is 140 ha running inland to the north-west of the power station site itself. This includes a main access road running through the area which will remain as the permanent access to the power station, together with car parks, helipad and security buildings north of the power station site, which will also remain during the operational phase of the project. In addition, there would be a further lay-down area adjacent to Leiston, part of which might be used as a rail terminal land for re-location of existing buildings at Coronation Wood (west of Sizewell B) and further land at Pill Box Field (south of Sizewell A). A jetty is also provided for the handling of materials. It is important that Cabinet appreciates the sheer size of the proposed development area so that it is clear of the importance of mitigating the impact of the scheme if it is to be perceived as a success. For instance, the main lay-down area extends 1.8km inland from the coast.

119. The extent of the construction and lay-down areas is extensive and needs to be justified by EDF, particularly as this is largely in the AONB and stretches across the whole width of the AONB at its narrowest point.

120. Principles for the development of these sites as set out in the consultation documents are soundly based and welcomed but do not deal with some fundamental concerns that the local authorities would want addressed:

- a) Local authorities have in the past raised concerns about the use of Pill Box Field. No details are available as to the nature of the temporary use of the field and its extent. EDF should be made aware that this is an area of concern given its visibility in the landscape. In addition, the local authorities would need to be satisfied that the proposed use of Coronation Wood would not destroy the current function of this woodland as a screen to the B Station complex;

- b) In landscape terms there are concerns about the use of land north of Abbey Wood (at the northern extremity of the main lay-down area) that will overlook the Minsmere Valley to the north. In the absence of details of the exact use of the land it is difficult to lodge a detailed objection but EDF should be made aware the council does not support the use of this land. Likewise there are concerns about the use of the land north of Campus Option 1 which will be in close proximity to Theberton;
- c) There is no clarity from EDF as to whether the bridleway to the west of the main lay-down area and between this and Option 1 of the accommodation campus will remain usable during the construction phase. This is a key link in the network of north-south leisure routes along the Suffolk Coast and AONB and it will be important that its use is retained throughout the construction period;
- d) The part of the lay-down area north of Lover's Lane adjacent to the B1122 would adversely affect the setting of Leiston Abbey, an important heritage asset, where it utilises the western slope facing towards the Abbey. It is suggested that the use of this land should be objected to in principle;
- e) Whilst not objecting in principle to the use of the land east of the Eastlands Industrial Estate on the edge of Leiston, more work needs to be undertaken both to aid the understanding of impacts on nearby residential properties from freight movements and transshipments and from the use of Lover's Lane to move freight to and from the construction site;
- f) No details of the proposed jetty have been provided at this stage pending further design work and marine studies. The design and location of the MOLF and the potential to use the beach for recreation during construction are issues that need to be resolved in a manner that does not prejudice the coastal processes or the utility of the beach; and
- g) A phasing plan for release of land and its restoration at the earliest opportunity should be developed. This principle of phased release and restoration should form part of the siting considerations for the construction area. The access road will remain after the construction phase but the opportunity exists for it to be treated in a way that is more sympathetic to its location in the AONB.

121. The Councils consider that:

- a) **the lay-down areas are very extensive and the need for them should be more fully justified. In particular the Council would object to the use of land which would overlook the Minsmere Valley, Theberton and Leiston Abbey and the land at Pill Box Field;**
- b) **the bridleway running between the lay-down area and the site for Option 1 of the accommodation campus should remain open at all times;**

- c) any use of land at Coronation Wood should retain the screening effect for the buildings at Sizewell B;
- d) more work needs to be done to assess the impact of the use of the land at east Leiston on local residents and on traffic volumes on Lover's Lane; and
- e) a phasing plan should be prepared for the restoration of the lay-down areas in line with a vision for the EDF estate. In addition, EDF should demonstrate how the access road will be treated so that it minimises its impact on the AONB once the construction phase is completed.

Associated Development

122. This section describes the types of 'Associated Development' that EDF are proposing to support the development of Sizewell C.

It is important to note that, while the Associated Development sites proposed by EDF are forms of mitigation (other than the Visitor Centre), they will have specific impacts of their own which need to be carefully evaluated and also mitigated. EDF has offered a number of options for each form of Associated Development and an initial overview of their relative merits is described below.

Background

123. The Planning Act allows applicants to also include provisions for Associated Development within their application for a Development Consent Order. These developments must be necessary for, and subordinate to, the main development – in this case the nuclear power station. The types of development that can qualify in this context are quite broad, though ‘dwellings’ are specifically excluded. Case law has determined that accommodation campus-type developments, such as that proposed in this case, are eligible.

Description of Associated Development

124. The current consultation documentation identifies, and invites comment on, six forms of Associated Development:

- a) Two park and ride sites (including postal consolidation building and induction centre);
- b) A freight management facility;
- c) A campus comprising 2-3,000 bed spaces;
- d) A visitor centre;
- e) Rail improvements in the Leiston area; and
- f) Road improvements in Farnham.

125. The park and ride facilities, campus accommodation and any freight management facility are proposed as temporary developments. No detail is provided on the appearance of the developments, other than an indicative plan.

126. EDF’s preferred rail strategy is to provide a rail extension in to the main site, also on a temporary basis. The road improvement at Farnham would be permanent, as would the visitor centre.

Rationale for Associated Development

127. Other than the Visitor Centre, the proposed Associated Developments stem from EDF’s Transport Strategy and the need to minimise the impacts of construction traffic on the highway network along with the associated environmental and amenity impacts.

128. The robustness of the Transport Strategy is considered in detail elsewhere in the report; this section of the report focuses on the site specific impacts of the site options identified and their adequacy for the purpose they are proposed to serve.

129. The provision of the park and ride sites, one to the north of the B1122 and one to the south, combined with the provision of a near site campus

are designed to mitigate the impacts of the daily movement of large numbers of construction workers. However, more work needs to be undertaken to understand whether the respective sizes and locations of these facilities is correct.

130. In particular, with regard to the Accommodation Strategy, EDF has not clearly explained why a single campus of this scale is needed, nor why alternative strategies which could provide some legacy housing, or other socio-economic benefit, have been discounted. Furthermore, it is not clear that full consideration of the traffic implications of different accommodation strategies have been considered – for example all traffic movements associated with the campus developments need to be considered; this includes not only transport to and from the main construction site, but also to and from the campus as part of the weekly shift patterns, to and from the campus for (off-shift) recreation, access for deliveries and for the site management staff.
131. **The Councils should work with EDF to formulate an Accommodation Strategy which not only meets the requirements of the development, but also the future needs of the local community and furthermore minimises the overall traffic impact.**
132. The development of Sizewell C will generate significant HGV movements. EDF has proposed to mitigate this in part by achieving a modal shift of freight from road to rail. This in turn necessitates improving rail access to the main construction site, either through improving the existing rail head to the east of Leiston or by extending the existing rail line either from the existing rail head to the north, or by bypassing Leiston altogether by departing to the north, west of the town. Recognising though that a significant amount of freight will still be moved by road, improvements to the highway network are proposed in Farnham. The respective impacts of the rail and road options are detailed in the transport section of this report.
133. A further form of mitigation is EDF's proposal for a Freight Management Facility – the purpose of this is to control the timing and number of HGV movements through the highway network. EDF's preference is that such a facility (they have not confirmed one will definitely be constructed) would be co-located with the southern park and ride site. The local authorities do not see any advantages to this eventuality, but have identified the following advantages to a separate facility;
 - a) better control of HGV movements through congested parts of the A12 near Woodbridge;
 - b) reduced scale of development of a southern park and ride site, both in footprint and scale (security/lighting provisions are likely to be less intrusive);
 - c) potential for realising a legacy use for Operation Stack; and
 - d) potential for freight consolidation to occur, further reducing HGV trips.

134. The Councils believe that a Freight Management Facility is necessary and should be separate from a southern park and ride. Its role for freight consolidation should also be investigated.

Associated Development Site Assessment Process

135. The assessment of the sites has been undertaken having particular regard to the following criteria:
- a) Impact on amenity – as developments (other than the Visitor Centre) are of a temporary (up to 10 year) nature, amenity of neighbouring development is a key consideration;
 - b) Reversibility of impact – again, as most developments are temporary, priority is given to those sites where long term impacts can be avoided;
 - c) Legacy benefit – sites that provide a long term benefit, in land use or through environmental improvements, are preferred; and
 - d) Effectiveness in implementing the local authorities' strategies and policies – sites must contribute positively to the local authorities' preferred approaches to transport, environment and accommodation.
136. These strategies give rise to the following specific considerations:
- a) Sites should minimise the removal of landscape and habitat features, even on a temporary basis;
 - b) Sites should minimise the impact on populations of protected and or Biodiversity Action plan species;
 - c) Sites should minimise the loss of historic landscape features and buried archaeological features;
 - d) Sites should have a minimal impact on the Suffolk Coast and Heaths AONB; and
 - e) Sites should minimise visual and landscape impacts, and those on the setting of historic assets.
137. In formulating a response to Associated Development options, a number of overarching environmental issues have been identified:
- a) The assessments of the environmental impacts of the proposed sites appear to be desk-based. Local wildlife designations and species records have not been examined;
 - b) Much of the landscape mitigation for these sites includes additional planting. Given the relatively short life of the sites this is unlikely to have a significant mitigation effect for local receptors. It is however acknowledged that planting schemes could create a positive landscape legacy for these sites if they restore and enhance local landscape features and create habitat networks;
 - c) The majority of the sites propose the use of extensive lighting. This has the potential to have a significant impact on bats. There is therefore a significant risk that habitats for both feeding and roosting will be unavailable for the period of the construction of Sizewell C;

- d) With the exception of Campus Option 1, the consultation documentation lacks statements of the potential impact on the historic environment at each of the sites. In some cases, the documentation fails to identify non-designated assets adjacent to the respective site options which indicate high archaeological potential. Furthermore, it is not clear that the Sites and Monuments Record has been consulted consistently. Where the extent of archaeology is unknown, further evaluation before the next stage is needed to inform site selection. In all cases, evaluation (geophysics and trial trenching) would be required for the preferred options. This would include evaluation to identify areas requiring preservation in situ or full excavation prior to development; and
- e) The Environmental Report states that ground and surface water modelling has been undertaken, but not finalised and alludes to discussions with local authority. However, the county council is the Lead Local Flood Authority (LLFA) and it has not been contacted to discuss such matters.

138. That EDF be made aware of these deficiencies in process and evaluation and is requested to act to rectify the issues accordingly.

139. The section below considers the relative merits of the park and ride, campus, freight management facility and visitor centre options.

140. Three options are proposed, each of which would accommodate up to 3,000 bedspaces in blocks of 3 or 4 storeys, amenity buildings, car parking, recreation facilities and soil storage: Option 1 is the preference of EDF. It is for 35 ha to the west of the main lay-down site either side of the road into Eastbridge. Option 2 is for 45 ha at Sizewell Gap, to the east of Lover's Lane. Option 3 is 41 ha to the south of the existing Sizewell Sports and Social Club at Leiston.

141. Option 2 offers no advantages over Option 1 or Option 3 and is wholly within the AONB and should be discounted.

142. Option 1 would have significant impacts on the natural and historic environment, in particular bats, both in itself and in combination with the adjacent lay-down areas and reorganised access arrangements from the B1122 (possibly a lit roundabout). It would also have a significant impact on a key public right of way (including its possible temporary closure), which runs between the proposed campus site and lay-down area. However, it would mean workers could walk onto site eliminating the need for shuttle buses, which would in turn avoid additional traffic on the local highway network and thus possible congestion issues in the event of an evacuation. There, however, remains a concern over mixing construction and campus-related traffic.

143. Option 3 has fewer environmental constraints than Option 1, and could provide a legacy use in the form of some recreational facilities and/or serviced land for future residential development, particularly if the currently proposed layout was reversed, with the accommodation nearest Leiston (though this could have amenity impacts in the short term). It would however increase traffic movements in the locality

associated with the daily movements of construction workers, though the site access arrangements would not conflict with HGV traffic, in the way they would for Option 1. Furthermore, there is also potential to provide off-road pedestrian/cycle links both to the rear of Sizewell A and B and also parallel to Lovers Lane to enhance opportunities for sustainable access to the main construction site.

144. A key factor will be the feedback from residents of Theberton and Leiston and their perspectives on the respective socio-economic impacts of the Options 1 and 3. The proximity of the campus to existing settlements has implications for both amenity and the likely levels of spending within the local economy by workers.
145. **Option 2 must be eliminated immediately. Further work is needed to understand the comparative merits of Options 1 and 3 and indeed whether there are alternative permutations that are more satisfactory.**

Northern Park and Ride Options

146. Two park and ride sites are proposed; one for drivers from the north and one for drivers from the south. Both would hold up to 1,000 cars and have bus interchange facilities and there could also be space for a workers' induction centre and postal concentration unit. Option 1 would be at Yoxford Road, Middleton, Option 2 to the north of Darsham Station and Option 3 close to the A12/A144 junction.
147. Option 1 does not realise the benefits that a park and ride should as it is too close to the main site and should therefore be discounted as being ineffective. Furthermore, with the B1122 designated as the main delivery route, there is significant potential for conflict between site deliveries and park and ride traffic. A significant, visually intrusive access point would also likely be required
148. While there is potential for localised impacts on amenity (though residences are already blighted to some extent by the A12) and archaeology on-site, Option 2 remains preferable to Option 3 on environmental grounds. Furthermore, the junction of the A144 and A12 in the vicinity of Option 3 is a known accident location and thus development here would not be acceptable.
149. Option 2 also has the potential advantage of a legacy use in the shape of car parking for Darsham station, though this is yet to be explored.
150. It is considered that there could be benefit in the main northern park and ride site being closer to the principal origins of workers in Lowestoft, Great Yarmouth and Norwich. Further work will be needed on the transport modelling to look at the opportunities for this.
151. **Options 1 and 3 should be discounted immediately. Option 2 is the relative preference and should be retained for more detailed study, though it could still be considered to be too close to the main site**

for the primary northern park and ride site. It could, however, serve a more localised function, complementing an additional facility further north.

Southern Park and Ride Options

152. The southern park and ride site would have the same facilities as the northern one. However there is the possibility that it would also include lorry parking for 50 – 100 vehicles. EDF's preferred option (Option 1) is to the north of Wickham Market, adjacent to the A12. Option 2 is at the junction of the A12 and A1152 at Woodbridge and Option 3 is at Potash Corner, Bredfield, with a new access onto the A12.
153. As mentioned in the transport section, decoupling the southern park and ride from the freight management facility would provide significant transport and potential legacy benefits. In addition, the environmental implications of the more substantial facilities required for lorry parking are likely to be damaging in the locations proposed for park and ride facilities. Nevertheless, the relative preference of the sites is likely to remain unchanged.
154. Development of Option 1 is likely to result in irreversible damage to a site of significant archaeological value, in particular if freight management facilities are also developed on this site. There are also concerns regarding the safety of access arrangements on the merge into the northbound A12 due to speeds on the A12 at this point. Amenity impacts would however be limited.
155. Option 2, due to its more southerly location, would achieve maximum mitigation for the highway network and also reduce the likelihood of workers accessing the site via 'rat-running' on roads north of Ipswich (such as the B1078), rather than remaining on the Strategic Road Network. Access arrangements, including possible signalisation of the roundabout need to be considered further. The site is also of potential archaeological value and in proximity to a Special Landscape Area and to Woodbridge, so there may be potential for impacts on residential amenity, notwithstanding the separation provided for by the A12.
156. Option 3 would likely result in permanent environmental impacts and has the most significant impact on amenity and the Public Rights of Way network. There are concerns regarding the ability to achieve safe access, particularly in view of the proximity of nearby side access roads.
157. **Option 3 should be discounted immediately. Option 1 should be retained to consider whether appropriate archaeological mitigation and safe highway access could be achieved. Option 2 should also be retained for more detailed study, including consideration of any potential low-intensity legacy use and, depending on further studies, could be the Council's preferred option.**

Freight Management Facility

158. As an alternative to a lorry park on the same site as the park and ride proposals above, there are three options for “stand-alone” freight management facilities adjacent to the A14 east of Ipswich. Option 1 is to the west of the Orwell Crossing Lorry Park and Option 2 to the east. Option 3 is to the east of the Seven Hills intersection of the A14 and A12.
159. In considering these options, the the Councils have considered the potential legacy use of any site for Operation Stack, the holding of Lorries delayed by poor weather or incidents at the Port of Felixstowe. At the present this is done on the old A45 road but it has been a long term aspiration to identify a more appropriate location.
160. Option 3 is likely to have significant impacts on the natural and historic environment. This is of particular concern in the context of considering a legacy use for Operation Stack.
161. Option 1 consists of employment land allocated in the Suffolk Coastal Local Plan. A legacy use for Operation Stack would therefore conflict with local planning policy. A temporary use could also have implications for the deliverability of employment land in the interim. Careful consideration would need to be given to the impacts on the amenity of residences to the north, albeit across the railway line and Felixstowe Road.
162. Option 2 is within the AONB, though this is an isolated part, cut off from the remainder of the AONB by the later construction of the A14. As a consequence, it is considered preferable to Option 1 in the context of a legacy use for Operation Stack. Offsetting the permanent impact on the AONB should be considered as part of the environmental mitigation package. The emergency services have indicated a similar preference favour Option 2 due to its potential legacy use as a Multi-Agency Strategic Holding Area (MASHA). Again though, amenity of nearby development, and implications for surface water flooding would need to be considered.
163. Both Option 1 and Option 2 would require provision of a new access from the A14 to replace that being used by the Orwell Crossing Lorry Park. This would be a matter for the Highways Agency to comment on.
164. **Option 3 should be discounted for environmental reasons immediately. Further work should be undertaken to consider how legacy use can be secured on Option 2. If this is not possible, Option 1 could be preferred. The impacts on the AONB of either Option 1 or 2 should be taken into account and if necessary mitigated.**

Visitor Centre

165. A new visitor centre is proposed to replace that at Sizewell B. Option 1 would be to the east of Lover’s Lane. Option 2 would be on land

adjacent to the car park at Sizewell Beach and Option 3 immediately to the north of the main site at Goose Hill.

166. The Councils support in principle the proposal for a visitor centre. EDF will be well placed to set the new development in the context of the Government's drive to reduce carbon emissions and describe the wider importance of Suffolk's energy coast. Given the location, EDF should also give weight to the special nature of the locality and consider how this might be addressed in consultation with the Coast and Heaths AONB. In any event, an iconic building, responding to the surroundings should be delivered.
167. Option 1 should be discounted on environmental grounds given that it lies in the AONB. However the local county councillor considers that this site should remain to be assessed alongside an adjacent campus proposal.
168. Option 3 has the best relationship with the construction site and therefore is most appropriate for the long term, though would have potentially significant environmental impacts that would need to be mitigated and offset as necessary.
169. A temporary visitor centre at Option 2 should be considered until Option 3 can be commissioned. Further consideration of other sites may be appropriate.
170. **The proposal for a visitor centre is supported in principle and should address Sizewell's contribution to carbon reduction, its part in the Suffolk energy coast and its location in an area of outstanding natural beauty. Option 1 east of Lover's Lane should be discounted for environmental reasons immediately. Further consideration needs to be given as to the role of the visitor centre in the short and long term and consequently where this important facility is best located.**