



Freepost Nautilus Interconnector

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Date: 25 October 2021
Project Reference: Nautilus MPI
Our Ref: Nautilus Consultation
Enquiries to: Naomi Goold

Email: naomi.goold@eastsoffolk.gov.uk

Dear Sir/Madam,

Response of East Suffolk Council to National Grid Ventures Non-Statutory Consultation on the Nautilus Multi-Purpose Interconnector Project

East Suffolk Council (ESC) welcomes the opportunity to comment formally on the proposals for the Nautilus Multi-Purpose Interconnector project. This letter provides ESC's response to the consultation. The Council has provided comments in relation to:

- The consultation;
- The issue of energy project coordination; and
- High-level comments in relation to site selection for the Nautilus project.

More detailed comments on site selection have been provided in Appendix A.

Timing and Format of Consultation

In terms of the timing of the consultation, whilst ESC appreciates that National Grid Ventures has their own timelines for the project, the timing of the consultation has been particularly difficult for local communities given the overlap with the Sizewell C new nuclear power station Development Consent Order (DCO) examination, which only closed on 14 October 2021. This has limited the ability of local communities to fully engage with the consultation until the later stages of the consultation period.

Regarding the format of the consultation, ESC welcomes the hosting of a combination of virtual and physical events to inform stakeholders and local communities about the project. It was noted that these were well attended and that there was printed information available for attendees to take home and digest. ESC would have wished to see a physical in person event held in each of the

affected parishes, especially the parishes affected by the converter station search areas. However, this was not undertaken, ESC would urge National Grid Ventures to take this request into consideration for subsequent rounds of consultation.

It is noted that a feedback form was provided as one method by which respondents could provide comments. Concerns were voiced to the Council by communities that the questions within the feedback form were leading, it is therefore welcomed that this is not the only means through which comments can be provided and that a less prescriptive response can also be submitted.

ESC has received specific comments from the local community in relation to the imagery used within the consultation. It would have been helpful for local communities and stakeholders to have seen images and graphics depicting the appearance of the infrastructure. It is also helpful for comparisons to be drawn with local landmarks to assist with the understanding of material, for example the height of the converter station compared to a well-known local building etc. It is hoped that National Grid Ventures will be able to take these comments on board for subsequent rounds of consultations.

In terms of the consultation material published, this contained predominantly high-level information with limited detail. This has limited the Council and other stakeholders, including the communities, in their ability to assess the impacts of the proposed siting and routeing options and provide comprehensive feedback. Due to the nature of the information presented, ESC would request that there is significant more work and detailed analysis of the sites undertaken prior to a preferred option being selected.

Concerns have also been raised within local communities and by town and parish councils in relation to the timing of the consultation, as this precedes any decision being made by the Secretary of State for Business, Energy and Industrial Strategy (BEIS), in relation to the East Anglia One North and East Anglia Two projects. National Grid Ventures at present has a connection offer for the Nautilus project from National Grid Electricity System Operator (NG-ESO) within the Leiston area. Based on information provided within the consultation documentation, it is understood that should the East Anglia One North and East Anglia Two offshore windfarm projects receive development consent, the Nautilus project would connect to the grid at the National Grid substation proposed under these applications. Such a connection would require extra bays to be added to the proposed National Grid substation.

At present the East Anglia One North and East Anglia Two offshore windfarm projects have not received development consent and the Secretary of State has until 6 January 2022 to make the decision. Significant concerns have been raised by the town and parish councils and local communities that this consultation is therefore premature. The exact connection location is not yet known, and the converter search areas are predicated on the need to find a site within 5km of the proposed National Grid substation sought by the windfarm projects immediately north of Friston village. If East Anglia One North and East Anglia Two offshore wind farms are not consented by the Secretary of State, National Grid Ventures has confirmed that they would need to reconsider the options proposed and potentially approach NG-ESO in relation to considering a different grid

connection location. This raises significant uncertainties regarding the current consultation and proposals presented.

ESC is responding to this consultation on the basis that the East Anglia One North and/or East Anglia Two offshore windfarm projects are consented and therefore the National Grid substation immediately north of Friston village is consented. It is on this basis that the search areas provided within the consultation have been identified. However, if the National Grid substation is not given consent under the DCOs for one or both of the offshore windfarm projects, ESC reserves the right to reconsider the comments currently provided on the Nautilus project.

Offshore Wind Partner and Coordination

ESC welcomes the identification of Nautilus as a multi-purpose interconnector which could facilitate the connection of offshore windfarms to an offshore converter station, prior to transporting the electricity to the transmission systems of Great Britain or Belgium. This would reduce the amount of onshore infrastructure required. ESC fully supports National Grid Ventures vision for a new generation of interconnectors which will help to facilitate much needed coordination.

At present however, although Nautilus is identified as a multi-purpose interconnector, no agreements or provisional agreements with offshore windfarm partners have been identified to which the interconnector would facilitate a connection. During the consultation events and webinars, the potential to connect Nautilus to several offshore windfarm projects was discussed (East Anglia One North, East Anglia Two, Five Estuaries and North Falls), and it is noted that discussions are taking place, but no partnerships have been formed. It is understood that the bringing forward of an offshore wind partner or partners to connect to the project is not all within National Grid Ventures gift, but without these connections Nautilus would continue to comprise a project with a radial point to point connection, akin to the current interconnector projects.

Separate to the above point, but linked to the desire to achieve maximum coordination, it is known that National Grid Ventures is promoting another project known as Eurolink which comprises a proposed interconnector between Great Britain and the Netherlands. Both projects have received the same connection offer from NG-ESO and based on this are likely to be looking at similar siting and routeing options. It is understood that National Grid Ventures has separate commercial partners in relation to the two projects, but nonetheless National Grid Ventures is promoting both projects, and although Eurolink is slightly less developed, the timeframes for the projects are not significantly dissimilar. ESC therefore requests that maximum coordination is achieved between the two projects.

In addition to the Eurolink project, ESC is aware that National Grid Electricity Transmission (NGET) are promoting the South-East Anglia (SEA) Link identified as SCD1 within the Network Options Assessment (NOA). NGET has engaged ESC alongside other stakeholders in very early discussions in relation to this project. Although the connection location for this project is not yet known, the Sizewell area has been identified within the NOA. NGET, who alongside National Grid Ventures, are part of the National Grid PLC group, are potentially therefore likely to be looking at siting and

routing options within the same locality, which will only exacerbate the Council's concerns regarding cumulative impacts.

ESC would urge National Grid Ventures to liaise with NGET to ensure maximum coordination between all three projects. The co-location and potential sharing of infrastructure should be fully explored. The draft Overarching National Policy Statement for Energy (EN-1) states that the preference should be for coordination and seeks to address the need for more coordination in the design and delivery of onshore and offshore electricity transmission infrastructure. This is supported by the work being undertaken by the BEIS-led Offshore Transmission Network Review (OTNR). All projects are considered in scope for the Early Opportunities workstream. It is understood National Grid Ventures is already engaging with BEIS in relation to this review. Greater coordination and sharing of infrastructure would align with intentions within the recently published Net Zero Strategy: Build Back Greener ([Net Zero Strategy: Build Back Greener - October 2021 \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/101222/net-zero-strategy-build-back-greener-october-2021.pdf)), to 'adopt a new approach to onshore and offshore electricity networks to incorporate new low carbon generation and demand in the most efficient manner, taking account of the environment and local communities' (p.94, October 2021).

Greater coordination could also (if the projects are consented) facilitate infrastructure and construction programmes which could avoid the environment and local communities having to experience the adverse impacts and disruption caused during construction phases for one project, only to experience this again from another consecutively. The need for coordination will only be more pressing should East Anglia One North and Two offshore windfarms and Sizewell C be consented by the Secretary of State.

At present ESC cannot see evidence of a coordinated approach being taken, for the reasons set out above, which raises significant concerns.

Site Selection

The information provided within the consultation is limited in terms of its level of detail. It is understood that this in part, reflects the early stage of the project's development. Notwithstanding this, the lack of detail in relation to the siting and routing options has limited the Council's ability to provide detailed comments. The siting and routing options are also based on accommodating the Nautilus project alone, with no consideration of the other known future projects being promoted by National Grid Ventures and NGET. The siting and routing options need to reflect the importance of facilitating and maximising coordination. This would involve fully exploring options for co-location, sharing of infrastructure and coordination of construction.

Notwithstanding the above comments, the Council has provided some comments on both the site selection criteria and the options presented in the consultation within Appendix A of this document. At present ESC has significant concerns in relation to the different siting and routing options proposed, none of which are deliverable without significant challenge and some of which appear potentially undeliverable. ESC considers that there is significant further work required to evaluate

the siting and routeing options, including consideration of the factors which ESC has identified as currently missing from the key site selection criteria, before a preferred site can be identified.

ESC has provided comments in relation to the different elements of the project, but ultimately the impacts of the landfall, cable routeing and converter station site will have to be considered holistically. In addition to this, it is essential that the full cumulative impacts of the project, as well as consented, planned and forthcoming projects, are fully considered and assessed. East Suffolk is facing a significant number of large-scale energy projects, it is vital the impacts both during construction and operation must be comprehensively considered.

In addition to attending the webinars and community events held by National Grid Ventures, ESC also held a series of short meetings with the directly affected town and parish councils to seek their views on the project. The views expressed have helped to inform the Council's response. It was clear during the meetings that there is no town or parish council support for the proposal currently being consulted upon.

Summary

ESC has significant concerns in relation to the Nautilus project as currently proposed, in part due to the lack of demonstratable coordination with partner offshore windfarms or other proposed large-scale energy projects. ESC considers that National Grid Ventures needs to demonstrate that coordination between projects has been maximised. This is both through the use of the multi-purpose element of the interconnector to facilitate connection to offshore wind projects, but also through coordination with the Eurolink project and NGET's SEA Link project. ESC would urge National Grid Venture to consider siting and routeing options which can facilitate this level of coordination.

Notwithstanding the above comments, ESC is also of the view that insufficient information has been provided within the consultation to give the Council confidence that the siting and routeing options presented for Nautilus are viable. There are significant challenges in relation to securing an appropriate landfall, cable route and converter station site for the project. ESC consider that further work is necessary to demonstrate the viability of the siting and routeing options proposed prior to National Grid Ventures identifying a preferred site. Based on the information available, ESC objects to the lack of demonstratable coordination and is not able to support the landfall, cable route and converter station options presented.

If you wish to discuss any of the matters raised within this response further, please do not hesitate to contact us using the details above.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Philip Ridley', with a large, sweeping flourish underneath.

Philip Ridley BSc (Hons) MRTPI
Head of Planning and Coastal Management
East Suffolk Council

Appendix A ESC Detailed Comments on Siting and Routeing Methodology and Options

The site selection and routeing options are based on the need to accommodate the Nautilus project alone. ESC has provided comments on the information presented within the consultation, notwithstanding the Council's views on the need to achieve maximum coordination, including through the exploration of options for co-location and the sharing of infrastructure.

1. Site Selection Criteria

- 1.1. The Briefing Pack contains a list of key criteria on page 9 which it is stated were used for selecting the most suitable siting and routeing options. Some additional constraints are also identified in relation to the landfall site options. Although the list is welcomed, there is minimal detail provided which limits the ability to provide feedback. For example, it is not clear from the documents what specific features, landscapes, assets etc. have been considered and what buffers have been used for these. ESC considers that there are some factors which have not been identified within the key criteria list that should have been considered during the site selection assessment. The Council has provided comments in relation to the criteria utilised, in addition to highlighting any additional factors which should have been considered.
- 1.2. *The potential to affect the Suffolk Coast and Heaths AONB and Heritage Coast* – Inclusion of this criteria is noted. It is assumed that this would include consideration of the setting of the Area of Outstanding Natural Beauty (AONB) as well as consideration of the effect of development proposed within the designation.
- 1.3. *Landscape* – It is not clear what landscape considerations have been included/excluded from the siting and routeing methodology. Consideration should be given to valued landscape features. Box 5.1 of Guidelines for Landscape and Visual Impact Assessment 3rd edition offers a comprehensive range of factors that can help in the identification of valued landscapes and ESC would expect this guidance to be followed.
- 1.4. In respect of landscape character, whilst we would anticipate the Suffolk County Landscape Character Assessment will contribute to the baseline information, the district level assessment ([Suffolk Coastal Landscape Character Assessment](#)) and AONB Touching the Tide assessments ([Touching the Tide - Landscape Character Assessment](#)) should be key informative guides.
- 1.5. It is important that the criteria utilised for cable routeing includes consideration of Tree Preservation Orders, but this should not be the only consideration. Potential impacts on all trees and hedgerows should be part of the consideration. ESC would expect hedgerows to be considered under the qualifying criteria included in the 1997 Hedgerow Regulations. Historic landscape character assessment should also be a key consideration in cable route planning, whilst there may be no listed buildings within proposed cable corridors, impacts on the setting of any adjacent ones should be considered. Likewise, the historic character

and features of the landscape at a potential converter station site may make a significant contribution to the local character of place and the sensitivity of a site. The nature of this interest will need to be understood and assessed as part of both the site selection process and subsequent stages of assessment.

- 1.6. *Proximity to public rights of way and cycle routes* – It is noted that public rights of way and cycle routes have been considered. ESC will defer to Suffolk County Council (SCC) as the Highway Authority for detailed comments on this, but we do expect disruption to key routes to be minimised in the project planning, for the benefit of our communities and visitors.
- 1.7. *Residential properties, existing infrastructure and future developments* – It is welcomed that residential properties have been included within the criteria for site selection, it is also considered that settlements as a whole should be included. It is noted that the criterion includes consideration of existing and future developments. It is vital that other large-scale projects which are consented or proposed in the area are fully taken into account during the consideration of the siting and routeing options. This is essential to understand the cumulative impacts of the projects collectively. This is also considered crucial to allow full consideration to be given to maximising coordination. The need for coordination should be ingrained within the siting and routeing criteria and sites and routes chosen with this in mind.
- 1.8. *Impacts on local heritage and archaeological assets* – The inclusion of this criteria is noted. It is assumed that the reference to local relates to the geographical location of the asset rather than its significance as ESC would like to highlight that all listed buildings are listed by the Government for their national importance. It is assumed that the site selection has considered listed buildings, it is expected that all grades, Grade I, Grade II* and Grade II should be considered. It is not clear from the information provided what factors have been considered and what have not. The impact on Conservation Areas is often a consideration which is omitted and should not be. Conservation Areas are Designated Heritage Assets, and it is therefore essential that they are mapped as a constraint and taken into consideration.
- 1.9. Proximity to listed buildings may give rise to setting impacts for listed buildings. The principal impacts that arise from the project in relation to listed buildings relate to those derived from the location of the converter station. With a land-take of five hectares, a maximum height of 24 metres (equivalent to a seven-storey building), the final site selection should be based on careful and detailed assessment of the contribution that setting makes to the significance of any nearby designated heritage assets, and how this contribution would be affected by the development.
- 1.10. Any detailed site selection must include a Heritage Impact Assessment following prescribed methodology set out in advice provided by Historic England.

- 1.11. With regard to archaeology, ESC will defer to SCC's Archaeological Service for detailed comments.
- 1.12. *Ecological designated sites and sensitive features* – It is noted that this is one of the criterion for site selection. ESC would like to highlight at this early stage that due to the proximity of some of the landfall and cable route options to European designated sites, the shadow Habitats Regulations Assessment (sHRA) will need to consider any potential impacts on functionally linked land (as well as the designated sites themselves).
- 1.13. *Flood Risk* – it is noted that flood risk has been included within the list of site selection criteria. It is important that surface water flood risk is considered alongside other forms of flood risk and regard had to the outputs of any published surface water management plans. ESC will defer to SCC as the Lead Local Flood Authority for detailed comments.
- 1.14. *Conformance with Local Development Plan policies* – The development plan for the district is the East Suffolk Council Suffolk Coastal Local Plan 2020. There are numerous relevant policies for consideration within this document, but attention is drawn to Policy SCLP3.4 'Proposals for Major Energy Projects'. This policy highlights the need to consider the cumulative impacts of projects but also highlights a number of other factors which should be considered, and which have been highlighted within the Council's comments on the site selection criteria below.
- 1.15. Additional criteria ESC considers the site selection process should include consideration of:
- 1.16. *Facilitate coordination* – there is no clear criteria which seeks to promote coordination through the site selection criteria by exploring opportunities for co-location and infrastructure sharing, this should be included.
- 1.17. *Coastal Protection* – the terrestrial siting criteria does not include reference to coastal erosion risk zones which would be expected. Similarly, the additional criteria identified for the landfall site options makes no reference to the consideration of coastal change.
- 1.18. *Noise and vibration* – the criteria do not include reference to either construction or operational noise and vibration.
- 1.19. The converter station site will need to be adequately assessed using relevant guidance (currently BS4142:2014+A1:2019 - Methods for rating and assessing industrial and commercial sound) whilst also considering appropriate deviations where BS4142 is out of scope and to take account of matters such a low frequency noise, if appropriate. The search areas suggested are all areas of low background and rural residential character noise, and therefore the siting of a development that will introduce a significant and likely out of character long term constant noise source, could have a significant adverse impact in that locality as well as impacting on the general amenity of the area.

- 1.20. ESC's position on noise from developments of this nature in this district may be summed up by the following condition used in Town and Country Planning Act applications, but is equally relevant here and has been the starting point for other DCO projects with which ESC has been involved:

Noise from fixed plant or machinery (e.g. heat pumps, compressors, extractor systems, fans, pumps, air conditioning plant or refrigeration plant) can be annoying and disruptive. This is particularly the case when noise is impulsive or has tonal characteristics. A noise assessment should therefore be submitted to include all plant and machinery and be based on BS4142:2014+A1:2019. A rating level (LAeq) of at least 5dB below the typical background (LA90) should be achieved. Where the rating level cannot be achieved, the noise mitigation measures considered should be explained and the achievable noise level should be identified and justified.

- 1.21. Due to the size of these types of projects, the 5dB below background is an aspirational target and one we ask applicants to consider as the appropriate limit. Deviation from this level will require robust justification and the aim in all cases should be to achieve the lowest possible sound level for which we will also require robust justification. This should be in line with all relevant standards, guidance and policy. The developer is reminded of the overarching principles of NPS EN-1 in terms of noise and vibration and particularly the requirement to mitigate and minimise noise impact.
- 1.22. Construction noise and vibration will need to be assessed and planned with the relevant guidance in mind (currently BS 5228-1 & 2 :2009+A1:2014 - Codes of practice for noise and vibration control on construction and open sites.). The areas where the landfall, cable routes, converter station search areas and grid connection point are suggested are predominantly low background and rural residential character noise areas, and therefore compliance with this guidance is expected as a minimum. Where impacts are likely to be significant and/or long term, it is likely ESC will request consideration over and above that in the guidance due to the likely increased duration and scale of impact of a project of this size. Monitoring and mitigation proposals will need to form a significant part of a Construction Management Plan and Code of Construction Practice.
- 1.23. As it does not appear to have been considered at this point in site selection, it is expected that any location for the landfall, cable routes, converter station and grid connection point are fully and adequately assessed in terms of noise and vibration impact. It is recommended that designs for all aspects of the project are made with noise and vibration mitigation in mind and consideration should be given to not only the siting of permanent infrastructure (including areas such as joint bays) but also temporary infrastructure such as haul roads and construction compounds. This is a sensitive area and that should be upper most in any assessment and decision in terms of site selection going forward.
- 1.24. *Light pollution* – It is noted that the impact of external lighting has not been considered during site selection. It is expected that where potential nuisances like this have not been

considered during the site selection process, they will need to be adequately addressed in any submission including documents such as Construction Management Plan and Code of Construction Practice.

- 1.25. *Contaminated Land* –site selection should include consideration of contaminated land. It will need to be further assessed in line with relevant guidance (including BS 10175:2011+A2:2017 and Land Contamination Risk Assessment - LCRM) and legislation to ensure any contamination found prior to or during the development is safely dealt with, regardless of the sites selected.
- 1.26. *Private Water Supplies* – There has been no specific consideration in site selection on the impact on Private Water Supplies at any of the sites or during construction, this will need to be considered going forward.
- 1.27. *Air Quality* - There is no information within the consultation material regarding the impact on air quality. The terrestrial site selection criteria identified do not include the consideration of air quality. It is important that air quality impact and dust control is considered early in the project, even if this is initially in outline terms only. In addition, best available technology/best practicable means is requested for equipment and methodology used during the construction and operation of the scheme to minimise impacts upon air quality and to reduce the potential for nuisance from construction dust.
- 1.28. Impacts on local air quality and on habitats should be a consideration in siting and routeing investigation and decisions, and if this is not considered necessary, the reasons for this should be fully explained. To enable pollutant and dust impacts to be minimised, routes and construction site access roads within specified distances of designated habitat sites and residential receptors (as per the recognised guidance) should be avoided where possible. In general, siting and routeing options which minimise the extent of works are best for air quality/nuisance, as this would result in less dust and reduced emissions. This however must be weighed up in the balance against other impacts.
- 1.29. The main potential impacts of the proposed development on air quality are those associated with the construction phase, specifically associated with the emissions from construction vehicles, particularly heavy goods vehicles (HGVs), and dust from the work itself. Identifying roads for inclusion in the construction and operational air quality assessment should be guided by the Institute for Air Quality Management (IQMA) Land Use Planning and Development Control Screening Criteria, and the lower thresholds for inclusion at Air Quality Management Areas used where appropriate. The most sensitive of National Highways' and IAQM traffic speed change criteria should be used for identifying roads for assessment. Re-routed traffic could influence air quality, particularly if this results in increased congestion. As such, the air quality assessment needs to consider the effects of re-routing existing traffic during construction, where appropriate. It would be preferable for a dynamic traffic model such as VISSIM to model the effects of re-routing existing traffic.

However, if a static model is used, the effects should still be considered in a quantitative assessment.

- 1.30. A sensitivity test should be undertaken as part of the air quality assessment, to establish what the impact of the scheme could be if air quality does not improve in line with government projections. A sensitivity test of impacts with more pessimistic assumptions than government projections should be adopted. The developer's air quality assessment should ideally use locally derived fleet information on vehicles within East Suffolk for emission calculations. In addition, the developer's proposed commitments to Euro Standards for construction vehicles should be reflected in emission factor toolkit assumptions used for the construction fleet and an option selected within the emission factor toolkit, so that separate emissions data can be developed for buses and rigid/articulated HGVs, as appropriate.
- 1.31. The proposed scheme has the potential to negatively impact on local air quality and cause dust nuisance to local receptors. As such, ESC would expect the impact of construction and operation on local air quality to be considered at the siting and routeing stage, and at the later stages when detailed assessments should be carried out.
- 1.32. Although not necessarily relevant at this stage, should this project proceed, ESC requests that the developer commits to using Euro VI emission standards for all tiers of construction vehicles, and that all non-road mobile machinery (NRMM) used is stage V compliant, and stage IV where V is not possible.
- 1.33. *Highways* – It is considered that the siting and routeing criteria should include consideration of access routes to serve the different elements of the project. It is important that there are suitable routes within the serving highway network to facilitate the moving of large items during construction and maintenance. It is a significant omission from the siting and routeing criteria not to include the consideration of access and impacts on the highway network. ESC will defer to SCC as the Highway Authority for more detailed comments.
- 1.34. *Agricultural Grade Classification* – It is considered that the agricultural land classification should be considered within the site selection criteria for the converter station site at the very least, as this would result in the permanent loss of agricultural land. It is important to understand and consider the quality of agricultural land which would be lost during site selection, as it is not possible to mitigate this loss at a later date. The Applicant should seek to minimise impacts on the best and most versatile agricultural land, defined as land grades 1, 2 and 3a of the Agricultural Land Classification and preferably use land in areas of poorer quality (grades 3b, 4 and 5).
- 1.35. During the meetings ESC held with some affected town and parish councils, it was voiced that it would be helpful if National Grid Ventures could publish full details of the siting and routeing screening exercise undertaken and criteria utilised.

2. Siting and Routeing Options

- 2.1. Notwithstanding our comments above in relation to the site selection criteria which has led to the selection of the siting and routeing options presented, the Council has provided some more detailed comments on the options proposed. It should however be noted that ESC's ability to provide comments on the options has been severely restricted by the lack of detailed information provided within the consultation.

Landfall

- 2.2. A key constraint for landfall sites between Thorpeness and Sizewell is the Coraline Crag outcrop formation located offshore between landfall locations A and D. The outcrop is regarded as a sensitive feature for its significance for bryozoan fossils but also importantly the feature acts as a coastal control point which exerts a significant stabilising influence on the coast to the north and south of Thorpe Ness. It is important to ensure that damage (by trenching) to the Coraline Crag outcrop is avoided. It will need to be demonstrated that siting and routeing options can be achieved without damage to the exposed Coraline Crag outcrop.
- 2.3. An assessment has not yet been undertaken in sufficient detail to explore the potential impacts on coastal change of each of the cable landing site options. The East Anglia One North and East Anglia Two projects undertook a bespoke assessment of this aspect and produced reports of the findings that are examples of good practice in this field. National Grid Ventures need to adequately demonstrate consideration of the risk posed by coastal change to works at, and immediately landward, of the shoreline. This will include full assessment of the potential impact of coastal change on the transition bay sites to ensure the risk of erosion to near-coast structures and buried cables and ducts is properly assessed in a precautionary fashion. The landfall sites are all located within an area where Local Plan Policy SCLP9.3: Coastal Management Area, is relevant.
- 2.4. In addition to consideration of the Coraline Crag outcrop and risk posed by coastal change, the developer will also need to ensure that the landfall works do not have a significant negative impact on the shoreline (mean low water springs to the top of the cliff).
- 2.5. In respect of ecology, the landfall options proposed may also have ecological constraints beyond those identified within the documents, particularly the presence of protected species, which it is not possible to determine without detailed field surveys. These must be assessed using published guidance methodologies and based on these findings the mitigation hierarchy (avoid, mitigate, compensate) must be applied to the site selection process. As stated above, given the proximity of some of the landfall options to European designated sites, a sHRA will need to consider impacts on designated sites and any functionally linked land.

- 2.6. Considering the landfall options from an ecological perspective, options B, C and D are all in very close proximity to the Sandlings Special Protection Area (SPA) and the Leiston-Aldeburgh Site of Special Scientific Interest (SSSI). For sites C and D this includes the presence of statutory designated nature conservation sites on both the landward and seaward sides of the sites. These are likely to place significant ecological constraints on construction activities at these sites. Sites A and B also have part of the Suffolk Shingle Beaches County Wildlife Site (CWS) on their seaward sides, again creating an ecological constraint to landfall construction.
- 2.7. As recognised in the consultation information, option E is within part of the Leiston-Aldeburgh SSSI and is close to a suite of other designated nature conservation sites of national and international importance. It appears highly unlikely that the ecological impacts of construction activities at this site could be mitigated sufficiently to make it an acceptable landfall option.
- 2.8. The impacts on residential properties and commercial enterprises must also be taken fully into consideration. The landfall options are located in close proximity to residential and commercial premises. Construction activities taking place at the landfall site, from previous experience, will necessitate some 24-hour working which could cause noise and disturbance to visitors to the locality and adversely affect occupiers' amenity.
- 2.9. It is also noted that all the landfall site options are located adjacent to the popular coastal path as well as further public rights of ways, bridleways and cycle routes. The sites sit within the AONB and Heritage Coast and comprise a well visited area by tourists. The implications of the works on this area need to be fully considered.
- 2.10. Finally, it is strongly recommended that National Grid Ventures consult with EDF Energy and ScottishPower Renewables to ensure that any assumptions on marine cable pathways required to link to the landing sites are viable. It is also considered essential that the developer fully engages with the developers of all other projects that are proposing to, or desire to, make landfall in this locality, to maximise opportunities for coordination and the sharing of infrastructure.

Summary

- 2.11. In summary, ESC requires evidence of full consideration of the risk posed by coastal change to the works proposed, evidence to demonstrate that the landfall works will not have a significant negative impact on the shoreline and demonstration that the cable route options are achievable without damage to the exposed Coraline Crag outcrop. At present insufficient information has been provided to address ESC's concerns in relation to coastal management.
- 2.12. At present there are significant ecological constraints in relation to the landfall particularly options C and D, and option E is considered unsuitable in its current location. Further work

is required to understand any potential impacts on designated sites and any functionally linked land. Detailed field surveys need to be undertaken to understand the presence of protected species. In addition to this work, further detail is required in relation to the design and timing of the works proposed.

- 2.13. Greater consideration also needs to be given to impacts on residential amenity, commercial enterprises, and public amenity from the works at the landfall. It is also noted that construction noise and impacts on air quality from construction activities have not yet been considered and these will need to be assessed given the proximity of properties and nationally designated sites.
- 2.14. It is not possible at this stage for ESC to provide a preference for a landfall site due to the limited detail provided within the consultation documents. This section of the coast is heavily constrained and therefore National Grid Ventures will need to demonstrate whether any of these options are viable from an offshore and onshore perspective.
- 2.15. ESC also wants to see evidence of coordination if this project proceeds. As indicated previously, this is a heavily constrained fragile area of the coastline and therefore it is important for developers to demonstrate how they have coordinated with other nationally significant developments also looking to make landfall in this area, to seek to maximise the sharing of infrastructure and coordination of construction programmes.

Cable Routeing Options

- 2.16. As indicated in relation to the landfall options, ESC's ability to provide detailed and comprehensive comments has been limited by the very high-level information provided within the consultation material.
- 2.17. Shared Route for Northern and Southern Corridor – This route requires the crossing of part of the Sandlings SPA and Leiston-Aldeburgh SSSI in order to reach any of the proposed converter station options. The East Anglia One North and Two offshore windfarm cable routes are already proposing to cross the SPA/SSSI in this area, and therefore any crossing for this interconnector (or any other projects), will need to cross the designated sites using a Horizontal Directional Drilling (HDD) type technique. This must be factored into the assessment of the project, including the assessment of the need for any test areas within the designated sites. There is likely to be air quality implications which will need to be appropriately mitigated. The route also potentially crosses part of the Aldringham to Aldeburgh Disused Railway Line CWS.
- 2.18. In addition to the sensitive habitats, this section of the route also lies within the AONB and Heritage Coast. It is therefore a nationally designated landscape which is valued and visited by many tourists. There are also several residential properties and businesses which sit near this route, the impact upon which needs to be carefully considered, especially in light of the need to potentially HDD the SPA/SSSI.

- 2.19. Northern Cable Corridor - The first half of this route (closest to the landfall) crosses either part of the Sizewell Marshes SSSI or Aldhurst Farm. EDF Energy has developed Aldhurst Farm to help compensate for the impacts on the SSSI as a result of the construction of Sizewell C, even if the development is not consented. Both the SSSI and Aldhurst Farm are sensitive wetland habitats of at least national nature conservation importance. Based on the information available it does not seem likely that the impacts of construction of a cable route across them could be adequately mitigated. The route also crosses other land which EDF Energy are proposing to use for ecological mitigation for the Sizewell C project (particularly the area north of Lovers Lane).
- 2.20. The northern route interacts with part of the proposed construction area for the Sizewell C project and runs parallel with a section of the proposed Green Rail Route. It is not clear how this interaction could be facilitated (if Sizewell C is consented) and to what extent National Grid Ventures has engaged with EDF Energy on this proposed interaction.
- 2.21. The northern route passes by designated heritage assets - including the Scheduled Monument and Grade I and II listed buildings at Leiston Abbey. The long-term impacts of this cable route on their settings should be understood.
- 2.22. At present, based on the information available it is difficult to understand how the Northern Cable Corridor is a viable option.
- 2.23. Southern Cable Route Corridor – The section of this route between its seaward end and the B1069 (Snape Road) is approximately the same route proposed to be used by the East Anglia One North and Two offshore windfarm cable routes. It is known that there is an ecological ‘pinch point’ where the route crosses the Hundred River, the B1122 and the area of woodland at Aldringham Court. This is a sensitive area of wooded river valley, impacts on which it is not considered could be satisfactorily mitigated. This must be considered if this route option is to be progressed, and an HDD type technique may be the only viable option in this area.
- 2.24. It is also important to highlight the proximity of residential properties in this pinch point location which would be adversely affected by construction works and potential HDD operations. Careful consideration of these impacts and potential mitigation is necessary.
- 2.25. Finally, the route proposes to travel to the south of Aldringham Court, a grade II listed building and would therefore potentially affect its setting. The impact of the works on the setting of this asset would need to be fully considered both individually and cumulatively.
- 2.26. Central Cable Route Corridor – As identified in relation to the southern cable route, there is an ecological pinch point where the route crosses the Hundred River, a similar constraint may also apply for the part of the Central Cable Route Corridor in this area. The cable route in the Aldringham area is also heavily constrained by residential properties and the Hundred

River, the route seems to weave in very close proximity to both elements. The construction works are therefore likely to result in significant adverse effects on residential amenity in this locality and would need to be very carefully managed in terms of flood risk.

- 2.27. Notwithstanding the Council's concerns regarding the pinch point at Aldringham, it is considered that there are less constrained routes between the Southern Cable Route Corridor and CSA4 that should be considered further, if this project is progressed in this manner. There would appear to be route options which would predominantly utilise arable land, part of which already forms part of the East Anglia One North and Two offshore windfarm cable routes. This would potentially offer alternative routes to converter station sites without using the eastern part of the Northern Cable Corridor or the Central Cable Corridor, both of which are significantly constrained. This comment is made on the basis that a viable option for crossing the pinch point is identified.
- 2.28. Landfall E Cable Route Corridor – Given the significant ecological constraints present at landfall option E, no consideration has been given to this cable route corridor.

Summary

- 2.29. ESC has several significant concerns regarding the cable route options identified, which at best require very careful design and construction techniques and at worst render the options unviable. It is not considered that the Northern Corridor (from seaward end to Abbey Road) is ecologically viable and there are also significant concerns regarding the interaction with the Sizewell C construction works (if consented). The shared Northern and Southern Corridor requires the crossing of the Sandlings SPA/Leiston-Aldeburgh SSSI which is likely to require the use of HDD type technology to avoid the works damaging the designated sites. This however causes other challenges in relation to residential amenity, local businesses and the AONB. The Southern Corridor and Central Corridor also present particular ecological, landscape, heritage and residential amenity challenges at the pinch point and crossing of the Hundred River. Again, HDD type technologies are likely to be required in this locality, although this has not been demonstrated to be possible by other developers due to the constrained width of the area available.
- 2.30. The need for coordination and opportunities for co-location and infrastructure sharing should be fully explored.

Converter Station Search Areas

- 2.31. Notwithstanding the comments made in relation to the landfall options and cable route options presented, ESC has provided some comments in relation to the converter station search areas identified.

CSA1

- 2.32. This is the largest of the site search areas, stretching from Sternfield in the north to Snape church in the south. This site sits in an elevated position mostly comprising a plateau at or just above the 20m contour and falls within the [Estate Sandland](#) landscape type, retaining a series of characteristic features, including field patterns (simplified in comparison with OS first edition) and lanes and footpaths. Notably Kiln Lane, Redbarn Lane and Sloe Lane are also historic parish boundary features. The search area north of Red Lane/Kiln Lane drops away to a small valley to the north. There are two small areas of woodland in the northern part of the search area, between which is an area of land which National Grid Ventures has previously identified as a potential site option. Away from this relatively visually sheltered area, the remainder of the search area is open and exposed, which will require substantial levels of screen planting to moderate visual impacts, and such planting will result in a high degree of change to landscape character. Careful consideration will need to be given to avoiding such measures having an adverse impact on landscape character. The site is also just to the north of the AONB and therefore the impact of the development on the setting of the designated landscape needs to be considered.
- 2.33. This site predominantly comprises arable fields, with several hedgerows with trees and scattered trees. Whilst, based on the information available, there do not appear to be any significant ecological constraints on the site, detailed consideration would need to be given to the presence of any protected and/or priority species (including farmland birds) and the retention and enhancement of the vegetation features present.
- 2.34. Snape Church lies to the south of the CSA1 search area and is a grade II* listed building. The setting of churches is generally extensive, in terms of visual and historic connections to the surrounding landscape and historic settlements. The potential impact on the setting (and therefore on the significance) of the church is great. Furthermore, the site search area sits near Friston Hall (Grade II).
- 2.35. The site search area sits near the eastern edge of the settlement of Sternfield and northern edge of Snape. In addition to the properties associated with these settlements, there are residential properties scattered around the periphery of the site selection area which would be affected by the construction works but also permanent infrastructure associated with the converter station. This includes operational noise; the converter station site will need to be adequately assessed and the Council will seek to minimise the operational noise as previously indicated (see paragraphs 1.19-1.21).
- 2.36. A significant proportion of the converter station search area also lies within Grade 2 agricultural land. The loss of the best and most versatile agricultural land should be minimised.

CSA2

- 2.37. From the south, this area stretches from the north of Sternfield around Bloomfield's Covert and at the northern end includes a large area of open arable land east of Saxmundham,

bounded to the north by the Leiston-Saxmundham Road (B1119). The southernmost part of the search area appears to include woodland belts, moats and hedge lines. Like CSA1, this site is also in an elevated position, but the indicated search area suggests that it is more specifically located on the eastern facing slopes as the land begins to drop away from the 30m high ground to the east of Saxmundham. The higher ground offers useful potential for screen planting with possible roadside planting also providing scope for screening for immediate visual receptors.

- 2.38. The land to the north and east of Bloomfield's covert is open arable land. Modern farming practice has stripped the landscape of most key features such as hedgerows, hedgerow trees and copses so in this respect the potential for adverse landscape impact is less severe than for some other sites under consideration. Prior to agricultural improvement works after 1945, this area had a locally characteristic field pattern and included a substantial Ancient Woodland known as [Great Wood](#), as well as ponds and a small plantation typical of the [Ancient Estate Claylands](#) landscape type, of which this area is part.
- 2.39. This site is primarily comprised of large arable fields, with no apparent boundary vegetation within the site area shown on the plan. Whilst, based on the information available, there do not appear to be any significant ecological constraints on the site, detailed consideration would need to be given to the presence of any protected and/or priority species (including farmland birds).
- 2.40. Based on historic OS maps, as indicated previously, it appears that the bulk of this site contained woodland along with small fields with hedgerows and trees until at least the late 1950's. There may therefore be the opportunity to reinstate some of these habitats across the wider converter station search area if this option is selected.
- 2.41. The site does sit immediately to the east of Saxmundham town and there are also some sporadic residential properties located along the B1119. Additionally, the site sits adjacent to the Grade II listed Wood Farmhouse. Although the comments regarding opportunities for reinstatement of the landscape features are valid, this site is very open at present. The same comments apply in relation to construction and operational noise as CSA1.
- 2.42. The site predominantly comprises grade 3 agricultural land although there is an area of grade 2 land within the northern section. It is not known whether the land is grade 3a or 3b, as previously stated the loss of the best and most versatile agricultural land should be minimised.

CSA3

- 2.43. This site sits at the western end of the former Leiston WW2 airfield site. Much of the former field pattern was removed to allow for the construction of the airfield but this area lies beyond the western end of the short north-west/south-east cross runway and so retains its former field pattern depicted by hedgerows and hedgerow trees which presumably would

be at risk of removal if this site was brought forward for development. As a result, it may be appropriate to shift the search area further east if this area is to be examined in further detail, unless the development can be accommodated within the existing field pattern. It should also be noted that despite the total loss of historic landscape features on the former airfield itself, there are some constraining features including plantation woodland.

- 2.44. It is important to note that considering land further east would potentially bring development into the setting of Moat House (Grade II) and closer to Hall Farm. A better understanding of the required land take would help understand better the potential impact on landscape character, but for now the potential landscape character erosion is fairly high. On the other hand, existing trees, hedges and woodland that can be retained would provide useful screening potential. Any new planting for screening purposes is likely to integrate well with existing landscape character. The Suffolk Coastal Landscape Character Assessment however cautions against development of the plateau landscape.
- 2.45. This site is immediately south of Theberton Woods CWS and Leiston airfield CWS is also present immediately adjacent to the most-eastern corner of the search area. It is comprised of arable fields separated by a large tree/hedge-line, roadside hedgerows are also present on much of the southern, western and northern boundaries. This vegetation provides the most important ecological features on the site, and should this site be selected, they should be retained and enhanced. The presence of any protected and/or priority species (including farmland birds) will also need to be assessed and consideration of buffering the CWS to the north will also be required.
- 2.46. The site comprises grade 3 agricultural land. As previously stated, it is not known whether the is grade 3a or 3b but again the loss of the best and most versatile agricultural land should be minimised.
- 2.47. The site is at present less constrained by large numbers of residential properties than other sites, however there are some properties to the west and south-east relatively close to the site, which includes the Grade II listed Peakhill Cottages. Any movement of the site eastwards would also move the site closer to residential properties which would need to be carefully considered. Cake and Ales residential and tourist caravan site is located to the south-east.

CSA4

- 2.48. The site lies to the west of Knodishall and falls within a landscape that has a notably rural character with areas of modest to small sized fields bordered by intact hedgerows, hedgerow trees, copses and small woodland tree belts. The area retains a simplified pattern of historic field boundaries with later plantations and secondary woodlands, it is part of the [Ancient Estate Claylands](#) landscape type. The lack of intrusion from modern development is noted in the Suffolk Coastal Landscape Character Assessment.

- 2.49. Development of this search area is likely to lead to a notable loss of key landscape character features such as hedges and trees which cannot be mitigated in a like for like basis. However, existing hedges and tree belts offer screening potential if retained and therefore any development would need to be accommodated within the existing pattern of enclosures and woodlands, which is considered unlikely. New screen planting has the potential to be successful but, in this landscape, it would need to be well sited as extensive planting has the potential to have an adverse impact on landscape character.
- 2.50. As stated, the site is a mix of arable fields, hedgerows and trees and small blocks of woodland, the Hundred River also flows just to the east of the search area boundary. Given the presence of this variety of habitats on and around the site it appears more likely that ecological impacts will arise if it is selected as the converter station site, in particular it appears unlikely that all of the existing vegetation could be retained as part of the development proposal and therefore any scheme would need to address this. The presence of any protected and/or priority species (including farmland birds) will need to be assessed.
- 2.51. Part of this site lies within flood zone 3, ESC will defer to SCC as the Lead Local Flood Authority for further comment on this matter, but flood risk would need to be carefully considered.
- 2.52. The site comprises grade 2 agricultural land. As previously stated, the loss of the best and most versatile agricultural land should be minimised.
- 2.53. The proximity of Knodishall village would be likely to give rise to adverse impacts that may not be possible to avoid or appropriately mitigate. Development on this site also has the potential to impact the setting of the Church of St Lawrence (Grade II*) and Knodishall Place (Grade II), which are located within the village of Knodishall, and the setting of Pattles Farmhouse on Grove Road.
- 2.54. Finally, the site also includes monument record KND 004 which is the site of a roman villa which has been identified through field walking but not investigated or defined. SCC Archaeological Service will provide more detailed information on this site, but further work will be necessary to determine the site's significance and whether preservation in situ is necessary.

CSA5

- 2.55. This area is to the west of Knodishall. The search area land slopes north-east/south-west and has a similar small scale field pattern and character as CSA4. The area retains much of its historic field pattern, particularly in the northern half, and has a scattering of ponds, plantations and secondary woodlands. The site is part of the [Ancient Estate Claylands](#) landscape type. Any development would need to be capable of being accommodated within the existing pattern of enclosures and woodlands. In addition, the land is quite steeply sloped and would inevitably require a good degree of terrain remodelling to achieve

required level platforms. It is hard to see how this site can deliver effective landscape and visual impact mitigation without itself having an adverse impact on landscape character, if indeed effective mitigation can be delivered at all.

- 2.56. As with CSA4, the proximity of Knodishall and Leiston would be likely to give rise to adverse impacts that may not be possible to avoid or appropriately mitigate. The search area is surrounded by residential properties on all boundaries. Additionally, this site is to the east of the Grade II* listed Church of St Lawrence and has the potential to impact its setting.
- 2.57. As stated, this site is a mix of arable fields, hedgerows and trees and small blocks of woodland. Given the presence of this variety of habitats on and around the site it appears more likely that ecological impacts will arise if it is selected as the converter station site. In particular, it appears unlikely that all of the existing vegetation could be retained as part of the development proposal and therefore any scheme would need to address this. The presence of any protected and/or priority species (including farmland birds) will also need to be assessed.
- 2.58. The site comprises a combination of grade 2 and grade 3 agricultural land. It is not known whether the section of grade 3 land is grade 3a or 3b, but as previously stated the loss of the best and most versatile agricultural land should be minimised.

Summary

- 2.59. The converter station search areas all have their challenges, and will all result in adverse impacts albeit to a greater or lesser degree – no weighting has been ascribed by the Council at this stage. They are all located in quiet rural areas where the potential operational noise from a converter station would be out of character and require appropriate mitigation. The sites are also predominantly served by narrow rural roads, it would need to be demonstrated that the local network could accommodate the expected construction and operational traffic in addition to the cumulative traffic. It is however not possible to consider the converter station search area options in isolation from the cable route and landfall options, as without an appropriate option for all three the project is not viable. The above comments would therefore need to be considered holistically alongside the comments provided in relation to the cable route and landfall. At present it appears very difficult and challenging to identify a viable cable route to the converter station sites from the landfall.

National Grid Substation

- 2.60. An important element of the project which must be considered as part of the siting and routeing options is the project's grid connection and implications of this. As previously indicated, this response has been drafted based on the current connection offer received by National Grid Ventures and on the assumption that East Anglia One North and/or East Anglia Two projects receive development consent from the Secretary of State. As a result of the connection works, it is understood that an extension with a maximum footprint of

1.3 hectares would be required to the proposed National Grid substation, based on the use of air insulated technology. This addition to accommodate the Nautilus project will have to be fully assessed. A cable route is also required between the converter station and the NGET substation.

- 2.61. Greater information needs to be provided in relation to the implications of the connection of these projects to the proposed NGET substation, including whether this would affect the technology employed within the infrastructure i.e. air insulated switchgear or gas insulated switchgear. The use of different technologies would have significant implications especially for the footprint of the substation.
- 2.62. The proposed National Grid substation location is a sensitive site, with its historic landscape character, proximity of listed buildings, proximity to residential properties and the settlement of Friston, flood risk, public rights of way and quiet rural positioning. Any cabling or extension to the proposed National Grid substation would require full assessment including cumulatively with the East Anglia One North and Two projects. Careful consideration would need to be given to prevent prejudicing mitigation associated with these projects. In addition, the cumulative impacts of other future connections also proposed at the site would need to be considered.
- 2.63. In relation to operational noise, the extension would need to be assessed using the guidance as indicated previously and will also be subject to a cumulative assessment with the infrastructure associated with committed and known projects using this site as a connection point. It is expected that this assessment will guide and provide any required mitigation to ensure that the operational noise impact from this development is negligible.
- 2.64. If a coordinated approach to the future National Grid Ventures projects is provided with the delivering of co-located infrastructure, this could facilitate the delivery of one shared cable route between the converter station site and NGET substation location, helping to minimise adverse impacts on local communities and the environment.

3. Cumulative impacts

- 3.1. As previously stated, it is essential that the full cumulative impacts of the Nautilus project in combination with other consented, planned and forthcoming projects are assessed and fully taken into consideration. The cumulative impacts of all these projects are a significant concern, and it is vital due to their magnitude that projects are not considered in isolation. It has been noted above, that the different landfall and cable route options in addition to the grid connection point, will potentially interact with features of the Sizewell C, East Anglia One North and East Anglia Two projects (if consented). This all needs to be adequately considered in terms of impact, including where the consenting of this project prolongs impacts in an area that has or is to be vacated by another project. In addition to the above-mentioned projects, it is also similarly essential that the cumulative impacts of the Nautilus project alongside other planned projects are fully assessed.

- 3.2. The cumulative impacts of all the energy projects potentially constructing within similar or overlapping timeframes is a concern in relation to the impact on tourism in the locality.
- 3.3. ESC would like to stress again the importance of coordination, to seek to minimise the impacts of the projects alongside other projects, on the locality.
4. Within the above comments and letter, it is considered that the questions within the consultation have mostly been addressed. Two questions were however asked about the AONB (Questions 11 and 12) which have not been answered previously and therefore a response has been provided below.
- *Q11 - Do you agree that it would be beneficial to co-locate developments to form clusters within the AONB, to help minimise potential effects on the community and the natural environment?*
 - *Q12 - Do you think that consideration should be given to locating developments in areas of the AONB which are already characterised by industrial development?*

4.1. In principle it would not be *beneficial* to co-locate developments to form clusters within the AONB. This is a nationally designated landscape where National Policy Statement (NPS) EN-1 confirms that AONBs have the highest status of protection in relation to landscape and scenic beauty. NPS EN-1 states:

Development proposed within nationally designated landscapes

5.9.9 National Parks, the Broads and AONBs have been confirmed by the Government as having the highest status of protection in relation to landscape and scenic beauty. Each of these designated areas has specific statutory purposes which help ensure their continued protection and which the IPC should have regard to in its decisions. The conservation of the natural beauty of the landscape and countryside should be given substantial weight by the IPC in deciding on applications for development consent in these areas.

4.2. It is also not agreed that there are sites within the AONB *characterised* by industrial development, although it is acknowledged that there is potential to minimise the magnitude of landscape change on sites within the AONB where existing large-scale infrastructure is present. This does not change the fact that the AONB is given the highest protection and full impacts of any development on the special qualities of the AONB would need to be comprehensively assessed, including any in combination effects. NPS EN-1 does however go on to state that development consent may be granted in the AONB in exceptional circumstances.

5.9.10 Nevertheless, the IPC may grant development consent in these areas in exceptional circumstances. The development should be demonstrated to be in the public interest and consideration of such applications should include an assessment of:

- *The need for the development, including in terms of national considerations, and the impact of consenting or not consenting it upon the local economy;*
- *The cost of, and scope for, developing elsewhere outside the designated area or meeting the need for it in some other way, taking account of the policy on alternatives set out in Section 4.4; and*
- *Any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.*

4.3. In accordance with policy, there are therefore exceptional circumstances where development within the AONB may be consented. The need for the development would have to be demonstrated as set out above. The overall cost and scope for developing sites outside the AONB would need to be considered so great as to render them unreasonable alternatives to a location within the AONB. Finally, the magnitude and degree of harm caused to the AONB by the development, taking full account of paragraphs 5.9.9 and 5.9.10, would need to not render the project unsuitable in the chosen location.

4.4. Although in principle it cannot be agreed that it would be *beneficial* to co-locate developments to form clusters within the AONB. There are specific exceptional circumstances identified within national policy where development within the AONB maybe accepted. A site within the AONB where there is already a dominant presence of large-scale infrastructure could meet these exceptional circumstances. It would however be heavily dependent on the specific details of the project and alternative sites available.