WRITTEN REPRESENTATION FOR SPR EA1N and EA2 PROJECTS (DEADLINE 1)

LANDSCAPE AND VISUAL

Interested Party: SASES **PINS Refs:** 20024106 & 20024110

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Summary

The written representation on landscape and visual issues comprises:

1. the expert report prepared by Michelle Bolger dated October 2020; and

2. the expert report prepared by Jon Rose and Associates dated 27 October 2020 concerning proposed mitigation planting.

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Landscape and Visual Issues

Relating to the
Onshore Development at Friston

Required for
East Anglia ONE North/ TWO Offshore Wind Farms

Prepared for
Substation Action Save East Suffolk (SASES)

LPA
Suffolk Coastal (East Suffolk)

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1 Executive Summary

Introduction

1.1 My name is Michelle Bolger, I am a Chartered Landscape Architect and Director of Michelle Bolger Expert Landscape Consultancy (MBELC) and I am experienced in reviewing the landscape and visual aspects of planning and Development Consent Order (DCO) applications. I have been involved since August 2018 in reviewing the proposals for the onshore Scottish Power Renewable (SPR) Substations for the windfarms being promoted by East Anglia One North (EA1N) Limited and East Anglia Two (EA2) Limited, and the associated National Grid (NG) substation.

1.2 National policy for energy infrastructure is set out in the Government's Overarching National Policy Statement (NPS) for Energy (EN-1). It emphasises the importance of good design, which includes siting and being sensitive to place, as the key means of minimising the harmful impacts of energy infrastructure on the landscape. NPS EN-3 and EN-5 reinforce the importance of good design when proposing new renewable energy infrastructure.

The Proposals

1.3 The key elements in the proposals for the SPR&NG substations, shown on Figures 5 & 9 in Appendix 1 to this review, are:

- Two Gas Insulated Switchgear (GIS) substations, one for each wind farm;
- A NG Substation which may have GIS or Air Insulated Switchgear (AIS);
- Up to three NG Cable Sealing End Compounds which would be in addition to the substations;
- National Grid Overhead Realignment Works;
- Permanent Operational Access Road; and
- A series of up to 6 construction sites/ haul roads.

1.4 The combined footprint of the main components[1], the operational access road, and the land which would not be returned to agriculture (Figure 9) i.e. the overall area subject to

[1] The combined footprint of the substations and cable sealing end compounds is 12.71 ha.

permanent development & change, is over 40 ha.[2] By way of comparison, the combined footprint of the nuclear power stations at Sizewell A and B (Figure 1) is 36.5 ha.[3]

1.5 The duration of the key construction activities at Friston is not entirely clear. The construction period for the NG substation is up to 4 years and does not necessarily include the overhead line realignment works. Yet the Landscape and Visual Impact Assessment (LVIA) prepared as part of the Environmental Impact Assessment (EIA) refers to a three-year construction period. It has yet to be decided whether the SPR substations would be built concurrently (2.5 years) or consecutively (5 years).

1.6 In addition to the extended duration of construction, constructing the SPR substations concurrently would delay the post construction mitigation planting (which represents the bulk of the mitigation planting). The mitigation for the National Grid infrastructure and whichever of the EA1N or EA2 substations were built first would be significantly delayed.

Existing Landscape Character

1.7 Friston is a small rural village connected by a network of quiet lanes at the centre of a spider's web of PRoWs. Friston Church (which is Grade II*) is located at the northern edge of the village on an area of slightly higher ground within a generous churchyard. The tower forms a landmark when seen from the landscape to the north. Nestled amongst mature trees, it signals the presence of the village.

1.8 Although land north of Friston is within two different landscape character areas (LCAs), (LCA L1: Heveningham and Knodishall Estate Claylands and LCA K3: Aldringham and Friston Sandlands) the countryside in this area has a coherent character overall and is highly representative of the '*quiet farmland*' of LCA L1. It comprises a landscape that is focused on arable farming, with a clear pattern of irregular fields, pockets of woodland and a number of historic farms which feature Grade II listed farmhouses. The LVIA acknowledges this character and the importance of this landscape to the setting of the parish and village of Friston (para 179). The landscape north of the village demonstrates a number of LCA L1's Special Qualities, also acknowledged in the LVIA (para 103). In particular, the lack of any sizeable settlement or intrusion from modern development, apart from the overhead transmission lines, creates a unifying sense of a peaceful, deeply rural 'backwater'. [4]

[2] Outline Landscape and Ecological Management Strategy Figure 3: OLMP General Arrangement
[3] Determined from Google Earth, calculating the area of hard surfacing/buildings visible around & including the power stations.
[4] Suffolk Coastal Landscape Character Assessment July 2018 Page 102

1.9 The transition from a larger to a finer grained landscape, that occurs when travelling north-south towards Friston village is a distinctive characteristic of the countryside north of the village.

Landscape and Visual Effects

1.10 The choice of Friston as a location for the SPR&NG substations was the result of a flawed selection process which did not display good design in terms of siting. Harmful aspects associated with the location at Friston have been exacerbated by the lack of micro-siting. There is no evidence that a design evolution process has been undertaken and the substations and ancillary infrastructure appear to have been arbitrarily and unsympathetically imposed upon the existing landscape. The consequences are:

- The loss of a substantial area of tranquil, open and deeply rural countryside;
- Development that conflicts with the prevailing unified character of the surrounding landscape;
- A complete change to the character of Friston, from a rural village to a village defined by substations and ancillary infrastructure;
- Harm to the character and functionality of the PRoW network, including through the severance and permanent stopping up of PRoWs; and
- The need for an excessively long, wide and incongruous permanent operational access road, to be constructed between the B1121 and the substations.

1.11 The sensitivity of the local landscape to the development proposed is **medium/high**. The overall magnitude of change would be **high**, and the nature of the change would be **adverse**. In this my assessment concurs with that of the LVIA. The overall effect upon the character of the local landscape and the setting of Friston village would be **major adverse** both during construction (temporary effect) and once operational (permanent effect). The LVIA accepts that there would be a significant permanent effect on this landscape.

1.12 The severity and permanence of the landscape harm are consequences of the unsuitability of the landscape in which the substations have been sited and the fact that there is very little that can be done to mitigate the harm caused by their location.

1.13 The ability of the proposed mitigation planting to lessen this harm is limited. Assuming the mitigation planting succeeds it could eventually reduce some views of the equipment within the substations, however it will not :

- Restore the unspoilt, quiet, and essentially undeveloped rural character of the area;
- Restore the connectivity between the landscape and the village;
- Change the fact that Friston will be defined by the presence of by the substations and electrical infrastructure; nor
- Re-establish the current experience of the using the PRoW Network north of Friston.

1.14 Furthermore, concerns have been identified by an experienced local nurseryman (Mr Jon Rose) who considers that due to local weather and soil conditions, high plant losses should be expected, and the rate of growth of the proposed mitigation planting is likely to be significantly less than what has been assumed for the purposes of the LVIA.

1.15 The overall effect upon the character of the local landscape and the setting of Friston village 15 years after operation would be **moderate/major adverse**.

1.16 The proposal would result in **major adverse** and **moderate/major adverse** impacts on the visual amenity of users of the PRoW network to the north of Friston and users of the road network around Friston. This harm would be due to the loss of the current visual amenity open views of the countryside and attractive views towards the edge of Friston, as well as to the visibility of the large-scale industrial structures.

1.17 Proposed mitigation will not restore the current visual amenity and in places the mitigation planting in itself will restrict open views.

1.18 If both SPR substations were consented, then additional, adverse cumulative impacts would occur at every stage of the development; increasing the development's overall landscape and visual effects due to the long duration of the construction phase, the delayed implementation of the post construction mitigation planting (if built concurrently), and the increase in the overall scale of the development.

Submitted Landscape and Visual Impact Assessment (ES Chapter 29)

1.19 The LVIA recognises that the landscape in the Friston area has a strong sense of place and local distinctiveness. Value is derived from the setting the landscape provides to the parish of Friston, the characteristic arrangement of the parish; the village and outlying farmsteads

in the open agricultural setting with a simple, rural character; the network of fields with strong hedgerow field boundaries; scattered mature deciduous field boundary trees; and a distinctive backdrop of ancient woodland.

1.20 The LVIA recognises that the landscape has a **medium/high** sensitivity to the development and that the magnitude of change would be **high** due to the conflict between the large-scale industrial nature of the development and the existing rural character with its characteristic patterns and its relationship with Friston. The LVIA identifies the impact of the development on Friston and the landscape to the north of Friston as significant. Although it is not made clear within the LVIA, this assessment equates to a **moderate/major or major adverse** impact. The LVIA assessment accepts that the significance of the impacts would reduce very little after 15 years of operation. The assessment equates to a **moderate/major adverse** impact for the life of the development.

1.21 Having identified such a significant level of harm the LVIA dismisses it on the basis that '*Virtually all nationally significant energy infrastructure projects will have effects on the landscape'* (Para 266). Whilst many nationally significant energy infrastructure projects will potentially have effects on the landscape, EN-1 makes clear that the harm to the landscape can be minimised through careful design in the siting of the projects. There is no evidence to show that the harm that would be caused by the SPR&NG substations has been minimised by a careful site selection process or by considered micro-siting.

1.22 The visualisations submitted with the ES underrepresent the impact of the development. This is due in particular to:

- The omission of key viewpoints
- The inability to make a direct comparison between the baseline images and the visualisations;
- The failure to present visualisations as single frame images where possible.
- The overestimation of the growth rates of mitigation planting; and
- The understanding that they were based on lower finished ground levels (those stated in the OLMP, as opposed to the higher levels stated in the Substation Design Statement).

Mitigation

1.23 The LVIA accepts that even with the mitigation proposals the effects will remain significant for the lifetime of the substations. (Not reducing below **moderate/major adverse**). Improved mitigation might be achieved if:

- It was agreed that the construction of both SPR substations and the NG substation was undertaken concurrently;
- A genuine micro-siting exercise was undertaken which identified and worked with the grain of the landscape to assess whether a smaller more irregular footprint could accommodate the required equipment;
- Consideration was given to consolidating some of the elements to achieve a smaller footprint;
- Priority was given to mitigating the impact on Friston village, even if this might move the substations closer to Grove Road;
- An enhancement programme was prepared which looked at improving the wider landscape rather than merely hiding views of the substations.

Compliance with Overarching National Policy Statement for Energy (EN-1).

1.24 The proposed development is not '*sensitive to place*[5]*'* and the mitigation measures proposed in the OLEM will do little to improve this as is acknowledged in the LVIA. The fundamental problem is that the siting of the SPR&NG substations has not been as a result of good design. The site selection process was flawed and failed to take into account the high value aspects of the landscape, the strong sense of place and local distinctiveness, the relationship with the village and how this is experienced from the well-used network of PRoW.

1.25 The scheme does not show '*good design in terms of siting relative to existing landscape character, landform and vegetation.'*[6] On the contrary it is in conflict with all the high value aspects of the landscape.

1.26 Having failed to carry out an appropriate and fair site selection process there is no evidence that the design has been evolved or micro-siting has been employed to improve the relationship with the existing landscape. The final layout of substations and cable sealing end compounds does not respond to the existing landscape or make use of features in the existing landscape in order to '*minimise harm to the landscape.'*[7]

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[5] EN-I 4.5.I
[6] EN-I 4.5.2
[7] EN- I 5.9.8

1.27 The location of the SPR&NG substations at Friston does not appear to have been influenced by topography or any other aspect of the existing landscape[8] except the presence of the overhead transmission lines. As acknowledged in the LVIA the screening that might be achieved after 20+ years from the date of commencement would do little to mitigate the adverse landscape and visual impacts.

1.28 The proposals cannot achieve the type of good design sought in EN-1 (and emphasised in EN-3 & EN-5) because of their location, the conflict with the character and qualities of that location, and the lack of any micro-siting design process.

Compliance with NPPF

1.29 The proposals fail to recognise the intrinsic character and beauty of the countryside and should therefore be considered to be inconsistent with the NPPF.

Compliance with Suffolk Coastal Local Plan

1.30 The proposals are not sympathetic to the special qualities and features described in the Suffolk Coastal Landscape Character Assessment and should therefore be considered to be inconsistent with Policy SCLP10.4 of the Suffolk Coastal Local Plan.

Conclusion

1.31 National policy emphasises the importance of good design in terms of siting as a key means by which to minimise the harmful impacts of energy infrastructure on the landscape. The choice of Friston as a location for the SPR&NG substations was the result of a flawed selection process. The proposals have been located next to a small rural village in an area of countryside which is recognised as a peaceful, deeply rural 'backwater'. The consequences of choosing this location are landscape and visual effects which are both severe and permanent. These effects are not inevitable and there has been no evidence to show that the harm that would be caused by the substations has been minimised by a careful site selection process or by considered micro-siting.

[8] As recommended in EN-5 2.2.5

2 Introduction

Qualifications and Experience

2.1 My name is Michelle Bolger. I am a Chartered Landscape Architect and Director of Michelle Bolger Expert Landscape Consultancy (MBELC). I have a degree and a Diploma in Landscape Architecture from Greenwich University and I am a Chartered Member of the Landscape Institute. I also have a degree in English from Durham University and a Postgraduate Certificate in Education from London University. I am Chair of the Landscape Institute's Education and Membership Committee and a Trustee on the Landscape Institute Board. I have previously worked as a Senior Associate for Gillespies LLP and Liz Lake Associates.

2.2 I have prepared Landscape / Townscape and Visual Impact Assessments (L/TVIA) to accompany planning applications for a range of projects including residential development, light transit, highways, leisure, retail, commercial and enabling development, both as standalone documents and as part of Environmental Impact Assessments.

2.3 On behalf of local planning authorities and other bodies such as National Resources Wales and the National Trust, I have reviewed L/TVIAs prepared for developments including Nationally Significant Infrastructure Projects in Wales. Most recently, on behalf of the National Trust, I reviewed the landscape and visual aspects of the DCO application for Wylva Newydd, prepared examination responses and appeared at the Examination in Public.

2.4 I have jointly delivered a series of training workshops on LVIA for other landscape architects and local authority officers. I have delivered two sessions for Planning Inspectorate training days with regard to Landscape and Visual Impact Assessment.

2.5 During the last fifteen years, I have presented evidence at appeal, call-in and local plan inquiries on behalf of Appellants, Local Planning Authorities and local action groups regarding the landscape impacts of proposals for residential, commercial, light transit, nuclear and wind energy developments.

Introduction

2.6 EA1N Limited and EA2 Limited have each applied for an Order granting Development Consent for their respective offshore wind farm projects (EA1N Offshore Wind Farm and EA2 Offshore Wind Farm). The onshore elements for the offshore windfarms include grid connections and onshore substations close to Friston, East Suffolk. National Grid (NG) are also proposing a substation on the same site as the EA1N & EA2 Substations.

2.7 In August 2018, Michelle Bolger Expert Landscape Consultancy (MBELC) were commissioned by Substation Action Save East Suffolk (SASES) to review the landscape and visual aspects of the proposals during the pre-application stage of the development consent regime. Our report focused on the substation site selection process and is attached as **Appendix 3**. In March 2020, MBELC provided a review of the RAG assessment approach used by Scottish Power Renewables (SPR) to assess and compare potential onshore substations sites, after it was released as part of the Preliminary Environmental Information. That review is attached as **Appendix 4**.

2.8 Now at the Examination stage, SASES have commissioned MBELC to review the landscape and visual effects of the onshore components which form part of the separate Development Consent Order (DCO) applications submitted by EA1N Limited and EA2 Limited (SPR). This review is focused on the changes that would occur as a result of the onshore components proposed to be located at Friston. For context, this review also provides a summary of the onshore components across the entire Onshore Development Area (ODA) (**Figure 1**) and an overview of the landscape character areas affected by the wider proposals.

2.9 This review covers:

- The relevant landscape policy considerations.
- A summary of the proposed onshore components most relevant to the assessment of landscape and visual effects (for the entire ODA).
- A summary of the published landscape character assessments.
- A description of the local landscape character context at Friston.
- The key landscape, visual and cumulative effects that would result from the substations and associated permanent infrastructure being located at Friston.
- A summary of the key findings within the applicant's submitted LVIA.
- A review of the proposed mitigation strategy and my recommendations for additional mitigation measures based upon the findings of this review.
- Consideration as to whether the proposals comply with landscape policy.

2.10 I have been familiar with the landscape in the vicinity of Friston for a number of years and in preparing this review I have visited the site and the surrounding landscape on three occasions over the course of three years:

- 22nd/23rd August 2018.
- 29th July 2019.
- 7th September 2020.

Methodology

2.11 This review of the DCO applications has been undertaken in accordance with the principles set out by the Landscape Institute (LI) and Institute of Environmental Management Assessment (IEMA) in the *Guidelines for Landscape and Visual Assessment* 2013 (GLVIA3), and guidance from Natural England in *An Approach to Landscape Character Assessment 2014*. **Appendix 2** provides my methodology for undertaking landscape and visual assessment.

3 Landscape Planning Policy Context

3.1 *Overarching National Policy Statement for Energy (EN-1)*

3.2 National policy for energy infrastructure is set out in the Government's Overarching National Policy Statement (NPS) for Energy (EN-1). Section 4.5 of EN-1 sets out the principles for good design that should be applied to all energy infrastructure, and states:

> *4.5.1 'The visual appearance of a building is sometimes considered to be the most important factor in good design. But high quality and inclusive design goes far beyond aesthetic considerations. The functionality of an object — be it a building or other type of infrastructure — including fitness for purpose and sustainability, is equally important.* ***Applying "good design" to energy projects should produce sustainable infrastructure sensitive to place****, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area.*
>
> *4.5.2* ***Good design is also a means by which many policy objectives in the NPS can be met, for example the impact sections show how good design, in terms of siting*** *and use of appropriate technologies can help mitigate adverse impacts such as noise.*
>
> *…*
>
> *Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure,* ***there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation****. Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area.*
>
> *For the IPC to consider the proposal for a project,* ***applicants should be able to demonstrate in their application documents how the design process was conducted and how the proposed design evolved****. Where a number of different designs were*

*considered, applicants **should set out the reasons why the favoured choice has been selected**'.*[9] *(Emphasis added)*

3.3 Section 5.9 of EN-1 sets out the assessment principles relevant to landscape and visual considerations and highlights the need for projects '***to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting**, operational and other relevant constraints **the aim should be to minimise harm to the landscape**, providing reasonable mitigation where possible and appropriate*'.[10]

3.4 Regarding the potential mitigation of landscape and visual effects EN-1 states that '*Reducing the scale of a project can help to mitigate the visual and landscape effects of a proposed project*'.[11] It goes on to state that '*within a defined site, **adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within that site***'[12] and '*depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off site*'.[13]

3.5 ***National Policy Statement for Renewable Energy Infrastructure (EN-3)***

3.6 NPS EN-3 sets out technical considerations for the IPC when determining consent applications for offshore wind farms. NPS EN-3 recognises the large scale of onshore infrastructure that is often associated with offshore wind farms. It states: '*The onshore element of the grid connection (electric lines and substations) should be determined in accordance with the Electricity Networks Infrastructure NPS, EN-5. Depending upon the scale and type of this onshore development, elements of it could constitute either associated development or an energy NSIP in its own right*'.[14]

3.7 NPS EN-3 reinforces the importance of good design (as highlighted in EN-1) where it states that '*Proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity*'.[15]

3.8 ***National Policy Statement for Electricity Networks Infrastructure (EN-5)***

3.9 NPS EN-5 includes additional technology-specific considerations to the generic principles identified in EN-1. Section 2.2 is factors influencing site selection by applicants. It states that '*There will usually be some flexibility around the location of the associated*

[9] Overarching National Policy Statement for Energy (EN-1) Section 4.5
[10] Overarching National Policy Statement for Energy (EN-1) Paragraph 5.9.8
[11] Overarching National Policy Statement for Energy (EN-1) Paragraph 5.9.21
[12] Overarching National Policy Statement for Energy (EN-1) Paragraph 5.9.22
[13] Overarching National Policy Statement for Energy (EN-1) Paragraph 5.9.23
[14] National Policy Statement for Renewable Energy Infrastructure (EN-3) Paragraph 2.6.41
[15] National Policy Statement for Renewable Energy Infrastructure (EN-3) Paragraph 2.4.2

substations and applicants will give consideration to how they are placed in the local landscape taking account of such things as local topography and the possibility of screening.'[16]

3.10 As with EN-1 and EN-3 above, the emphasis on the need for good design in relation to new infrastructure is repeated '*Proposals for electricity networks infrastructure should demonstrate good design in their approach to mitigating the potential adverse impacts which can be associated with overhead lines*'.[17]

3.11 National Planning Policy Framework

3.12 National policy is set out in the National Planning Policy Framework (NPPF), February 2019. To satisfy national policy objectives planning should:

- Contribute to protecting and enhancing our natural, built and historic environment (Paragraph 8).
- Protect and enhance PRoWs and access (Paragraph 98).
- Be visually attractive and sympathetic to local character and history, including the surrounding built environment and landscape setting (Paragraph 127).
- Establish or maintain a strong sense of place (Paragraph 127).
- Protect and enhance valued landscapes (Paragraph 170).
- Recognise the intrinsic character and beauty of the countryside (Paragraph 170).
- Recognise the wider benefits of trees and woodland. (Paragraph 170).

3.13 Suffolk Coastal Local Plan

3.14 The East Suffolk Council Suffolk Coastal Local Plan (SCLP) was adopted on 23rd September 2020. Relevant policies may also be considered important and relevant to the determination of these DCO applications. I have not considered those policies in detail in preparing this report since they are likely to be addressed by the relevant authorities in Local Impact Reports. However, I note that Policy SCLP10.4 deals with landscape character and requires development proposals to:

- Be informed by, and sympathetic to, the special qualities and features as described in the Suffolk Coastal Landscape Character Assessment (2018).
- Demonstrate their location, scale, form, design and materials will protect and enhance:

[16] National Policy Statement for Electricity Networks Infrastructure (EN-5) Paragraph 2.2.5
[17] National Policy Statement for Electricity Networks Infrastructure (EN-5) Paragraph 2.5.2

a) The special qualities and features of the area;

b) The visual relationship and environment around settlements and their landscape settings;

c) Distinctive landscape elements including but not limited to watercourses, commons, woodland trees, hedgerows and field boundaries, and their function as ecological corridors;

d) Visually sensitive skylines, seascapes, river valleys and significant views towards key landscapes and cultural features; and

e) The growing network of green infrastructure supporting health, wellbeing and social interaction.

- Include measures that enable a scheme to be well integrated into the landscape and enhance connectivity to the surrounding green infrastructure and Public Rights of Way network.
- Protect and enhance the tranquillity and dark skies across the plan area.

3.15 I consider whether the proposal will comply with these policies in section 12.

4 Proposed Development

Introduction

4.1 Set out below are the onshore components of each DCO application most relevant to the assessment of landscape and visual effects. The components which are common to both applications are identified. The location of key components discussed below are shown on **Figures 1 & 5**. All are located within the ODA, which is: '*The area in which the landfall, onshore cable corridor, onshore substation, landscaping and ecological mitigation areas, temporary construction facilities (such as access roads and construction consolidation sites), and the National Grid Infrastructure will be located*'.[18]

Rochdale Envelope

4.2 A 'Rochdale Envelope' approach has been used for the DCO applications. This approach uses a series of maximum extents ('up to') for the assessment of environmental effects. Within those extents the detailed project design can occur without rendering the ES inadequate.[19] This approach is supported by the Government's National Policy Statements for energy infrastructure, which recognise that not all details of a proposal will be finalised at the application stage.

Onshore Components Required for Each Development (EA1N and EA2)

4.3 Each development would require the following key permanent onshore components:

- **Landfall site (Figure 1)**. This would include up to two concrete transition bays (where the onshore and offshore cables connect). Each transition bay would be up to 6m in width, 1.8m in height and 21m in length. They would be buried underground but manhole covers would remain for maintenance access.
- **Cables**. The route of the cables can be seen by looking at the location of the ODA between the Landfall ODA and the ODA for the substations (**Figure 1**). Up to six onshore cables (approximately 9km in length) would transport electricity from the landfall to the onshore substation. In addition, two fibre optic (FO) cables and up to two Distributed Temperature Sensing (DTS) cables are

[18] East Anglia ONE North Offshore Windfarm Environmental Statement Volume 1 Chapter 6 Glossary of Terminology
[19] Overarching National Policy Statement for Energy (EN-1), Department of Energy and Climate Change, July 2011

required. The cables would be installed in two parallel trenches (three onshore cables, one FO cable and one DTS cable in each trench).

- **Jointing Bays**. Up to 19 buried jointing bays along the route of the cable. (This number would be doubled if single jointing bays were used along both trenches).[20] The jointing bays would be up to 15m long x 3m wide x 1.7m deep or 15m long x 9m wide x 2.5m deep if a double jointing bay is required. The jointing bays are where sections of onshore cable are joined together. The location of each jointing bay is to be determined at detailed design but would be 55m from any residential dwelling.
- **A Gas Insulated Switchgear (GIS) Substation (SPR Substation) (Figure 5)**. The onshore substations (East Anglia ONE North onshore substation & East Anglia TWO onshore substation, referred to in this review as the SPR Substation(s)) convert the electrical current into an appropriate voltage which is supplied to a separate NG substation which connects into the national electricity grid. Each SPR substation would be located within a compound up to 190m x 190m (3.61ha). The compound would also include '*power transformers, switchgear, reactive compensation equipment, harmonic filters, cables, control buildings, communications masts, backup generators, access, fencing and other associated equipment, structures or buildings*'.[21] The maximum height of buildings would be 15m and the maximum height of electrical equipment would be 18m. The SPR substation(s) represent the majority of the infrastructure to be located at Friston.
- **SuDS Detention Basins (Figure 9)**. Two SuDS ponds are listed in the project description for each separate application. The ES indicates that at least one of these ponds would have a capacity of 5,775m3.[22]
- **Landscaping (Figure 9)**.

Onshore Components used by Both Developments

4.4 The following onshore components are used by both DCO applications. The same number of each component is required whether one or both projects proceed:

[20] ES states up to 19 but this is based on double jointing bays being used. Single jointing bays may be used. See ES 6.7.2 Chapter 6
[21] East Anglia ONE North Offshore Windfarm Environmental Statement Volume 1 Chapter 6 Project Description 6.7.7
[22] East Anglia ONE North Offshore Windfarm Environmental Statement Volume 1 Chapter 6 Project Description 6.7.8.7

- **NG Substation (Figure 5)**. This would either be an Air Insulated Switchgear (AIS) or GIS substation. The differences are summarised below:
    - AIS substation - Maximum footprint 4.49ha, maximum height of buildings 6m.
    - GIS substation - Maximum footprint 1.68ha maximum height of buildings 16m.
    - Maximum height of electrical equipment would be 16m for both.
- **NG Cable Sealing End Compounds (Figure 5)**. Up to three cable sealing end compounds, two of which would be up to 0.25ha and the third would be 0.5ha (cable sealing end (with circuit breaker) compound). These compounds contain electrical infrastructure that enables the NG substation to connect with the overhead lines. Their location would be determined during detailed design. The tallest structures in the compounds (the overhead line gantries) are 16m in height. The larger compound would also contain a 3.5m tall building with a 3m x 5m footprint.
- **National Grid Overhead Realignment Works (Figure 9)**. To include:
    - Realignment of the existing northern overhead line further north in order to create separation between the two overhead lines for the construction of cable sealing end compounds. This would include replacing up to two existing pylons and adding one new pylon.
    - Replacement of one existing pylon within the southern overhead line.
- **Permanent** Operational **Access Road (Figure 5)**. The permanent operational access road would be up to 8m wide, and up to 1,700m in length. It would travel eastwards from a new junction with the B1121 north of Moor Farm towards the three substations. Additional access tracks (up to 3.7m wide) would connect to the three cable sealing end compounds.
- **SuDS Basin for the NG substation compound (Figure 9)**.

Key Construction Sites (For Locations see ES Figure 6.6)

4.5 Key components of the construction work include:

- A 1.71 ha construction consolidation site (CCS) for each SPR substation.
- A 2.33 ha CCS for NG substation/infrastructure.

- A 1.5ha temporary works area for the cable sealing end (with circuit breaker) compound
- A 0.75ha temporary works area for each of the other two cable sealing end compounds.
- A 0.5ha temporary working area for the overhead lines.
- A 9m wide temporary haul road (comprised of aggregate onto a geotextile base and / or use of temporary mats) for the substation between Snape Road (access ID 10) and Grove Road (ID 11/12) and continuing to the substation location.
- The precise quantity of earth movement (earthworks to establish suitable grade for the substation compound) is currently unknown.
- The cables would be installed within the cable route either via:
    - Direct laying within an open cut trench. This is the default method.
    - Trenchless methods such as horizontal directional drilling (HDD) micro tunnelling or auger boring. These methods may be used at '*special crossings*' such as the landfall at Thorpeness and the SPA/SSSI, although SPR have stated they prefer an open-cut crossing through the SPA/SSSI.[23]

4.6 The cable route includes room for the temporary fenced construction area which would include laydown areas, spoil storage and a temporary haul road (up to 4.5m wide with additional 4m wide passing places) In brackets are the widths required if both EA1N and EA2 proceed concurrently.[24]

- 32m (64m) wide along the majority of the cable route.
- 16.1m (27.1m) wide across the section north of Fitches Lane.
- 16.1m (32.2m) wide within the Leiston – Aldeburgh SSSI / Sandlings SPA if trenching technique is used (which is the preferred crossing method).
- 90m wide within the Leiston – Aldeburgh SSSI / Sandlings SPA if HDD technique is used.
- 92m wide where it crosses the Hundred River.
- Up to 190m wide within 418m of the landfall transition bays.

[23] East Anglia ONE North Offshore Windfarm Environmental Statement Volume 1 Chapter 6 Project Description 6.7.3.10
[24] East Anglia ONE North Offshore Windfarm Environmental Statement Appendix 6.3 Table A6.1

Construction Duration

4.7 The indicative durations for key construction activities (those in bold would take place entirely at Friston) include:

- Construction of landfall – up to 12 months
- Construction of onshore cable route – up to 24 months
- **Construction of a SPR substation – up to 30 months**
- **Construction of NG substation – up to 48 months**
- **Construction of NG overhead line realignment works – up to 12 months within a 36 month window.**

4.8 The ES does not include a construction sequence for the entire project or projects (only the onshore cable routes). It is not clear which, if any, of the above works would be undertaken at the same time. Nor how much overlap there would be for those that were undertaken sequentially. Similarly, it is not known whether the proposed East Anglia ONE North project and proposed East Anglia TWO project would be built concurrently or sequentially.

4.9 Even assuming it was possible to undertake all the works at Friston concurrently, the minimum construction period is 4 years. If the overhead realignment works requires the NG substation to be complete the minimum period would be 5 years. If the SPR substations are constructed independently the construction period of the two SPR substations alone would take at least 5 years and potentially longer as it is not clear at what stage **of** NG overhead line realignment works could take place, or whether there would be a 'pause' between the construction of the two SPR substations. It is also unclear whether other development may come forward at the NG substation in relation to other energy projects. This may further extend the duration of the construction works at Friston.

4.10 The length of the construction period also determines the potential period for pre commencement planting. This is considered in more detail in Section 11 Mitigation Proposals. The visualisations have assumed 3 years for the pre-commencement planting, but it is not clear how this length of time is derived.

5 Published Landscape Character Assessments

Introduction

5.1 A significant part of the ODA is located within the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB). It also crosses the Suffolk Heritage Coast, Sandlings Special Protection Area (SPA), Leiston - Aldeburgh Site of Special Scientific Interest (SSSI), Hundred River Valley SLA, and includes land within the immediate setting of a number of listed buildings, including the Church of St Mary at Friston (Grade II*) (**Figure 2**).

5.2 The ODA is considered in national, county, and district landscape character assessments. This section considers the key information in those studies and, where included, any strategies or guidance for the management of change within the landscape. Table 1 below sets out the various studies and identifies the landscape character type/ landscape character area in which each of the three main parts (landfall/cable route/substations) comprising the development area are located.

Table 1: Landscape Character Areas and Types

	National Character Area (NCA)	Suffolk County	Suffolk Coastal
Landfall Development Area	NCA 82: Suffolk Coast and Heaths	LCT 7. Estate Sandlands (mostly) & LCT 5. Coastal Dunes and Shingle Ridges	LCA K3: Aldringham and Friston Sandlands
Cable Route Development Area	NCA 82: Suffolk Coast and Heaths	LCT 7. Estate Sandlands (mostly) & LCT 1. Ancient Estate Claylands & LCT 6. Coastal Levels	LCA K3: Aldringham and Friston Sandlands (mostly) & LCA L1: Heveningham and Knodishall Estate Claylands & LCA D4: Thorpness to Aldeburgh

	National Character Area (NCA)	Suffolk County	Suffolk Coastal
Onshore Substation Development Area (including NG Substation)	NCA 82: Suffolk Coast and Heaths	LCT 1. Ancient Estate Claylands (mostly) & LCT 7. Estate Sandlands	LCA L1: Heveningham and Knodishall Estate Claylands (mostly) & LCA K3: Aldringham and Friston Sandlands

National Character 82: Suffolk Coast and Heaths

5.3 The Onshore Development Area is entirely within NCA 82: Suffolk Coast and Heaths. NCA 82 is described as a mainly flat or gently rolling landscape which is often open but with few commanding viewpoints. It is '*one of the driest parts of the country, with local rainfall typically only two thirds of the national average*'.[25] Much of the area is utilised by farming while '*the remaining coast and lowland heaths, which are known locally as the Sandlings, form particularly distinctive features, although traditional heath is now much fragmented…*'.[26]

5.4 Settlement within the NCA is described as '*sparse, consisting mainly of small villages and iconic coastal market towns.*' It remains a '*lightly populated, undeveloped area that is notable for its tranquillity, high-quality environment and culture, and outstanding wildlife. These values combine to offer authentic and revitalising experiences for people, making it popular for outdoor recreation and tourism.*'[27]

5.5 Offshore wind farms and the need to bring transmission cables onshore is identified as one of the challenges facing this landscape, particularly as they have the '*potential to impact on the special qualities of the landscape and seascape.*' [28]

[25] National Character Area Profile 82: Suffolk Coast and Heaths. Introduction and Summary Pages 3 & 4
[26] National Character Area Profile 82: Suffolk Coast and Heaths. Introduction and Summary Pages 3 & 4
[27] National Character Area Profile 82: Suffolk Coast and Heaths. Introduction and Summary Pages 3 & 4
[28] National Character Area Profile 82: Suffolk Coast and Heaths. Introduction and Summary Pages 3 & 4

Suffolk Landscape Character Assessment (Updated and Revised 2011)

5.6 The Suffolk Landscape Character Assessment (Suffolk County Assessment) was undertaken by Suffolk County Council in partnership with the Living Landscapes Project and all District and Borough Councils in Suffolk. It mapped and describes landscape character types (LCT) across the county, at a scale of 1:50,000.

5.7 The majority of the ODA (because of the cable route) falls within LCT 7. Estate Sandlands, although a large tract of land around and including the proposed substations is within LCT 1. Ancient Estate Claylands. The character of each LCT is summarised below along with the relevant guidance.

5.8 **LCT 1 Ancient Estate Claylands**. LCT 1 occupies the edge of the clay plateau which in places allows for views which are open and long. It has an enclosure pattern which is '*generally ancient and organic in appearance*' with straighter boundaries found where the influence of former estates is strongest. Settlement consists of '*occasional villages and numerous dispersed hamlets and farmsteads*' with many of the latter being medieval in origin. Vegetation includes '*blocks of ancient semi-natural woodland*' and numerous hedgerow trees. [29] The guidance for new large-scale agricultural buildings in the open countryside, outlined above, is also applicable to LCT 1.

5.9 **LCT 7 Estate Sandlands** relates to two discrete areas within the county: covering the Brecks and the area known as the Sandlings. The latter is the area affected by the ODA. It is described as a flat to gently rolling plateau of freely-draining sandy soils, which together with the dry conditions, have over time given rise to extensive areas of heathland. This landscape type is generally without ancient woodland but is characterised by widespread tree belts and rectilinear plantations planted as part of the creation of farmland out of the former heaths in the 18th and 19th centuries.

5.10 The Guidance Note for LCT 7 explains how '*the sparse settlement means that this is a deeply rural landscape so some developments that could be accommodated in visual terms in these areas can still have a profound effect on the character of this landscape type*'.[30] Electrical transmission infrastructure is not listed as a key force for change within the Guidance Note for LCT 1. However, new large-scale agricultural buildings within the open countryside are covered by the guidance. Although agricultural buildings typically have a greater affinity with a rural setting, the guidance relating to their scale and the open context of the plateau is considered to be applicable to the substation/infrastructure, in

[29] Suffolk Landscape Character Assessment 1 Ancient Estate Claylands EP/Edit1/02.08.10
[30] Suffolk Landscape Character Assessment 7 Guidance Note Estate Sandlands EP/Edit1/1.10.10

particular. The guidance explains how the '*right choice of siting, form, orientation and colour of these buildings can make a considerable contribution to mitigating their impact*' and recommends:

- Buildings should relate to an existing cluster of buildings whenever possible.
- The correct orientation of the building should be explored as it can significantly change the visual impact of the development.
- Management of existing hedgerows should also be explored.
- The location of the development in relation to existing trees that act either as screening or as a backdrop should be carefully considered.
- New planting should be designed to integrate the development into the character of this landscape, and may consist of both backdrop and screening planting.
- In many cases the landscape impact of these projects is only acceptable if it is mitigated by effective planting. The applicant should therefore provide a detailed scheme of planting and aftercare, which can form the basis of a condition.

Suffolk Coastal District Landscape Character Assessment (July 2018)

5.11 The Suffolk Coastal District Landscape Character Assessment (Suffolk Coastal Assessment) was prepared by Alison Farmer Associates on behalf of Suffolk Coastal District Council (prior to its merger with Waveney District Council). It used the LCT boundaries from the Suffolk County LCA to inform the definition of **more detailed and place specific landscape character areas**. (Emphasis added) These were mapped at a scale of 1:25,000.

5.12 The majority of the ODA (because of the cable route) falls within LCA K3: Aldringham and Friston Sandlands (an 'Estate Sandlands' landscape type). However, the proposed substations and a substantial tract of land around lies within LCA L1: Heveningham and Knodishall Estate Claylands (an 'Ancient Estate Claylands' landscape type). (**Figure 3**) These are described below.

5.13 **LCA L1: Heveningham and Knodishall Estate Claylands** is the largest character area identified in the study. It comprises a gently rolling clayland plateau which is described as '*a landscape of quiet farmland with a simple, unified and deeply rural character. There are no large villages, only an irregular network of quiet lanes with only scattered farms and*

hamlets to provide any sense of settlement'. [31] The landscape is said to be '*deeply rural and attractive*'[32]. The character of the eastern part of the LCA L1, which includes the ODA, is described as being less unified due to its proximity and transition into the Sandlands LCT. The landscape in this eastern area is '*somewhat more fine grained, there is more pasture and less emphasis on large scale agricultural organisation which gives rise to a more textured and rich visual experience*'.[33] Detractors within the landscape include '*large industrial agricultural buildings [which] have a negative impact, especially where there is inadequate screening*'.

5.14 The Special Qualities and Features of LCA L1 include (emphasis added):

- Its special qualities are its **particularly unified character - a peaceful, deeply rural 'backwater'**, focused on farming.
- **There is little intrusion from modern development**, especially in the more remote western part. Whist some conversion has taken place of agricultural buildings, the remoteness of the area has helped protect it from development pressure, and it has likely changed little in the 20th and 21st centuries.

5.15 Strategy Objectives for LCA L1 include:

- **Protect the unspoilt, quiet, and essentially undeveloped rural character of the area**.
- Protect the plateau landscape from visual intrusion of development in areas beyond this character area e.g. from new tall vertical features such as masts or turbines or new urban development.
- **Protect the landscape from development of a scale that harms the prevailing light, scattered nature of the existing settlement**.
- Manage areas of semi-natural woodland through appropriate woodland management schemes.
- Manage hedgerows to retain and restore the pattern of network of field boundaries, especially where suckering elm is present – introduce coppicing if needed.
- Plan for enhancements to biodiversity in this highly agricultural landscape, perhaps opportunities that might emerge through agri-environmental schemes.

[31] Suffolk Coastal Landscape Character Assessment July 2018 Page 102
[32] Suffolk Coastal Landscape Character Assessment July 2018 Page 102
[33] Suffolk Coastal Landscape Character Assessment July 2018 Page 103

5.16 **LCA K3: Aldringham and Friston Sandlands** includes the coast south of Sizewell to Thorpeness and extending inland to include parts of Leiston, Aldeburgh and the smaller villages of Knodishall Common, Friston and Snape. The area comprises flat and gently rolling farmland between the plateau landscape to the north and west and the lower lying coastal landscapes to the south. It is distinguished by its 'Sandlings' character which includes '*pockets of heathland and woodlands*' which also exist alongside large-scale intensive agriculture. The overhead pylons which transmit power away from Sizewell are identified as a detracting feature which '*have a substantial negative impact in the more open areas*' where they are said to '*distort the sense of scale within the landscape*'.[34] The Sandlings Walk Long Distance Footpath is identified as one of the 'Special Qualities and Features' of LCA K3.

5.17 Strategy Objectives for LCA K3 include:

- Restore, maintain and enhance the network of pine lines, tree belts and pattern of small plantations found across much of this landscape type.
- Manage areas of existing scrub and woodland, protecting the mosaic of habitats and variety of contrasting open and enclosed spaces found in this landscape.

[34] Suffolk Coastal Landscape Character Assessment July 2018 Page 92

6 Local Landscape Character Context at Friston

ODA for SPR and NG Substations and Infrastructure

6.1 The ODA identified for the SPR and NG Substations and Infrastructure (SPR&NG ODA) is identified in yellow shading on **Figures 1 & 5**. This area lies immediately north of Friston village and covers approximately 147 ha of countryside. The SPR&NG ODA falls across three parishes (Knodishall, Friston and Sternfield) (**Figure 1**). The bulk of the SPR&NG ODA is split between Knodishall and Friston CPs.

6.2 Within the SPR&NG ODA are: (**Figure 5**)

- Public rights of way (PRoW) connecting Friston, the surrounding countryside and scattered farms, including Footpaths (Fp) 6, 7, 7A, 8, 16 and 17.
- Mostly arable fields generally marked by hedgerows with hedgerow trees.
- Pockets of woodland (Laurel Covert; part of New Covert; and a copse established in a former pit).
- A 3km long overhead high voltage transmission corridor.
- Parts of Saxmundham Road (B1121), Grove Road and the road leading to Knodishall (School Road).
- Peartree Farm (east side of Grove Road) and Fareacres (west side of Grove Road).

6.3 Within the immediate context of the SPR&NG ODA are: (**Figure 5**)

- Friston village (historic northern parts adjoin ODA).
- Church of St Mary at Friston (Grade II*) and Friston House (Grade II).
- Pockets of Woodland (Grove Wood (Ancient Woodland); Friston House Wood; Fristonmoor Covert; New Covert):
- Historic farms (High House Farm (labelled Moor Farm near Fristonmoor on the OS) (Grade II); Little Moor Farm (Grade II); Woodside Farm (Grade II); and Moor Farm alongside the B1121.

Countryside North of Friston

6.4 The SPR&NG ODA (north of Friston) includes land within LCA L1 (Heveningham and Knodishall Estate Claylands) and LCA K3 (Aldringham and Friston Sandlands). The substations and permanent infrastructure are located mostly within LCA L1 (**Figure 3**) although close to the boundary with LCA K3 which lies to the west and east. Friston village is entirely within LCA K3.

6.5 Although land north of the village is within two different LCAs, the countryside in this area has a coherent character overall and is highly representative of the '*quiet farmland*' of LCA L1. It comprises a landscape that is focused on arable farming, with a clear pattern of irregular fields, pockets of woodland and a number of historic farms which feature Grade II listed farmhouses. The landscape north of the village demonstrates a number of LCA L1's Special Qualities. In particular, the lack of any sizeable settlement or intrusion from modern development, apart from the overhead transmission lines, creates a unifying sense of a peaceful, deeply rural 'backwater'.[35]

6.6 The transition from a larger to a finer grained landscape, that occurs when travelling north-south towards Friston village is a distinctive characteristic of the countryside north of the village. This transition is very apparent when looking at aerial photography (**Figure 8**). Figure 8 also illustrates how on all other sides, the village setting comprises a more regular pattern of large-scale fields, with some used for pig farming (with sheds). A photograph taken from the tower of Friston Church is helpful in illustrating the field pattern north of Friston and the transition in the scale of enclosure leading towards the village (see **Photograph A (Figure 12)**). In the northern part of the SPR&NG ODA, north east of the site of the NG substation, the landscape features larger arable fields on a rolling clayland plateau (rising to 24m above ordnance datum (AOD)) (**Figure 7**). Towards the village, and at the location of the proposed substations, the size of the fields starts to decrease and there is a greater sense of enclosure provided by the well-defined hedgerow network and woodlands at Grove Wood and Friston House.

6.7 Although included within LCA K3, the countryside immediately north of Friston is considered to be representative of the eastern parts of LCA L1, which due to their proximity and transition into the Sandlands LCT are described as being '*somewhat more fine grained*', with '*less emphasis on large scale agricultural organisation*' and '*a more textured and rich visual experience*'.[36] The landscape framework in this part of the countryside is largely

[35] Suffolk Coastal Landscape Character Assessment July 2018 Page 102
[36] Suffolk Coastal Landscape Character Assessment July 2018 Page 103

unchanged since the first edition OS (**Figure 6**) and it provides a coherent and attractive setting to the historic northern part of the village.

6.8 The overhead transmission lines which cross the area and the large farm sheds at Redhouse Farm are the only detractors within the landscape but both are features of the countryside. Although visible, the pylons have not diminished the enjoyment of a '*deeply rural and attractive*'[37] landscape, including from those parts of the PRoW network which pass beneath them.

Friston Village

6.9 Friston is a small rural village connected by a network of quiet lanes. The village has a loose knit structure which has changed little over the last 100 years (**Figures 5 & 6**). The B1121, village green and other fields east of the village green, separate the southern part of the village from its smaller northern part.

6.10 The northern part of the village features Friston Church (the Church of St Mary Grade II*), Church Farm, which lies to the east of the Church, a scattering of individual properties along the southern side of Church Road to the west of the Church and a parallel row of properties to the south along Hill Crest. The southern property boundary of Friston House (Grade II) joins Church Road, as does a track (also Fp 17) leading to Woodside Farm (Grade II). The northern part of the village is small in scale and has a strong rural character owing to its rural setting on all sides; a combination of fields and Friston House Wood. The finer grain of the landscape immediately north of the village, as described above, is sympathetic to the scale and character of the northern part of the village. In all other directions, the village is bound by larger scale arable fields.

6.11 Friston Church is located at the northern edge of the village within a generous churchyard and its location on an area of slightly higher ground on the edge of the village accentuates the visibility of the church tower. The tower forms a landmark when seen from the landscape to the north. Nestled amongst mature trees, it signals the presence of the village. In particular from Fp 6 which is located on the alignment of an historic route between Friston village and the farms to its north.

6.12 The village lies at the centre of a spider's web of PRoWs which run in all directions from the crossroads, and which are based on historical pathways shown on the first edition OS (**Figure 6**). From Church Road two footpaths lead to the north with a third joining from the

[37] Suffolk Coastal Landscape Character Assessment July 2018 Page 102

east off Grove Road. The Sandlings Walk Long Distance Route runs through the village in an east/west direction.

6.13 The existing overhead transmission lines are more than a kilometre distant from the village and, whilst visible, they do no not define the character of the settlement or its setting.

Landscape Value

6.14 Although this is not a designated landscape it is a valued landscape containing many of the characteristics noted as helping in the identification of a valued landscape[38]. The condition of the landscape is good, and it has a high scenic quality with the only detractors being the overhead transmission lines. It has conservation interest in that it provides a setting for the village and for a number of listed buildings important in the landscape, in particular Friston Church which is listed Grade II*. It is entirely representative of the L1 Heveningham and Knodishall Estate Claylands. The recreational value of the landscape is high containing as it does a network of PRoWs. Perceptually it is a very tranquil landscape with only the overhead transmission lines detracting from perceptions of its tranquillity. Overall value is **medium/high**.

Summary

6.15 Friston is a small rural village connected by a network of quiet lanes at the centre of a spider's web of PRoWs. Friston Church is located at the northern edge of the village on an area of slightly higher ground within a generous churchyard. The tower forms a landmark when seen from the landscape to the north. Nestled amongst mature trees, it signals the presence of the village.

6.16 Although land north of Friston is within two different LCAs, (LCA L1: Heveningham and Knodishall Estate Claylands and LCA K3: Aldringham and Friston Sandlands the countryside in this area has a coherent character overall and is highly representative of the '*quiet farmland*' of LCA L1. It comprises a landscape that is focused on arable farming, with a clear pattern of irregular fields, pockets of woodland and a number of historic farms which feature Grade II listed farmhouses. The LVIA acknowledges this character and the importance of this landscape to the setting of the parish and village of Friston. (para 179) The landscape north of the village demonstrates a number of LCA L1's Special Qualities, also acknowledged in the LVIA (para 103). In particular, the lack of any sizeable settlement

[38] Guidelines for Landscape and Visual Impact Assessment Box 5.1 Page 84

or intrusion from modern development, apart from the overhead transmission lines, creates a unifying sense of a peaceful, deeply rural 'backwater'. [39]

6.17 The transition from a larger to a finer grained landscape, that occurs when travelling north-south towards Friston village is a distinctive characteristic of the countryside north of the village.

[39] Suffolk Coastal Landscape Character Assessment July 2018 Page 102

7 Landscape Effects

Introduction

7.1 This section addresses the landscape effects which would result from the development of either SPR substation on its own together with the NG substation and ancillary infrastructure at Friston. Landscape effects are effects on the fabric of the landscape and/or on landscape character. Effects on landscape character often extend beyond the site itself and are a consequence of visual changes which affect the pattern and character of the landscape. Visual amenity effects are considered separately in the next chapter, as the effects on people.

Location (siting and mirco-siting)

7.2 NPS EN-1 highlights the need for '*good design*' in the development of energy infrastructure. Careful siting is a fundamental component of good design[40] and is essential in order to produce infrastructure that is sensitive to place. The emphasis on siting in EN-1 reflects the fact that it is very difficult to mitigate harm arising from development in the wrong location.

7.3 To assess and compare potential onshore substations sites SPR used a Red/ Amber/ Green (RAG) assessment approach. A review of the RAG approach is contained in **Appendix 4**. In summary, the RAG assessment was flawed because it:

- Failed to include key criteria such as local landscape character and the relationship to settlement.
- Applied criteria inconsistently.
- Contained double counting.
- Weighted certain criteria differently without explanation.
- Did not consider all three substations together.
- Was an exercise focused on assessing '*the **potential risks to** proposed development options*' rather than the **potential impacts of** proposed development options.

[40] Overarching National Policy Statement for Energy Paragraph 4.5.2

7.4 The findings of the RAG assessment are therefore considered to be unsound. They do not display good design in terms of siting and should not have been relied upon to inform the next stage of the substations site selection process. Due to the flawed site selection process, the substations and infrastructure are sited in a location where they would cause severe landscape and visual harm that cannot be adequately mitigated. Moreover, their location necessitates excessively long supporting infrastructure, including elements such as the permanent operational access road (1,700m) and the cable route (9km) both of which have their own landscape impacts.

7.5 Harmful aspects associated with the location at Friston have been exacerbated by the lack of micro-siting. It is not evident that a design evolution process has been undertaken and as a consequence the substations and ancillary infrastructure appear to have been arbitrarily and unsympathetically imposed upon the existing landscape (refer **Figure 10**). Section 5.9 of EN-1 highlights the need for projects '***to be designed carefully, taking account of the potential impact on the landscape***'[41] as part of the consideration of 'good design, with particular regard to siting. SPR's lack of a micro-siting process has not led to a careful design. **Figures 5, 8, 9 & 10** illustrate the unsympathetic layout of the proposed arrangement relative to existing hedgerows, trees and woodlands, and the pattern/grain of the landscape overall.

7.6 The consequences of the flawed site selection process, the lack of careful design in micro-siting, and the inappropriateness of the location of the substations overall, are:

- The loss of a substantial area of tranquil, open and deeply rural countryside;
- Development that conflicts with the prevailing unified character of the surrounding landscape;
- A complete change to the character of Friston, from a rural village to a village defined by substations and ancillary infrastructure. Harming to the village includes harm to the landscape setting of Friston Church (Grade II*) and to the approaches into the village.
- Harming the character and functionality of the PRoW network, including through the severance and permanent stopping up of PRoWs.
- The need for an excessively long permanent operational access road, to be constructed between the B1121 and the substations (1,700m long) (**Figure 5**).

[41] Overarching National Policy Statement for Energy (EN-1) Paragraph 5.9.8

- The need for a 9km long cable route.

7.7 The above impacts are described in turn in more detail below.

The loss of a substantial area of tranquil, open and deeply rural countryside

7.8 The scale of the proposed development is substantial. It comprises 3 new substations, 3 cable sealing end compounds, a 1,700m long road, and associated infrastructure (including a new pylon and perimeter fencing). The combined footprint of the main components[42], the operational access road, and the land which would not be returned to agriculture (Figure 9) i.e. the overall area subject to permanent development & change, is over 40 ha.[43] By way of comparison, the combined footprint of the nuclear power stations at Sizewell A and B (Figure 1) is 36.5 ha.[44]

7.9 Due to their scale and location the proposals would result in the complete loss of a substantial area of tranquil, open and deeply rural countryside. It would also result in substantial harm to the tranquil, open and deeply rural character of the retained landscape surrounding the substations. The proposals would conflict with the prevailing unified characteristics of the landscape north of Friston, which is highly representative of LCA L1 and its '*special qualities*'. The introduction of over 12ha of new electrical infrastructure would mean this landscape was no longer '*focused on farming*' with '*little intrusion from modern development*' but defined by modern development and large-scale electrical infrastructure. The coherent landscape pattern of irregular fields and their transition in scale towards the village would be lost. The unified character of the landscape and the sense of being within a peaceful, deeply rural 'backwater' would be lost.

7.10 As described in the submitted ES, it is not only a substation building that would be constructed in each compound, but also '*electrical equipment including power transformers, switchgear, reactive compensation equipment …, harmonic filters, cables, control buildings, communications masts, backup generators, access, fencing and other associated equipment, structures or buildings*'.[45] Introducing this array and overall quantity of infrastructure into the middle of the countryside would severely diminish its rural character. The character of the landscape would no longer be '*peaceful*' with the character of a '*deeply rural 'backwater*'' but industrial/utilitarian in character. This new utilitarian character would prevail across the landscape between the substations and Friston

[42] The combined footprint of the substations and cable sealing end compounds is 12.71 ha.
[43] Outline Landscape and Ecological Management Strategy Figure 3: OLMP General Arrangement
[44] Determined from Google Earth, calculating the area of hard surfacing/buildings visible around & including the power stations.
[45] East Anglia ONE North Offshore Windfarm Environmental Statement Volume 1 Chapter 6 Project Description 6.7.7

village. It would also extend into the wider countryside east, north and west of the site, currently characterised by its historic farmsteads.

7.11 The tranquillity of this part of the countryside would not only be disturbed by the visual changes resulting from the construction of the substations and associated infrastructure but is also likely to be disturbed by noise generated from the substations. EN-5 describes the potential for such noise from substations '*Audible noise effects can also arise from substation equipment such as transformers, quadrature boosters and mechanically switched capacitors. Transformers are installed at many substations, and generate low frequency hum. ... Noise may also arise from discharges on overhead line fittings such as spacers, insulators and clamps'*.[46] Adverse noise effects are considered in more detail in other expert reports.

Adverse impact on the character of Friston village

7.12 The footprint of the proposed SPR and NG substations and infrastructure would dwarf the village of Friston. As outlined above, the permanent development footprint would be approximately 40 ha, and the substations and cable sealing end compounds alone would occupy 12.71 ha. The village footprint is only 15.5ha. The striking disparity between the scale of the proposal and the scale of the village, in particular the disparity with the northern part of the village centred on the church, is evident in **Figures 5 & 9**. I have prepared these figures because there are no figures or drawings within the applicant's ES which show both the village and the proposed development.

7.13 The ES includes visualisations which illustrate how the proposals would harm the character of the village, through changes to its rural setting. These changes would be felt in particular from within the village and its approaches, including from:

- Within the village, looking across the countryside to the north of the village e.g. **LVIA Vp 2** (Church Road)[47]. (Relevant LVIA Vps have been added to my **Figure 5**)
- From the countryside north of the village, including from footpath approaches into the village, looking back towards the village and Church. E.g. **LVIA Vp 5** (Junction of Fps 15 and 17)[48]

[46] National Policy Statement for Electricity Networks Infrastructure (EN-5) Paragraph 2.9.7
[47] ES Figures 29.14 (a-e)
[48] ES Figures 29.17 (a-e)

- From the main vehicular approach into the village E.g. **LVIA Vp 8** (B1121 north of the village);[49] **LVIA Vp 9** (B1121 south of the village);[50] and **LVIA VP 14** (Grove Road)[51].

7.14 **LVIA Vp 2** is taken from the northern edge of the village on Church Road. It is an attractive rural setting for the village. The transmission lines at 1km distant are detractors but they are not prominent. In contrast the proposed development would dominate this view because:

- The scale of the development and its close proximity to the village means that it would be seen to occupy almost the entire gap between Grove Wood (east) and Friston House Wood (west). The visualisations are presented with a horizontal field of view (HFoV) of 53.5° and the substations would be prominent in the vast majority of this field of view.
- The development would be located at a higher elevation to the village; the proposed ground level of the substations is between 18.2m and 20.7m AOD[52], whilst the village is at 8-15m AOD).
- The development features numerous elements (up to 18m high[53]) that would be visible above the horizon and conspicuous on the skyline.
- The development's industrial character would be entirely incongruous and at odds with the attractive, small scale, rural character north of the village.

7.15 From within the countryside north of the village, on Fps 6 and what would remain of Fp8, views of the local landmark of Friston Church would be replaced by views of substations and infrastructure. It is from Fps 6 and 8 where the relationship between the church and the countryside, as experienced from a key approach into the village, is most easily appreciated (see **Photographs B – D (Figure 13)** which provide a sequence of photographs from Fps 6 & 8 looking towards the church). LVIA Vp 5 is the only visualisation, included in the LVIA, which has a view of the church from the PRoW network north of the village (although in this view the church is located at the very edge of the page, away from the main substations, which would not be the case in views from Fps 6 and what would remain of 8). Nevertheless, the visualisation from Vp 5 illustrates the large scale of the change and the severity of the impact that the proposals would have on views back towards the village. The countryside

[49] ES Figures 29.20 (a-e)
[50] ES Figures 29.21 (a-e)
[51] ES Figures 29.26 (a-e)
[52] Outline Landscape and Ecological Management Strategy Paragraphs 104 - 106
[53] This is the maximum height of electrical equipment within the GIS SPR Substations.

setting to the church and the village would be lost. Along Fps 6 and what would remain of 8, the church would no longer be visible as an attractive landmark, signalling the presence of the village, but would become obscured behind the substations and infrastructure. These impacts are considered from a built heritage perspective elsewhere in SASES's submissions.

7.16 The scale of the proposal and its proximity to Friston would also be felt from the main vehicular approaches into the village, most notably on the B1121 south of the village where the proposal and the northern part of the village would be seen together (LVIA Vp 9). Currently the transmission lines form a faint detractor clearly set at some distance from the village. The height and spread of the proposed development – seen above the existing village buildings - is such that it would dominate the small-scale features in the view and establish a new dominant industrialised backdrop to the village. There would be no sense of separation between the village and the development which would appear to be immediately behind the village.

7.17 Although the development and village would not be seen together at Vps 8 (B1121 north) and 14 (Grove Road), the development would be seen as a prominent addition to the landscape, shortly before entering the village, and therefore there would be an awareness of its close proximity to the village.

7.18 People approaching the village on all of the main vehicular approaches (B1121 north and south, and Grove Road), and the footpath approaches from the north, would be very aware of the scale of the proposed development and its close proximity to the village. There would be an ever-present awareness of the development. As such, the village would no longer have the character of a rural village but instead would be perceived as a village defined by the presence of by the substations and electrical infrastructure.

PRoW network

7.19 As well as harming the character of the PRoW network, through the changes described above, the proposals would also impede the functionality/access to the countryside provided by the PRoW network north of Friston. During its construction, the development (overall) would require temporary diversions for 26 PRoWs.[54] On a permanent basis, the development would necessitate the permanent stopping-up and diversion of 2 PRoWs[55] north of Friston village:

- Fp 6 [56] - 498m section would be permanently stopped-up.

[54] Outline Public Rights of Way Strategy Paragraph 5
[55] Outline Public Rights of Way Strategy Paragraph 19
[56] E-354/006/0

- Fp 7 [57] - 87m section would be stopped-up and realigned.

7.20 The loss of Fp 6 is particularly to be regretted as it is a long-established route that aligns directly to the church and represents the historic parish boundary. The proposed new PRoW north of the village cannot mitigate the harm caused by the loss of Fp 6, because it would not have the same relationship with Friston Church and would not allow for the same sequence of views towards the church which are currently experienced from Fp 6. In addition, it would be located alongside a Grove Road instead of passing through open countryside.

7.21 In addition to the permanent stopping up of Fps 6 and 7, the permanent operational access road (see below) would also sever Fps 16 and 17. Fp 17 is one of two walking routes between the countryside north of Friston and the village. The other is Fp 6, which, as described above would be lost altogether. Currently walkers do not need to cross any roads on this part of the PRoW network. Users of Fp 17 would have to cross the access road on the route between Friston and the countryside, and wider PRoW network at Fristonmoor. The whole experience of the using Fp 17 would be altered as there would be a constant awareness of the substations. (LVIA Vps 1 & 5).

Permanent operational access road

7.22 The proposed permanent operational access road would be up to 8m wide, and up to 1,700m in length, and would be a significant piece of infrastructure in its own right. At up to 8m wide the road would be substantially wider than the B road (B1121) which it would join (5.5m wide carriageway at the location of the proposed new junction). The new road would be alien to its surroundings and cause harm by altering the composition of the landscape, its structure and the current seamless connectivity. The road would create a new hard edge within the countryside. Although it would be used less frequently than a public highway, it would still have an inescapable presence in the landscape.

Cable Route

7.23 The proposed cable route has been forced to snake around existing settlements, forcing it to cross the SLA, removing TPO woodland (SCDC/87/00030), harming the landscape setting of Aldringham Court (Grade II), and temporarily disrupting other resources including the promoted Sandlings Walk. The excessive length of the cable route (9km) is only required because of the remote location of the substations. If the substations had been located close to the existing substations and electrical infrastructure (such as the existing Galloper

[57] E-354/007/0

substation which serves other offshore wind turbine development), or in another coastal location, then roughly 92 hectares of the ODA would not have been required (Figure 4).[58]

7.24 The long cable route involves disruption and destruction across a large area of landscape only to end up with the substations being located in an inherently rural and unsuitable location. A long cable route is only justified when it results in reaching a suitable site for the substations.

Susceptibility to large-scale electrical infrastructure

7.25 **The susceptibility to change of a landscape** is: '*the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular landscape type or areas, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies*'.[59] The assessment of susceptibility must be tailored to individual projects. It '*should not be recorded as part of the landscape baseline but should be considered as part of the assessment of effects*'.[60]

7.26 The susceptibility of a landscape to a particular kind of development depends on the characteristics of the development and the characteristics of the landscape. The following landscape characteristics are good indicators of landscape susceptibility to large-scale electrical infrastructure.

- **Scale:** Large scale landscapes are likely to be less susceptible to large-scale electrical infrastructure than small scale intimate landscapes. Landscapes in which small scale elements are frequently found are likely to be more susceptible to large-scale electrical infrastructure.
- **Enclosure:** Landscapes with a high degree of enclosure are likely to be less susceptible to large-scale electrical infrastructure than open landscapes.
- **Landform & Topography**: A smooth, convex or flat landform is likely to be less susceptible to large-scale electrical infrastructure than a landscape with a dramatic rugged landform, distinct landform features or pronounced undulations.

[58] Figure 4 highlights in red shading sections 2, 3 and 4 of the ODA , which is considered to be the additional area of land required in order to reach the SPR&NG ODA at Friston.
[59] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 88, Paragraph 5.40
[60] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 89, Paragraph 5.42

- **Land Cover Pattern:** Simple, regular landscapes with extensive areas of uniform ground cover are likely to be less susceptible to large-scale electrical infrastructure than landscapes with more complex or irregular land cover.
- **Settlement Pattern and Density:** More sparsely settled areas are likely to be less susceptible than more densely settled areas or areas with a historic and/or rural village as there will be opportunities to site large-scale electrical infrastructure so that it does not dominate distinctive settlements.
- **Large Scale Visible Built Structures:** Landscapes that contain large scale infrastructure, major communications routes and large-scale developments are less susceptible to large-scale electrical infrastructure although development needs to be carefully sited to avoid visual clutter or cumulative impacts. Landscapes where there is little intrusion from modern development are more susceptible to large-scale electrical infrastructure.
- **Landmark features:** Historic landmarks that generate important views (e.g. to distinctive church spires/towers), or views to and from historic features in the landscape increase susceptibility.
- **Remoteness and Tranquillity:** Relatively remote or tranquil landscapes, due to freedom from human activity and disturbance which have a perceived naturalness or a strong feel of traditional rurality, tend to be more susceptible to large-scale electrical infrastructure.

7.27 It is important to note the difference between the impact of transmission corridors and the substations. Transmission corridors – when seen in the landscape – are linear infrastructure which by their nature are passing through the landscape. Whilst they can have a significant impact on the character of the landscape, they do not require a large footprint. In contrast, the substations require a very large site (over 12 ha) which would replace the existing landscape and consequently would define the landscape in a different way to a corridor, which is passing through the landscape.

7.28 **Scale:** The SPR and NG substations and infrastructure would be located in a part of the countryside where the scale of enclosure begins to decrease. They are not part of a large-scale landscape. Although in the northern and western parts of the SPR&NG ODA there are larger-scale agri-businesses, the landscape towards Friston village is '*somewhat more fine grained, there is more pasture and less emphasis on large scale agricultural organisation*

which gives rise to a more textured and rich visual experience.'[61] Field shapes are irregular and there is considerable variation in field sizes with smaller fields around Friston. There are frequent small-scale features in views north of the village. **Medium Susceptibility**

7.29 **Enclosure:** There is woodland in the landscape surrounding the site of the SPR and NG substations which provides some degree of enclosure and prevents some long-distance views. **Medium Susceptibility**.

7.30 **Landform & Topography**: The SPR and NG substations and infrastructure would be located on a very gently undulating landscape, but at a higher elevation than Friston village. To create the extensive level areas required for large-scale electrical infrastructure, it would require earthworks that would run against the grain of the landscape and would include a new bund 1.5m higher than the internal substation level. **Medium Susceptibility**.

7.31 **Land Cover Pattern:** Most of the site and the surrounding landscape is in arable production and this reduces its susceptibility. **Low Susceptibility**.

7.32 **Settlement Pattern and Density:** Friston is a historic village with a strong and attractive relationship to the surrounding landscape. The surrounding landscape is susceptible to large-scale electrical infrastructure which would dominate the settlement. **High Susceptibility**.

7.33 **Visible Built Structures:** The landscape in which the site is located has little intrusion of large-scale infrastructure except for the existing transmission lines. **Medium/high Susceptibility**.

7.34 **Landmark features:** Friston Church is an historic landmark feature. The adjacent landscape is susceptible to large-scale electrical infrastructure which would harm the setting of the church. **Medium/high Susceptibility**

7.35 **Remoteness and Tranquillity:** Despite the presence of the transmission lines the landscape surrounding the site has a tranquil, deeply rural quality which would be severely harmed by large scale electrical infrastructure. **Medium/high Susceptibility.**

7.36 **Consistency with landscape planning policies and strategies**. With regard to the Strategy Objectives for LCA L1[62] large scale electrical infrastructure on this site would not protect:

- The unspoilt, quiet, and essentially undeveloped rural character of the area,
- The prevailing character of the existing settlement; nor
- The plateau landscape from visual intrusion.

[61] Suffolk Coastal Landscape Character Assessment Page 103
[62] Suffolk Coastal Landscape Character Assessment

7.37 The development would not comply with national policy for energy infrastructure, regarding the application of 'good design', as the proposals:

- Have not demonstrated good design in terms of siting relative to existing landscape character.
- Have not been designed carefully with regards to micro-siting and the potential impact on the landscape.

7.38 In summary, the overall susceptibility of the landscape to the proposed development is **medium/high.**

Conclusion

7.39 The sensitivity of the local landscape to the development proposed is **medium/high** (the result of the combination of the **medium/high** value placed on the site and the surrounding landscape and its **medium/high** susceptibility to the proposed changes).

7.40 Considering all the factors identified above, the overall magnitude of change that would result from the proposed development of one SPR substation and the NG substations and infrastructure would be **high,** and the nature of the change would be adverse. The overall effect upon the character of the local landscape and the setting of Friston village would be **major adverse** both during construction (temporary effect) and once operational (permanent effect).

7.41 The ability of the proposed mitigation planting to lessen this impact is limited. Whilst it will, eventually, reduce some views of the equipment within the substations it:

- will not restore the unspoilt, quiet, and essentially undeveloped rural character of the area;
- will not restore the connectivity between the landscape and the village;
- will not change the fact that Friston will be defined by the presence of by the substations and electrical infrastructure; and
- will not re-establish the current experience of the using the PRoW Network north of Friston.

7.42 The overall effect upon the character of the local landscape and the setting of Friston village after 15 years would be **moderate/major adverse**.

Summary

7.43 The choice of Friston as a location for the SPR&NG substations was the result of a flawed selection process which did not display good design in terms of siting. Harmful aspects associated with the location at Friston have been exacerbated by the lack of micro-siting. There is no evidence that a design evolution process has been undertaken and the substations and ancillary infrastructure appear to have been arbitrarily and unsympathetically imposed upon the existing landscape. The consequences are:

- The loss of a substantial area of tranquil, open and deeply rural countryside;
- Development that conflicts with the prevailing unified character of the surrounding landscape;
- A complete change to the character of Friston, from a rural village to a village defined by substations and ancillary infrastructure;
- Harm to the character and functionality of the PRoW network, including through the severance and permanent stopping up of PRoWs.; and
- The need for an excessively long permanent operational access road, to be constructed between the B1121 and the substations.

7.44 The sensitivity of the local landscape to the development proposed is **medium/high**. The overall magnitude of change would be **high**, and the nature of the change would be **adverse**. In this my assessment concurs with that of the LVIA. The overall effect upon the character of the local landscape and the setting of Friston village would be **major adverse** both during construction (temporary effect) and once operational (permanent effect). The LVIA accepts that there would be a significant permanent effect on this landscape.

7.45 The ability of the proposed mitigation planting to lessen this impact is limited. Assuming the mitigation planting succeeds it could eventually (reduce some views of the equipment within the substations, however it will not :

- Restore the unspoilt, quiet, and essentially undeveloped rural character of the area;
- Restore the connectivity between the landscape and the village;
- Change the fact that Friston will be defined by the presence of by the substations and electrical infrastructure; nor
- Re-establish the current experience of the using the PRoW Network north of Friston.

7.46 The overall effect upon the character of the local landscape and the setting of Friston village 15 years after operation would be **moderate/major adverse**.

8 Visual Effects

8.1 This section is concerned with the visual receptors who would experience the changes in landscape character described above. Visual effects are a result of the sensitivity of visual receptors (people) to the proposed development and the magnitude of changes to existing views.

8.2 There are three key receptor groups who would be affected by the development of either SPR substation together with the NG substation and ancillary infrastructure at Friston. These are:

- Friston village residents (**high sensitivity**);
- Users of the network of PRoWs that surround the village (**high sensitivity**); and
- Users of the road network (which includes cyclists and horse riders) (**medium sensitivity**).

8.3 Friston village residents would also be part of the last two groups.

8.4 All three receptor groups would experience a high magnitude of change, both during construction and the eventual operation of the proposed development north of Friston. At the following locations the level of effects would be:

- **Major adverse** for village residents at LVIA Vp 2 (Church Road) and LVIA Vp 4 (Grove Road).
- **Major adverse** for users of the PRoWs network north of the village at LVIA Vp 1 (Fp 17) and Vp 5 (junction of Fps 15 and 17).
- **Moderate/major** adverse for users of the road network on the main vehicular approach into the village at LVIA Vp 8 (B1121 north of the village); LVIA Vp 9 (B1121 south of the village); and VP 14 (Grove Road).

8.5 Assuming the mitigation planting succeeds (refer to Section 11) the length of time for which the impacts on visual amenity would be experienced would at best, be at least 10 years. This would cover the construction phase of at least 4+ years and at least the first five years of the operation. As set out in Section 11, the establishment of trees in this landscape is slow due to the dry climate and the clay soils. There will be no significant change in the visibility of the substations from Vp 15 years after the site is operational – that is a minimum of 10 years from the start of construction. Even after 10 years establishment (minimum of

15 years from the start of construction) it is likely that there will be sufficient visibility, especially during the winter months, for the presence of the substations to be evident. The visualisations prepared are discussed in more detail in Section 10, but the 15 years post operational image from Vp 1 (minimum of 20 years from the start of construction), even if achievable, has replaced an attractive view across an unspoilt, quiet, and essentially undeveloped rural landscape with no view.

8.6 The proposed mitigation from Vp 1 does significantly lessen the harm when compared to the situation on completion. However, the magnitude of change is measured from the baseline situation. The change in view/ loss of views would result in a moderate magnitude of change for even after 20+ years, and the level of effect at the following locations would be:

- **Moderate/major adverse** for village residents at LVIA Vp 2 (Church Road) and LVIA Vp 4 (Grove Road).
- **Moderate/major adverse** for users of the PRoWs network north of the village at LVIA Vp 1 (Fp 17) and Vp 5 (junction of Fps 15 and 17).

8.7 The proposed mitigation would have no impact on the magnitude of change for users of the road network on the main vehicular approach into the village at LVIA Vp 8 (B1121 north of the village) and LVIA Vp 9 (B1121 south of the village). The level of effect would remain **Moderate/major** adverse.

8.8 From VP 14 (Grove Road) there would be a similar loss of open views as experienced to the north of the village. After 20+ years the magnitude of change would be moderate and the level of effect **Moderate** adverse. South of Vp 14 the intention appears to be to maintain a gap in the planting so in addition to the loss of open views from Grove Road, where views were available through the planting, they would be views of the substation. For vehicular users of Grove Road these would be fairly fleeting views. However, Fp 6 is to be diverted along the edge of Grove Road and this will be an additional adverse impact on visual amenity for users of the footpath network.

Conclusion

8.9 The proposal would result in **major adverse** and **moderate/major adverse** impacts on the visual amenity of users of the PRoW network to the north of Friston and users of the road network around Friston. This harm would be due to the loss of the current visual amenity open views of the countryside and attractive views towards the edge of Friston, as well as to the visibility of the large-scale industrial structures.

8.10 Proposed mitigation will, after a period of at least 10 years, lessen the views of the infrastructure to varying degrees (from a negligible degree at e.g. Vp 8 to a more substantial degree at e.g. Vp 1), but at all locations it will not restore the current visual amenity and in places the mitigation planting in itself will restrict open views (e.g. Vp 1).

9 Cumulative Effects

9.1 GLVIA3 states that cumulative effects: '*result from additional changes to the landscape or visual amenity caused by the proposed development in conjunction with other developments (associated with or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future*'.[63]

9.2 The LVIA considered two construction scenarios for its cumulative assessment:

- Scenario 1 – East Anglia ONE North and East Anglia TWO onshore infrastructure are constructed at the same time.
- Scenario 2 – East Anglia ONE North onshore infrastructure is built entirely and the land re-instated, then East Anglia TWO onshore infrastructure is constructed.

9.3 ES Appendix 29.5 contains the LVIA Cumulative Assessment, and identifies that the construction of both SPR substations together with the NG substation would result in cumulative landscape and visual effects that would be significant but '*medium term*' over the duration of the construction activity – this implies that the construction period would be at least 5years. For the operational phase, it considered that the effects would be the same, significant and permanent, irrespective of the construction scenario. (see following section for more details).

Conclusion

9.4 If both SPR substations were consented, then additional, adverse cumulative impacts would occur at every stage of the development; increasing the development's overall landscape and visual effects. Cumulative impacts that would be particularly harmful are:

- The long duration of the construction phase. If constructed sequentially (scenario 2 above) then the duration of the construction phase for just the two SPR substations would be at least 5 years.
- The overall scale of the development. If both SPR substations were constructed, then the development footprint occupied by the SPR substations and associated infrastructure would be doubled. The incongruity of the development's scale with

[63] GLVIA3 Paragraph 7.2 Page 120

the smaller scale rural character north of Friston village would be exacerbated. It is more difficult to micro-site two SPR substations, such to reduce their impacts upon the local landscape framework compared to micro-siting only one SPR substation.

9.5 It is noted that the cumulative effects of other developments which may come forward in association with National Grid infrastructure at Friston have not been considered in the applicants' assessments. These developments are understood to include up to six other offshore energy projects which may connect at the Friston substation complex (these projects are known as Nautilus, Eurolink, Five Estuaries, North Falls, SCD1 and SCD2).

9.6 It is very likely that the additional infrastructure required for those connections would have additional landscape and visual impacts to those already identified in this report. This issue is considered elsewhere in SASES's submissions and I have not carried out a further assessment of the cumulative effects of these projects.

10 Submitted Landscape and Visual Impact Assessment (ES Chapter 29)

Landscape Effects

10.1 There is a separate 154 page LVIA dealing with the landscape and visual effects of the onshore elements of the proposed off shore windfarms. There are four key onshore elements – Landfall, the onshore cable route, the SPR substations and the NG substation. Of these, only the latter two will have long term permanent effects during operation. Both of these elements are located in the landscape to the north of Friston. The impacts on the landscape at Friston should therefore have been of central importance to the LVIA.

10.2 Section 29.6.1.3.1 covers the assessment of Landscape Effects during construction of the – Onshore Substation and National Grid Infrastructure. It consists of three paragraphs (165-167) one of which is concerned with effects on the AONB which is not at issue. The assessment of landscape effects during operation is more detailed at seven paragraphs (178-187) with one concerned with effects on the AONB.

10.3 It is unclear why the LVIA in assessing landscape value refers to the County Landscape Character Types rather than the more recent Suffolk Coastal Landscape Character Areas which are more relevant at the local level. The LVIA considers the Ancient Estate Claylands LCT to have only medium value (paragraph 179) and lists the detracting factors to be found in this LCT. It then goes on to acknowledge that in the area that will be affected by the development these detracting factors are not present.

> *'The local landscape in the Friston area has a strong sense of place and local distinctiveness, with value deriving from the setting of the landscape to the parish of Friston, the characteristic arrangement of this parish, the village and outlying farmsteads in the open agricultural setting with a simple, rural character, network of fields with strong hedgerow field boundaries, scattered mature deciduous field boundary trees and distinctive backdrop of ancient woodland (Grove Wood).' (Para 179)*

10.4 I agree with this description and consider that the local landscape the LCA L1: Heveningham and Knodishall Estate Claylands, has noticeably greater value than the District LCT. The LVIA does acknowledges that the '*characteristic arrangement and visual relationship of the parish, the quiet rural setting, network of hedgerow field boundaries and public rights of*

way are susceptible to changes arising from the construction and operation of the onshore substation and National Grid infrastructure in landscape between Friston village and Fristonmoor.' (Para 180) The LVIA assess the susceptibility as medium-high and the sensitivity as medium high, even taking into account the presence of the high-voltage overhead transmission lines. (Para 180)

10.5 For ease of reference, the conclusions of the LVIA regarding the impacts on local landscape character are set out in **Tables 2 & 3** below with my comments. The conclusions relate to two landscape receptors referred to in the LVIA as Areas 1A and 7A. These areas were identified in the LVIA as sub-areas within LCAs (L1 & K3) originally drawn in the Suffolk Coastal Landscape Character Assessment[64]. Area 1A (North of Friston, between Grove Road, Fristonmoor and Saxmundham Road) is where the substations and the majority of infrastructure would be located. Area 7A (Thorpeness to Aldringham and Friston) includes Friston village and a substantial tract of countryside east of the village, up to the coast.

10.6 Although the LVIA identifies the sensitivity of the receptors on a scale of low-high and the magnitude of change on a scale of negligible to high, the overall impact is described only as 'significant' or 'not significant'. (Table 29.5 Significance Matrix Page 30) I do not consider this to be best practice as it results in a very unrefined conclusion. From Table 29.5 it appears that a significant impact could range from a moderate-minor effect to a major impact. It is necessary to understand more precisely the exact degree of significance. AS the LVIA has provided assessments of sensitivity and magnitude of change I have used these, based on best practice, to give an indication of the degree of significance.

[64] ES Figure 29.7

Table 2: Summary of findings for Area 1A (North of Friston)

	Area 1A (North of Friston)		
Stage	Sensitivity to change	Magnitude of Change	Significance of Effect
Construction	Medium-high	**High** on localised area to north of Friston within approximately 1.0km around the onshore substation and National Grid substation.	**Significant**, short-term and temporary on localised area to north of Friston within approximately 1.0km around the onshore substation and National Grid substation.
MB Comments – A high magnitude of change on a landscape with medium/high sensitivity results in a **major** adverse or **moderate/major** impact. As the construction period may be in excess of 4 years the constructions effects should be assessed as medium term.			
Operation (Year 1)	Medium-high	**High** (text as above)	**Significant**, long-term and temporary. (text as above)
MB Comments – A high magnitude of change on a landscape with medium/high sensitivity results in a **major** adverse or **moderate/major** impact. As there the effect remains significant at 15 years it is incorrect to say that this effect will be temporary.			
Operation (Year 15)	Medium-high	**Medium/High** (text as above)	**Significant**, long-term and permanent. (text as above)
MB Comments – A medium/high magnitude of change on a landscape with medium/high sensitivity results in a **moderate/major** impact. It is important to note that there is no significant difference between operation Year 1 and Year 15.			

Table 3: Summary of findings for Area 7A (Area Including Friston Village)

	Area 7A (Area Including Friston Village)		
Stage	Sensitivity to change	Magnitude of Change	Significance of Effect
Construction	Medium-high	**High** on localised area to north of Friston within approximately 1.0km around the onshore substation and National Grid substation.	**Significant**, short-term and temporary on localised area to north of Friston within approximately 1.0km around the onshore substation and National Grid substation.
MB Comments – A high magnitude of change on a landscape with medium/high sensitivity results in a **major** adverse or **moderate/major** impact. As the construction period may be in excess of 4 years the constructions effects should be assessed as medium term.			
Operation (Year 1)	Medium-high	**High** (text as above)	**Significant**, long-term and temporary. (text as above)
MB Comments – A high magnitude of change on a landscape with medium/high sensitivity results in a **major** adverse or **moderate/major** impact. As there the effect remains significant at 15 years it is incorrect to say that this effect will be temporary.			
Operation (Year 15)	Medium-high	**Medium/High** (text as above)	**Significant**, long-term and permanent. (text as above)
MB Comments – A medium/high magnitude of change on a landscape with medium/high sensitivity results in a **moderate/major** impact. It is important to note that there is no significant difference between operation Year 1 and Year 15.			

10.7 A significant cumulative effect (resulting from two SPR substations) was identified for both receptors (Areas 1A and 7A) at each development stage. These effects were considered to be significant at the construction stage, regardless of whether the substations were constructed at the same time (scenario 1) or sequentially (scenario 2). The only difference being the duration of the cumulative effect, with construction scenario 2 having a medium-

term effect (5 to 10 years[65]) and scenario 1 a short-term effect (1 to 4 years[66]).[67] It is noted that within the main body of the LVIA, the cumulative effects of scenario 2 (for the construction of the substations) are described as long term[68] (more than 10 years[69]). I am not clear how this figure of 10+ years was reached but it highlights the uncertainty over the length of the construction period.

10.8 Significant long term and permanent (and cumulative) visual effects were also identified for a number of visual receptors, including those within the PRoW network north of Friston (e.g. LVIA Vp 5) and within Friston village itself (e.g. LVIA Vp 2).

10.9 We agree with the LVIA that both Friston village and the landscape to its north would experience a high magnitude of change and would suffer significant adverse effects, at the least **moderate major adverse** at every stage of the development. There would be no significant reduction in effects after 15 years. We also agree that significant cumulative effects would also be experienced at every stage of development should both SPR substations be consented.

10.10 Although we agree that the effects would be significant that classification alone does not explain the severity of the harm. The LVIA has failed to set out in full the severity of the harm that would be caused by the proposed SPR and NG substations and Infrastructure in particular due to:

- The fact that the assessment of impacts from the SPR&NG development forms only a small part of the application for the offshore wind turbine developments. The proposed substations at Friston constitute substantial development but the impacts are not described in the level of detail that would have been expected had the SPR&NG development formed an NSIP in its own right.
- An absence of plans showing the proposal and Friston village together (none of the figures included within the LVIA or the OLMP show the complete proposals (e.g. substations, cable sealing ends, access roads etc) and the entire village together). This omission makes it difficult to see the enormity of the proposal relative to the size of the village. To assist in the examination, I have prepared a number of plans that show the proposal in relation to the village.

[65] East Anglia ONE North Offshore Windfarm Environmental Statement Volume I 29.4.3.5
[66] East Anglia ONE North Offshore Windfarm Environmental Statement Volume I 29.4.3.5
[67] East Anglia ONE North Offshore Windfarm Environmental Statement Appendix 29.5 Paragraph 29.2.2
[68] East Anglia ONE North Offshore Windfarm Environmental Statement Volume I 29.7.1.1.2 (210)
[69] East Anglia ONE North Offshore Windfarm Environmental Statement Volume I 29.4.3.5

10.11 Having identified such a significant level of harm the LVIA dismisses it on the basis that '*Virtually all nationally significant energy infrastructure projects will have effects on the landscape'*. Whilst many nationally significant energy infrastructure projects will have effects on the landscape EN1 makes clear that the harm to the landscape can be minimised through careful design in the siting of the projects, including through locating new infrastructure close to existing infrastructure. There is no evidence to show that the harm that would be caused by the SPR&NG substations has been minimised by careful site selection process or considered micro-siting.

Visualisations

10.12 The visualisations that have been submitted with the ES under-represent the impact of the development. This is as a result of a number of factors:

- An absence of viewpoints from a number of key locations
- The physical presentation of the images
- The omission of parts of the development from some visualisations

10.13 There are a number of key viewpoints from where visualisations have either not been prepared or the viewpoint location does not show the most important features of the landscape that are available from other nearby locations. In particular there is an absence of views that show the relationship between the footpaths to the north and the village which is identified by the church tower. Viewpoints from which visualisations should be prepared are:

- Fp 6 north of the site. This omission makes it difficult to understand the impacts on the setting of Friston Church and its role as a landmark across the countryside north of the village. (see **Photographs C, D & E (Figure 13)**)
- Fp 8 west of Vp 3. The omission of a viewpoint west of Vp 3 makes it difficult to understand the impacts on the setting of Friston Church and its role as a landmark across the countryside north of the village. It is inappropriate to have only one viewpoint from Fp 8, located at the junction with Grove Road. Views of the church from this location are screened by planting around Fareacres, whereas further west they are clear and make a significant and positive contribution to the local landscape. (see **Photograph B (Figure 13)**)
- From the front of Friston Church. There is no LVIA visualisation form the front of Friston Church. There is a cultural heritage viewpoint taken from the war memorial behind the church, but this is located behind a group of trees which obscures views to the north. There is no vegetation obscuring views from the front

of the church. This is a very pubic location where it is likely that people will gather and linger and therefore have more time to experience the view.

- From Grove Road south of Vp 14 where it is intended that there should be a gap in the proposed planting which will allow direct views into the substations. This is also on the proposed diverted footpath.

10.14 The physical presentation of the visualisations also results in an under-representation of the impact of the development. The most significant failure is as a result of the variation in the HFoV between the baseline images and the visualisations. The baseline images are presented with a 90° HFoV but the images showing the development which are presented with a 53.5°HFoV. This variation is in direct conflict with the recommendations of the most recent Landscape Institute Guidance *Visual Representation of Development Proposals* (LI TGN 06/19) which states that: '*Imagery will typically be presented as three related sheets: Baseline photograph; wireline / wireframe or photowire composite; and photomontage. **These should be presented at the same size to allow direct comparison'***.[70] This recommendation is reiterated at paragraphs 4.4.6 & 4.4.7 of LI TGN 06/19.

10.15 The difficultly in making a direct comparison is compounded by the fact that some of the year 1 photomontages (E.g. LVIA Vp 3) include substantial pre-commencement planting making it impossible to understand the exact nature of the development.

10.16 The failure to present as single frame images, at locations where all of the proposed development could have been captured in a single frame and presented on an A3 page. (e.g. at Vps 7, 9, 10. Using single frame image on an A3 page is recommended in TGN 06/19 where it is possible.[71] Single frame images allow a better understanding of scale and distance and A3 pages are easier for people to use on site. In order to highlight the differences made by presenting at single frame at A3 I have reproduced single frame photographs from the panoramas at Vps 9 and 10 (see **Figures 14 & 15**).

10.17 There is an omission of parts of the development from some visualisations. The cable sealing end with circuit breaker compound is missing on the set of visualisations showing the NG (GIS) Substation from Vp 5.[72] This compound is shown on the visualisations with the NG (AIS) Substation.[73] The choice of the HFoV for Vp 5 also results in an underrepresentation. The HFoV only includes the very edge of the cable sealing end with circuit breaker compound (right hand edge of the image) the rest of the compound is outside the image. This is

[70] Visual Representation of Development Proposals LI TGN 06/1 Paragraph 4.5.5.
[71] Visual Representation of Development Proposals LI TGN 06/ 4.5.11
[72] ES Figures 29.37 (a-e)
[73] ES Figures 29.17 (a-e)

unnecessary as the development does not extend all the way to the left-hand edge of the image. This is particularly significant because Friston Church is also located on the right-hand edge of the image. The cable sealing end with circuit breaker compound will be located directly between Vp 5 and the church.

10.18 The visualisations fail to represent a maximum effect scenario due to the lighting conditions when a number of the viewpoint photographs were taken. For example, the photograph for Vp 5, was taken towards the sun which means the proposed substations and infrastructure structures appear very dark. This is also the case for Vp 10, the photograph for which was taken in late afternoon, when the light was fading.

10.19 It is acknowledged that achieving photographs that accurately represent the experience on the ground is difficult. This is especially true of skyline features such as the tower of Friston Church. Whilst this can be seen very clearly with the human eye, photographs do not have the same ability to distinguish features of interest as the human brain. My photographs of the church tower also do not represent the actual experience.

10.20 The planting shown for the pre-commencement at operational year 1 and for post commencement planting at year 15 is considered to be optimistic. As set out in section 11, due to local weather and soil conditions, the growth rates could be 50% or less of what is predicted.

10.21 There is a lack of detail regarding significant infrastructure components such as the access roads, for which there are no photomontages or cross sections.

Conclusion

10.22 The LVIA recognises that the landscape in the Friston area has a strong sense of place and local distinctiveness, with value deriving from the setting of the landscape to the parish of Friston, the characteristic arrangement of this parish, the village and outlying farmsteads in the open agricultural setting with a simple, rural character, network of fields with strong hedgerow field boundaries, scattered mature deciduous field boundary trees and distinctive backdrop of ancient woodland.

10.23 The LVIA recognises that the landscape has a **medium/high** sensitivity to the development and that the magnitude of change would be **high** due to the conflict between the large-scale industrial nature of the development and the existing rural character with its characteristic patterns and its relationship with Friston. The LVIA identifies the impact of the development on Friston and the landscape to the north of Friston as significant. Although it is not made clear, the LVIA the assessment equates to a **moderate/major or major adverse** impact. The LVIA assessment accept that the significance of the impacts

would reduce very little after 15 years of operation. The assessment equates to a **moderate/major adverse** impact for the life of the development.

10.24 Having identified such a significant level of harm the LVIA dismisses it on the basis that '*Virtually all nationally significant energy infrastructure projects will have effects on the landscape'* (Para 266). Whilst many nationally significant energy infrastructure projects will potentially have effects on the landscape EN-1 makes clear that the harm to the landscape can be minimised through careful design in the siting of the projects. There is no evidence to show that the harm that would be caused by the SPR&NG substations has been minimised by a careful site selection process or by considered micro-siting.

10.25 The visualisations submitted with the ES underrepresent the impact of the development. This is due in particular to:

- The omission of key viewpoints
- The inability to make a direct comparison between the baseline images and the visualisations;
- The failure to present visualisations as single frame images where possible; and
- The optimistic growth rates used for the mitigation planting shown.

11 Mitigation Proposals

Introduction

11.1 An Outline Landscape and Ecological Management Strategy (OLEMS) has been submitted in support of the ES. Within the OLEMS is an Outline Landscape Mitigation Plan (OLMP) that was developed in consultation with the Local Planning Authority and other stakeholders, although not SASES. The OLEMS and OLMP would form the basis for a final detailed Landscape Management Plan (LMP), which would be prepared post-consent in order to discharge the relevant DCO requirements, namely the DCO Requirement for the 'provision of landscaping'. The mitigation measures outlined in the OLMP informed the landscape and visual impact assessments included in chapter 29 of the ES.

Summary of Key Aspects of Outline Landscape Mitigation Plan

11.2 The OLMP explains that three approaches to the landscape design proposals were considered: 'hidden', 'integrated' and 'exposed' and that a combination of the approaches of hiding and integrating have been used for the SPR and NG substations. It explains that: '*Due to technical constraints, it would be unrealistic to completely screen the entirety of the onshore substations, therefore some element of integration is required and is considered suitable to allow some recognisability of the function of the onshore substations, when viewed in the context of the existing electrical transmission infrastructure nearby*'.[74]

11.3 OLMP Figures 3, 6 & 7 illustrate how woodland planting is central to the mitigation strategy to hide and integrate the proposal. The OLMP assumes that the planted woodland areas would be well established between 5-10 years post planting, and fully established between 10-15 years.[75] The assumed heights, set out in the OLMP, at 15 years post planting are:

- Core native woodland (W1). Taller trees assumed to have heights between 6.5m – 7.8m and smaller trees/shrubs are assumed to have heights of 2m – 4m to form an understorey.
- Native edge woodland (W2). Trees assumed to have heights between 2m – 5m.

[74] Outline Landscape and Ecological Management Strategy Paragraph 67
[75] Outline Landscape and Ecological Management Strategy Paragraph 81

- Native screening woodland (W3). Taller trees assumed to have heights between 6.5m – 8.4m and smaller trees/shrubs are assumed to have heights of 2m – 4m to form an understorey
- Native wet woodland (W4). Taller trees assumed to have heights between 6.5m – 7.8m and smaller trees/shrubs are assumed to have heights of 2m – 4m to form an understorey.

11.4 It is noted that the vast majority of the proposed woodland planting is proposed to be undertaken post construction. This includes the '*large woodland belts that surround the onshore substation and National Grid substation, as well as formalising the woodland planting around the SuDS basins'*.[76] If the projects are built consecutively then the post construction mitigation planting (which represents the bulk of the mitigation planting) would be delayed. The mitigation for the National Grid infrastructure and whichever of the EA1N or EA2 substations were built first would be significantly delayed.

11.5 The areas of pre-construction planting (which includes hedgerow planting) shown on OLMP Figure 7 would be undertaken '*as early as possible, post-consent*'. The OLMP states that this would mean the planting would have '*had approximately three years of growth prior to completion of construction and commencement of operation*'.[77] It is unclear where the figure of 3 years is derived as the NG substation will take at least four years to construction.

11.6 Regarding the substation site levels and proposed bund, the OLMP states:

'Based on preliminary engineering design undertaken, the finished ground level in respect of the onshore substation is anticipated to be approximately 20.7m AOD where the onshore substation is located to the east, and approximately 18.2m AOD where the onshore substation is located to the west. The final finished ground level will be established during detailed design post-consent as per the Outline Substation Design Principles Statement.

The current bund proposal associated with onshore substation and National Grid infrastructure SuDS basins and perching of basins in location is identified in Figure 5.

The top of the bund will be 1.5m higher than the internal substation level. The intention is to grade the ground up to these levels from the substation at a grade of 1:3. This grade of slope also allows for safe maintenance access. The bund is then shaped so that externally it falls at a gentler grade of 1:10 to 1:20 away from the substation to have a

[76] Outline Landscape and Ecological Management Strategy Paragraph 87
[77] Outline Landscape and Ecological Management Strategy Paragraph 85

smoothly graded, natural looking slope facing the viewers looking towards the substation'.[78]

11.7 The assumed ground levels identified in the OLMP do not match those cited elsewhere in the application. For example, the Outline Onshore Substation Design Principles Statement (Substation Design Statement) states that the finished ground levels for the eastern SPR substation would be 21.4m AOD[79] (not 20.7m as stated in the OLMP) and for the western SPR substation the ground levels would be 19.8m AOD[80] (not 18.2m as stated in the OLMP). As the visualisations are specifically referenced in the OLMP it is assumed that these were prepared on the basis of the lower ground levels stated in the OLMP. It is therefore likely that they present a better case scenario than if the higher ground levels cited in the Substation Design Statement were used.

11.8 OLMP Figure 8 shows the proposed permanent diversions of the PRoWs north of Friston. The loss of Fp 6 is proposed to be mitigated by introducing a new diversion along Grove Road, connecting to the remaining section of Fp 6 near Little Moor Farm.

Comments on OLMP

11.9 The OLMP mitigation strategy cannot adequately mitigate the significant harm that would be caused by either one or both of the SPR substations being constructed alongside an NG substation and additional infrastructure. This is because that harm is caused by the location and scale of the development. The LVIA recognises this fact, by identifying significant permanent harm (**moderate major adverse**) to the character of the landscape north of and including Friston village and significant permanent harm to local visual amenity.

11.10 As outlined within the OLMP, it is unrealistic to consider that the proposals could be screened entirely however, I consider it is also unrealistic to consider that the proposals could be integrated into this landscape. They cannot be integrated because of:

- The lack of good design with regards to siting choices and therefore the incongruity of the proposals with the character of the local landscape in which they are located.
- The lack of good design with regards to siting choices and therefore the totally unsympathetic scale and proximity of the proposals to Friston village.
- The lack of careful design with regards to micro-siting.

[78] Outline Landscape and Ecological Management Strategy Paragraphs 104 - 106
[79] Outline Onshore Substation Design Principles Statement Paragraph 11
[80] Outline Onshore Substation Design Principles Statement Paragraph 11

11.11 Although SPR state that they recognise the importance of working with the landscape framework[81], there is little evidence of this within the OLMP figures, where the substations and ancillary infrastructure are shown to have been arbitrarily imposed upon the existing landscape framework. **Figures 5, 7, 8 & 9** (of this report) are particularly helpful in illustrating the unsympathetic layout of the proposed arrangement relative to existing hedgerows, trees and woodlands, and the pattern/grain of the landscape overall. There is a lack of information concerning how landscape issues have shaped the micro-siting process, and the (mitigation) planting shown in the OLMP Figures. In particular, no information is provided regarding the influence of local landscape opportunities, constraints, or character. Considering only designations is not sufficient to ensure the best possible landscape fit. **Figure 10** has therefore been prepared in order to show how the proposals, in terms of the siting/micro-siting of the substations, relate to the key local landscape constraints.

11.12 Section 3.5.4 of the OLMP sets out the assumed growth rates which have formed the basis for the vegetation shown in the visualisations. These growth rates have been reviewed by a local nurseryman (Mr Jon Rose). His comments are set out in a letter to SASES dated 27th October 2020, which is to be submitted by SASES. In that letter Mr Rose observes that the growth rates quoted in the OLMP used to determine the heights of the trees within W1, W3 & W4 (the main blocks of proposed woodland) may be significantly less that what has been assumed and can be '*50% or less of what is predicted*'. Mr Rose also explains how due to local weather and soil conditions, that high plant losses should be expected: '*Given the latest predisposed weather conditions of very dry Springs with little if any rain during the critical establishment period and given the types of soils in the area; high losses could be expected. I have seen losses up to 70% - 85% in nearby locations, necessitating a replanting program'*.

Recommendations

11.13 In line with the LVIA I do not consider the landscape and visual harm can be mitigated to a level where it is no longer significant. However below are key areas where I consider the proposals should be improved.

11.14 Some mitigation during the construction period could be achieved by agreeing that both the SPR substations and the NG substation would be constructed concurrently.

11.15 With regard to developments where the impacts cannot be adequately mitigated, the Suffolk County Assessment (referring to wind turbines), describes the need to '*compensate for the landscape impact of the development by providing a long-term legacy of landscape*

[81] Design and Access Statement 5.3

compensation', improving the condition of the landscape beyond the site of the development (in the case of wind turbines, 4-6km is suggested).[82] Reflecting upon this guidance, a high-level mitigation strategy has been prepared (**Figure 11**) which would:

- Lessen some of the harmful aspects of the current proposal by consolidating the substations (and ancillary elements, if possible) within one field (Substation Zone). This would lessen the impact upon the local landscape framework and would better conserve existing landscape elements and the existing landscape pattern, enabling it to be used as a basis for mitigation planting (Screening Zone).
- Improve the condition of the landscape across a wider area than is currently proposed to be planted/managed to provide a long-term legacy of landscape compensation (Landscape Enhancement Zone).

11.16 Within the Landscape Enhancement Zone, the following Land Management Guidelines[83] could be implemented, alongside any specific local requirements determined through local consultation:

- Reinforce the historic pattern of sinuous field boundaries
- Recognise localised areas of late enclosure hedges when restoring and planting hedgerows
- Maintain and increase the stock of hedgerow trees
- Maintain the extent, and improve the condition, of woodland cover with effective management
- Maintain and restore the stock of moats and ponds in this landscape

11.17 Other specific mitigation proposals recommended for inclusion, should either proposal be consented, are:

- As the amenity derived from the open landscape would be entirely lost, it is recommended that substantial addition woodland planting is proposed alongside the northern sections of the new footpath, so that it runs through a wider woodland area.

[82] Guidance Note Ancient Estate Claylands, Suffolk County Council
[83] Guidance Note Ancient Estate Claylands, Suffolk County Council

- Address deficiencies in the tree planting. Particularly the gap to the south east which means at from a section of Grove Road and the new footpath the substations would be clearly visible.
- Address micro-siting issues so that valuable landscape features such as the existing copse (identified on Figure 10) are protected.

Conclusion

11.18 The LVIA accepts that the mitigation proposals will remain significant for the lifetime of the substations. (Not reducing below **moderate/major adverse**). Improved mitigation might be achieved if;

- It was agreed that the construction of both SPR substations and the NG substation was undertaken concurrently;
- A genuine micro-siting exercise was undertaken which identified and worked with the grain of the landscape to assess whether a smaller more irregular footprint could accommodate the required equipment;
- Consideration was given to consolidating some of the elements to achieve a smaller footprint;
- Priority was given to mitigating the impact on Friston village, even if this might move the substations closer to Grove Road;
- An enhancement programme was prepared which looked at improving the wider landscape rather than merely hiding views of the substations.

12 Compliance with landscape related planning policy

Overarching National Policy Statement for Energy (EN-1).

12.1 The proposed development is not '*sensitive to place*[84]*'* and the mitigation measures proposed in the OLEM will do little to improve this as is acknowledged in the LVIA. The fundamental problem is that the siting of the SPR&NG substations has not been as result of good design. The site selection process was flawed and failed to take into account the high value aspects of the landscape, the strong sense of place and local distinctiveness, the relationship with the village and the pattern of landscape and settlement and how this can all be experienced from the well-used network of PRoW.

12.2 The scheme does not show '*good design in terms of siting relative to existing landscape character, landform and vegetation.'*[85] On the contrary it is in conflict with all the high value aspects of the landscape.

12.3 Having failed to carry out a fair site selection process there is no evidence that the design has been evolved or micro-siting has been employed to improve the relationship with the existing landscape . The final layout of substations and cable sealing end compounds does not respond to the existing landscape or make use features in the existing landscape in order to '*minimise harm to the landscape.'*[86]

12.4 The location of the SPR&NG substations at Friston does not appear to have been influenced by topography or any other aspect of the existing landscape[87] except the presence of the overhead transmission lines. As acknowledged in the LVIA the screening that might be achieved after 20+ years from the date of commencement would do little to mitigate the adverse landscape and visual impacts.

12.5 The proposals cannot achieve the type of good design sought in EN-1 (and emphasised in EN-3 & EN-5) because of their location, the conflict with the character and qualities of that location, and the lack of any micro-siting design process.

[84] EN-I 4.5.I
[85] EN-I 4.5.2
[86] EN- I 5.9.8
[87] As recommended in EN-5 2.2.5

NPPF

12.6 The proposals fail to recognise the intrinsic character and beauty of the countryside and in that regard should be considered to be inconsistent with the NPPF.

Suffolk Coastal Local Plan

12.7 The proposals are not sympathetic to the special qualities and features described in the Suffolk Coastal Landscape Character Assessment and should therefore be considered to be inconsistent with Policy SCLP10.4 of the Suffolk Coastal Local Plan. In particular, due to their location and scale, and the lack of good design, the proposals would not protect and enhance:

a) The special qualities and features of the area, which relate to its unified deeply rural character; nor

b) The visual relationship and environment around Friston village and its landscape setting;

12.8 Overall, the proposals are considered to conflict with the relevant national policy statements and national and local landscape policies.

Conclusion

12.9 National policy emphasises the importance of good design in terms of siting as a key means by which to minimise the harmful impacts of energy infrastructure on the landscape. The choice of Friston as a location for the SPR&NG substations was the result of a flawed selection process. The proposals have been located next to a small rural village in an area of countryside which is recognised for as a peaceful, deeply rural 'backwater'. The consequences of this location are landscape and visual effects which are both severe and permanent. These effects are not inevitable and there has been no evidence to show that the harm that would be caused by the substations has been minimised by a careful site selection process or by considered micro-siting.

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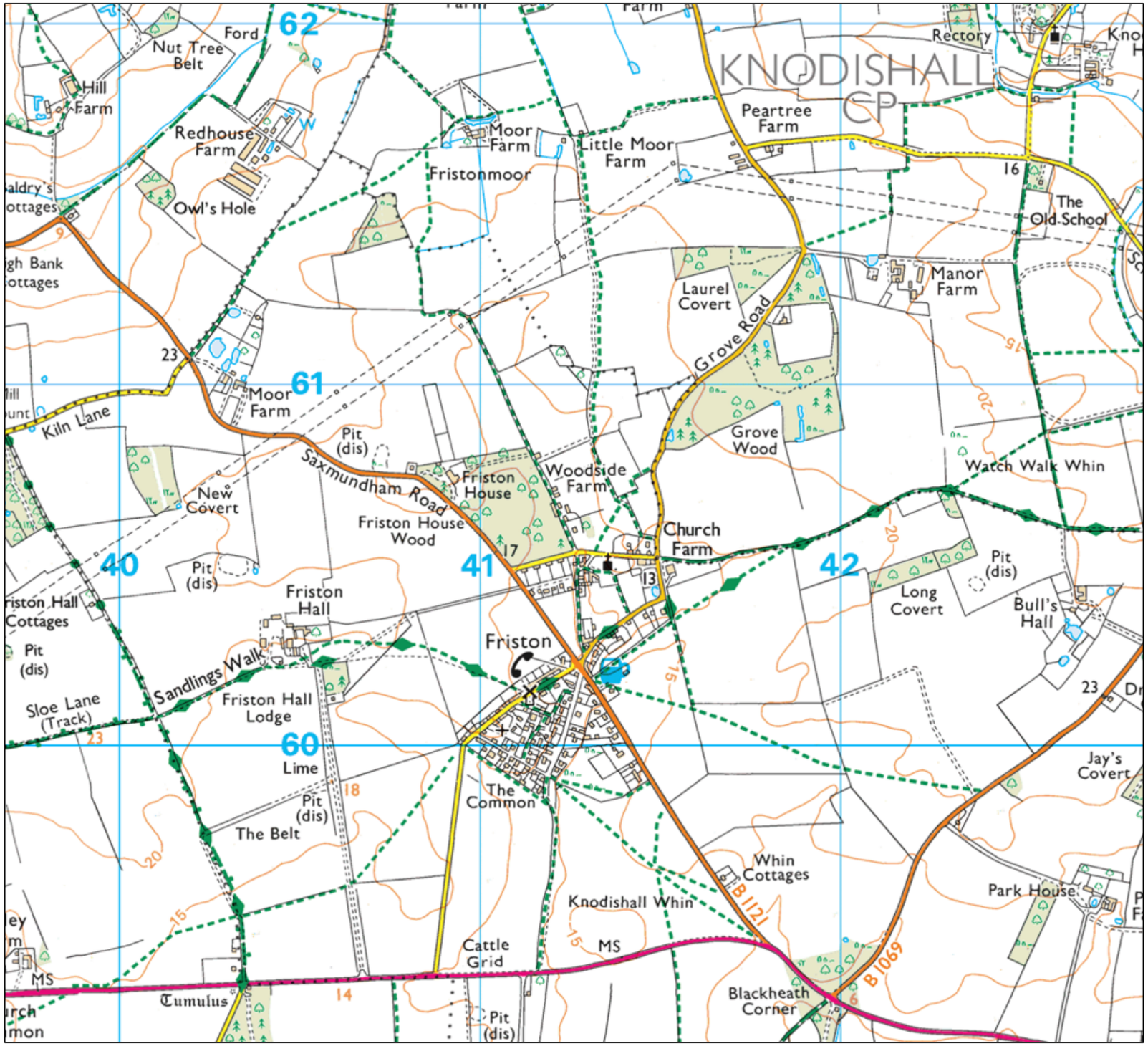

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Appendix 1 to
Landscape and Visual Issues

Relating to the
Onshore Development at Friston

Required for
East Anglia ONE North/ TWO Offshore Wind Farms

Prepared for
Substation Action Save East Suffolk (SASES)

LPA
Suffolk Coastal (East Suffolk)

PINS Refence
EN010077 & EN010078

October 2020

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Date issued:	30th October 2020
Status:	Final

CONTENTS

Sternfield CP

Knodishall CP

Friston CP

Leiston CP

Aldringham Cum Thorpe CP

Source:

Onshore Development Area and Sections derived from ES Figure 6.2

0 250 500 1km

Legend

- EA1N & EA2 Onshore Development Area (ODA)
- Parish Boundaries
- Galloper Substation (Built)

ODA Sections

- Landfall
- Section 1
- Section 2
- Section 3
- Section 4
- Onshore Substations and National Grid Infrastructure

FIGURE 1

Onshore Development Area

PROJECT
1080
East Anglia One North

CLIENT
Substation Action Save East Suffolk

Source:

Onshore Development Area and Sections derived from ES Figure 6.2

0 250 500 1km

Legend

- EA1N & EA2 Onshore Development Area
- Substations & Cable Sealing End Compounds
- Permanent Access Road (Substations)
- Galloper Substation (Built)

Designations

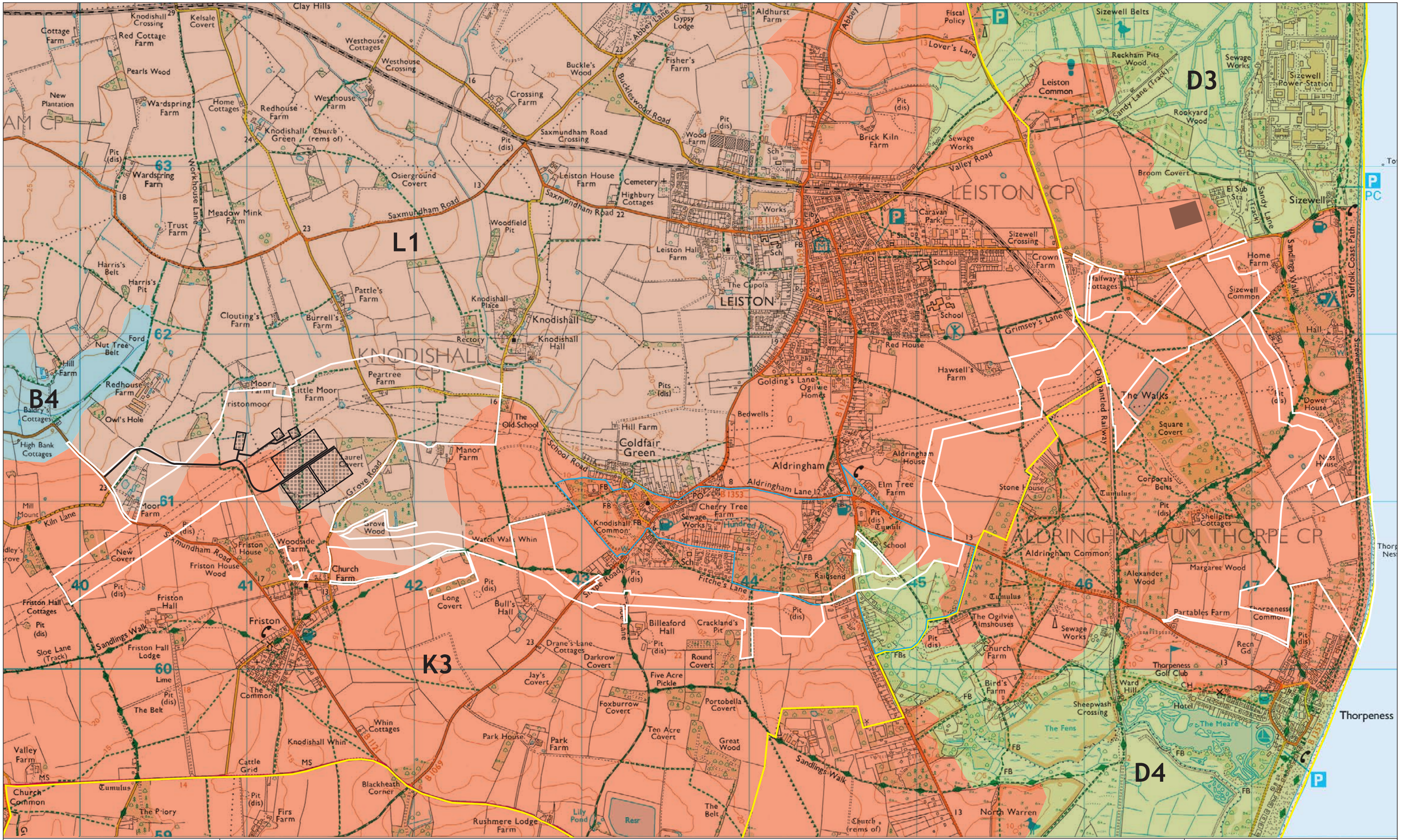
- Suffolk Coast and Heaths AONB
- Hundred River Valley Special Landscape Area
- Heritage Coast
- Ancient Woodland
- Special Protection Area (SPA)
- Site of Special Scientific Interest (SSSI)
- Grade II* Listed
- Grade II Listed
- Scheduled Monument

FIGURE 2

Designations

PROJECT
1080
East Anglia One North

CLIENT
Substation Action Save East Suffolk



Source:

LCTs/LCAs: Suffolk Coastal Landscape Character Assessment, July 2018

0 250 500 1km

Legend

- EA1N & EA2 Onshore Development Area
- Substations & Cable Sealing End Compounds
- Permanent Access Road (Substations)
- Galloper Substation (Built)

Landscape Designations

- Suffolk Coast and Heaths AONB
- Hundred River Valley Special Landscape Area

Suffolk Coastal Landscape Character Types

- B. River Valleys
- D. Coastal Broads and Marshes
- K. Estate Sandlands
- L. Ancient Estate Claylands

Suffolk Coastal Landscape Character Areas

- B4: Fromus Valley
- D3: Minsmere and Sizewell Coast
- D4: Thorpness to Aldeburgh
- K3: Aldringham and Friston Sandlands
- L1: Heveningham and Knodishall Estate Claylands

FIGURE 3

Landscape Character

PROJECT
1080
East Anglia One North

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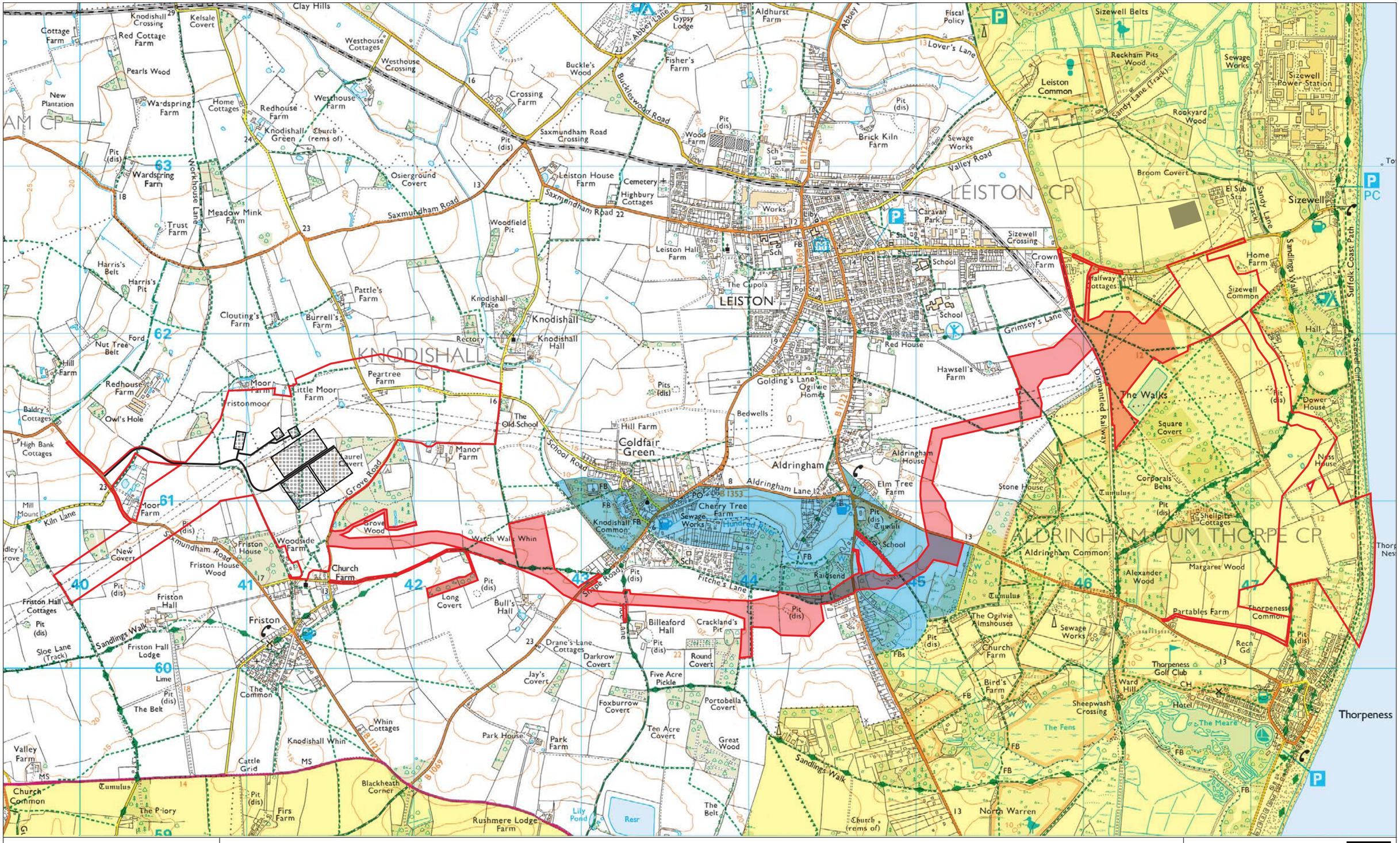
Substation Action Save East Suffolk



Source:

Onshore Development Area and Sections derived from ES Figure 6.2

0 250 500 1km

Legend

- EA1N & EA2 Onshore Development Area (ODA)
- Area of Additional Corridor Required to Reach Onshore Substations and National Grid Infrastructure at Friston Vs Broom Covert (ODA Sections 2-4) (Approx. 92 Hectares)
- Galloper Substation (Built)

Designations

- Suffolk Coast and Heaths AONB
- Hundred River Valley Special Landscape Area

FIGURE 4

Additional Corridor

PROJECT
1080
East Anglia One North

CLIENT
Substation Action Save East Suffolk

FIGURE 5

Substations and NG Infrastructure

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East Anglia One North

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April 2020

Legend

- Onshore Development Area for SPR and NG Substations and Infrastructure (SPRNG ODA)
- Preferred Arrangment of Substations & Associated Infrastructure
  - **A** - SPR Substation (preferred location for East Anglia ONE North Onshore Substation)
  - **B** - SPR Substation (preferred location for East Anglia TWO Onshore Substation)
  - **C** - National Grid Substation
  - **D** - Cable Sealing End Compound
  - **E** - Cable Sealing End (with circuit breaker) Compound
- Permanent Access Roads
- New pylon
- Location of MB Photographs A-E (for photographs refer Figures 12-13)
- Location of LVIA Viewpoints

0 100 200 500 750m

FIGURE 6

First Edition OS (1884)

PROJECT
1080
East Anglia One North

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Substation Action Save East Suffolk

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April 2020

Legend

Onshore Development Area for SPR and NG Substations and Infrastructure (SPRNG ODA)

0 100 200 500 750m

FIGURE 7
Topography

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1080
East Anglia One North

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Substation Action Save East Suffolk

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April 2020

Legend

Preferred Arrangment of Substations & Associated Infrastructure

Permanent Access Roads

Wider Topography (Bands Drawn at 2m Intervals based on 2m LIDAR Digital Terrain Model)

5m Above Ordnance Datum (AOD)

25m AOD

0 100 200 500 750m

FIGURE 8

Aerial Photograph

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DATE
April 2020

Photograph shows the transition from a larger to a finer grained landscape (north to south) in the countryside north of and leading to Friston village.

0 100 200 500 750m

FIGURE 9

Aerial Photograph + Proposal

PROJECT
1080
East Anglia One North

CLIENT
Substation Action Save East Suffolk

DATE
April 2020

Proposed land use in areas that will not be returned to agricultural use:

1 - Amenity grass seed mix for embankments & veges.

2 - Species rich grassland seed mix.

3 - SUDS/ Wetland grassland seed mix.

4 - Areas for potential future surface water management.

5 - Pre-construction tree/woodland planting

6 - Post-construction tree/woodland planting

Land outside of the above areas will be returned to agricultural use ‘where possible’.

Source:

Plan reproduced from Outline Landscape and Ecological Management Strategy (OLEMS) Figure 5: OLMP Illustrative Plan. Proposed land use determined from OLEMS Figure 3: OLMP General Arrangement

0 100 200 500 750m

FIGURE 10
Constraints & Proposal

PROJECT
1080
East Anglia One North

CLIENT
Substation Action Save East Suffolk

DATE
April 2020

Sternfield CP

Knodishall CP

Harm to distinctive views of Church on approach to village.

Severance of public footpath and removal of historic approach into village.

Ancillary elements imposed arbitrarily on landscape framework.

National Grid substation imposed arbitrarily on landscape

Removal of part of existing woodland.

Severance of field and existing landscape pattern; visible from B1121.

Access road severs landscape framework and public footpath.

Destruction of copse established in former pit.

Loss of distinctive views of Church on approach to village.

Friston CP

Substations imposed arbitrarily on landscape framework eroding finer grain landscape which contributes positively to setting of village.

Substation infrastructure visible as industrial backdrop to village from village green.

Legend

- Parish boundary
- Local roads
- Existing overhead transmission lines and pylons
- Local public rights of way network

Statutory

- Ancient woodland
- Grade II* listed
- Grade II listed

MBELC Assessment

- Local hedgerow network
- Local woodland/wooded areas
- Friston - rural village set around village green
- Transition from larger to finer grained landscape north-south towards Friston village (see Figure 8)
- Local ridges
- Distinctive views of Friston Church
- Copse in pit
- Allotments
- Attractive field (possibly managed as meadow)

Proposed Development

- Preferred Arrangment of Substations & Associated Infrastructure
- Preferred Access Roads

0 100 200 500m

FIGURE 11

Enhanced Mitigation Strategy

PROJECT
1080
East Anglia One North

CLIENT
Substation Action Save East Suffolk

DATE
September 2020

Legend

Substation Zone (13.4 hectares)
Location of all three substations (combined area = 11.71ha with AIS NG Substation or 8.9ha with GIS NG Substation) and cable sealing ends infrastructure if possible (additional 1ha).
Total =**12.71ha with AIS NG Substation or 9.9ha with GIS NG Substation**

Substations and associated infrastructure to be set down below existing ground level.

Screening Zone

Retain and strengthen hedgerows and woodlands which provide an existing framework for visual mitigation planting.

Landscape Enhancement Zone

Implement Land Management Guidelines described in Suffolk County Assessment with the intention of providing a long-term legacy of landscape compensation.

0 100 200 500m

FIGURE 12

Photograph A: Looking north towards the site of the proposed substations from the tower of Friston Church

FIGURE 13

Photographs B-D: Looking south towards Friston Church from Fp 6

Photograph B

Photograph C

Photograph D

Photograph E

FIGURE 14

Presentation of Figure: 29.21d (Viewpoint 9: B1121 Aldeburgh Road, south of Friston (1st year of operation)) as single frame image at A3

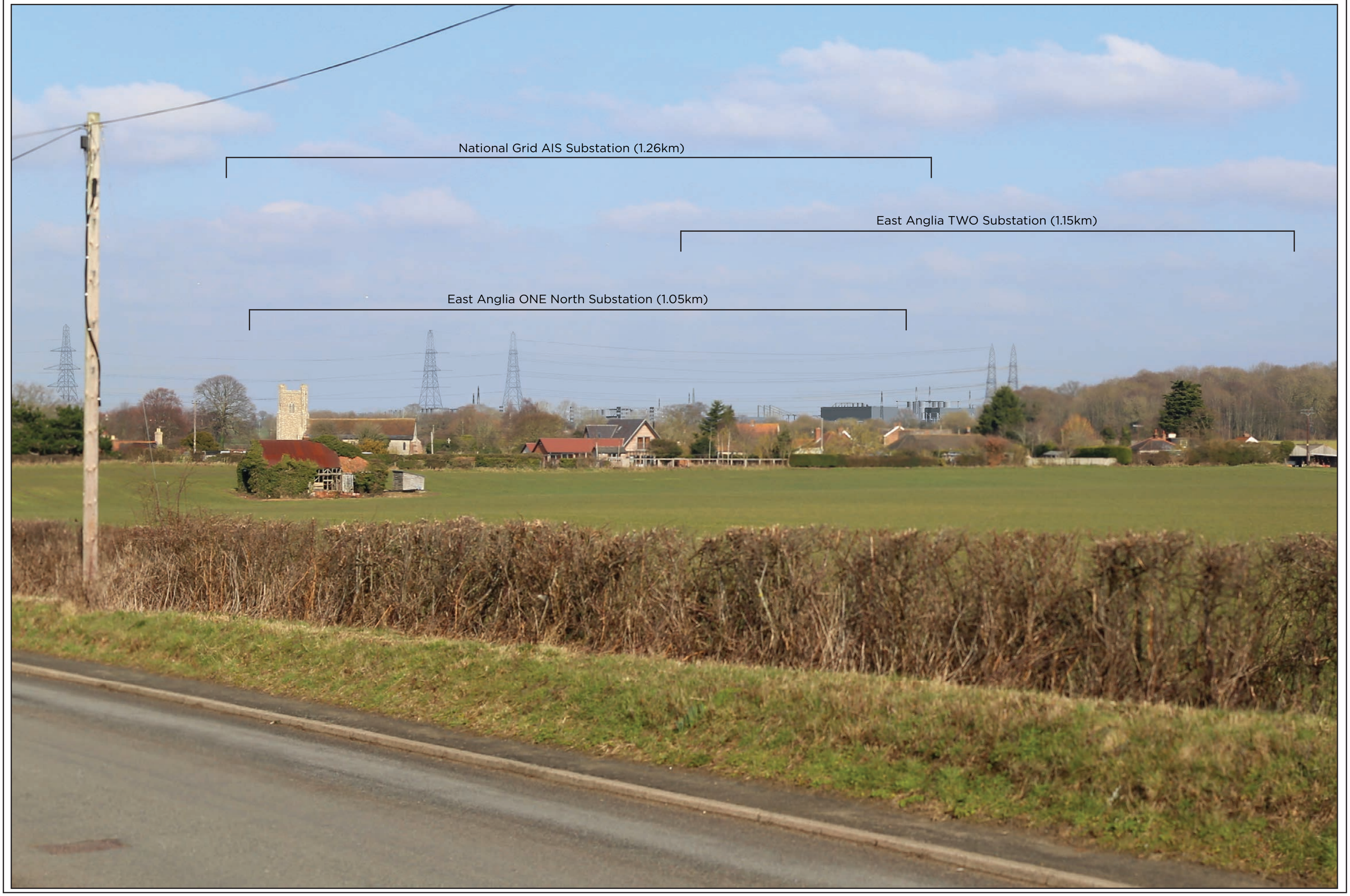

FIGURE 15

Presentation of Figure: 29.22d (Viewpoint 10: B1119 Saxmundham Road (1st year of operation)) as single frame image at A3

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Appendices 2-4 to Landscape and Visual Issues

Relating to the
Onshore Development at Friston

Required for
East Anglia ONE North/ TWO Offshore Wind Farms

Prepared for
Substation Action Save East Suffolk (SASES)

LPA
Suffolk Coastal (East Suffolk)

PINS Refence
EN010077 & EN010078

October 2020

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File name:	1080 Appendices 2-4 East Anglia One North & East Anglia Two Final.docx
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CONTENTS

Appendix 2

Methodology

MICHELLE BOLGER
Expert Landscape Consultancy

Methodological Approach for Landscape and Visual Assessment

Introduction

1. The methodology used by Michelle Bolger Expert Landscape Consultancy (MBELC) when preparing evidence on landscape and visual issues is based on *Guidelines for Landscape and Visual Impact Assessment*, Third Edition 2013 (GLVIA3) prepared by the Landscape Institute/Institute of Environmental Management and Assessment. The methodology also identifies where the approach adopted has been informed by the consideration of specific landscape or visual issues by the courts or by inspectors at public inquiry.

2. Landscape/ townscape effects are effects on the fabric and character of the landscape/ townscape. Visual effects are effects on people and are concerned with the impact of the proposals on the amenity of those people who will experience visual changes as a result of the proposals.

3. GLVIA3 sets out the processes that should be followed in the preparation of a Landscape and Visual Impact Assessment (LVIA), required for development that is the subject of an Environmental Impact Assessment (EIA), and for a Landscape and Visual Appraisal (LVA) required for development that is not the subject of an EIA. With regard to the differences between a LVIA and a LVA, GLVIA3 states that '*the overall principles and the core steps in the process are the same*'[1] and sets out the differences in defined procedures as follow:

> *'As a 'standalone' appraisal the process is informal and there is more flexibility, but the essence of the approach - specifying the nature of the proposed change or development; describing the existing landscape and the views and visual amenity in the area that may be affected;* predicting the effects, *although not their likely significance; and considering how those effects might be mitigated - still applies'*.[2]

[1] Guidelines for Landscape and Visual Impact Assessment, 2013 Page 26 Paragraph 3.2
[2] Guidelines for Landscape and Visual Impact Assessment, 2013 Page 26 Paragraph 3.2

Baseline Assessment

4. GLVIA3 sets out the factors that should be considered in establishing a study area and determining the baseline conditions. (GLVIA3 Page 32 Paragraphs 3.15-3.17) '*For the landscape baseline the aim is to provide an understanding of the landscape in the area that may be affected - its constituent elements, its character and the way this varies spatially, its geographic extent, its history (which may require its own specialist study), its condition, the way the landscape is experienced, and the value attached to it.*'[3]

5. The **value** of a landscape is: '*the relative value that is attached to different landscapes by society, bearing in mind that a landscape may be valued by different stakeholders for a variety of reasons...A review of existing landscape designations is usually the starting point in understanding landscape value but the value attached to undesignated landscapes also needs to be carefully considered*'.[4]

6. The NPPF in paragraph 170 states that:

> *'Planning policies and decisions should contribute to and enhance the natural and local environment by: (inter alia)*
> *a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*

7. Valued landscapes include nationally and internationally designated landscapes. The statutory status of nationally designated landscapes is set out in the National Parks and Access to the Countryside Act 1949 and the CROW Act 2000. This status is reflected in NPPF Paragraph 172 and local planning policies.

8. NPPF 170 Valued Landscapes are not restricted to designated landscapes. GLVIA3 on page 84 in Box 5.1 provides a list of factors that are useful in indicating landscape value '*in cases where there is not existing evidence to indicate landscape value*'. This list of factors has been considered useful by Inspectors in their appeal decisions.

9. Judgements about the value of a landscape are recorded on a verbal scale of high, medium and low with an overall conclusion that if the landscape in which a site is located has 'high' value this is likely to equate to a NPPF paragraph 170 'Valued Landscape'.

[3] Guidelines for Landscape and Visual Impact Assessment, Third Edition, 2013, Page 32, Paragraph 3.15
[4] Guidelines for Landscape and Visual Impact Assessment, Third Edition, 2013, Page 80, Paragraph 5.19

Landscape Effects

10. Landscape effects can be effects on the fabric of the landscape or on landscape character. Effects on landscape character often extend beyond the site itself and are a consequence of visual changes which affect the pattern and character of the landscape.

11. The assessment of the **sensitivity** of the landscape is directly related to the type of development proposed. Landscape Sensitivity is derived from: '*combining judgements of their* [the landscape receptors'] *susceptibility to the type of change or development proposed and the value attached to the landscape'*[5]. As identified above, the value of the landscape is assessed as part of the baseline, whereas the assessment of the susceptibility to change of a landscape must be tailored to individual projects and '*should not be recorded as part of the landscape baseline but should be considered as part of the assessment of effects'*.[6]

12. The **susceptibility to change** of a landscape is: '*the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular landscape type or areas, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies*'.[7] Judgements about the **susceptibility** of the landscape are recorded on a verbal scale of high, medium and low and the basis for the judgements is made clear and linked back to evidence from the baseline study as required by GLVIA Para 5.43.

13. Judgements about **sensitivity** of the landscape are a result of combining judgments regarding value and susceptibility. This is recorded on a verbal scale of high, medium and low and the basis for the judgements is made clear.

14. Judgements about the **magnitude of change** for landscape effects are recorded on a verbal scale of high, medium, low and negligible, based on the principles set out in GLVIA3 paragraphs 5.48-5.52 which includes a consideration of scale, geographical extent and the duration and reversibility of the landscape effects.

[5] Guidelines for Landscape and Visual Impact Assessment, 2013 Page 88 Paragraph 5.39
[6] Guidelines for Landscape and Visual Impact Assessment, 2013 Page 89 Paragraph 5.42
[7] Guidelines for Landscape and Visual Impact Assessment, 2013 Page 88 Paragraph 5.40

15. Judgements about the overall significance/ importance of landscape effects, are recorded on a verbal scale of major, moderate and minor, based on the principles set out in GLVIA3 paragraphs 5.53-5.57.[8]

16. The underlying principles are summarised in GLVIA Figure 5.10 (Page 92) which has been adapted below.

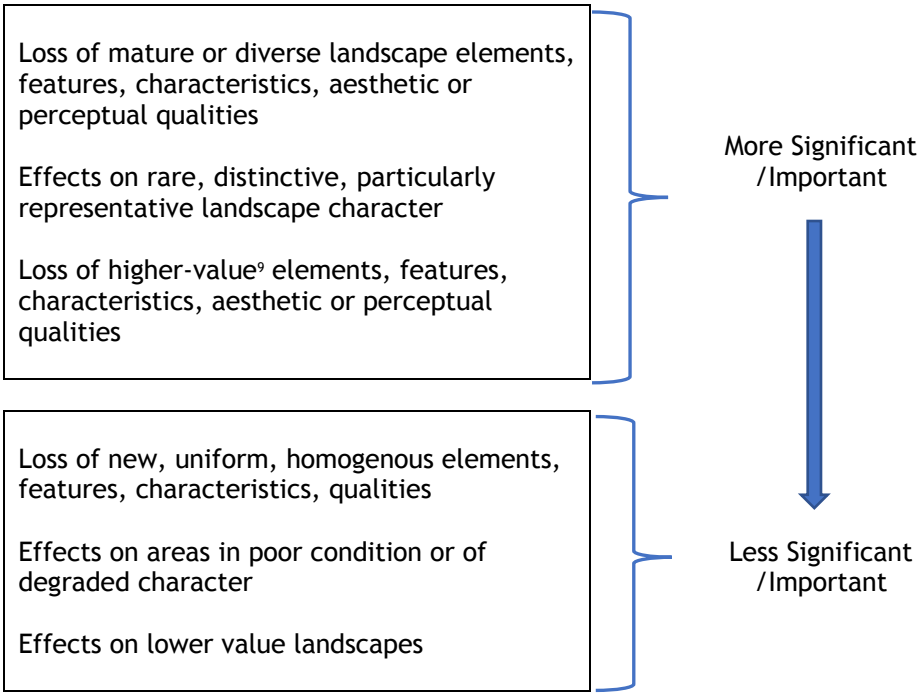

Figure 1 – Scale of Significance/Importance

(Derived from GLVIA3 Figure 5.10 Page 92 Scale of Significance)

[8] Significance of effect is the term used when undertaking an LVIA as part of an EIA.
[9] The Figure on Page 92 says '*loss of lower-value elements*', but this is an error in the text identified in GLVIA3 Statement of Clarification 2/13 8-07-13. It should read '*Loss of higher-value elements*'.

.

17. The reasons for reaching the final judgments on landscape effects are always made clear in the text. However, the following diagram in Figure 2 can assist in understanding the way in which the judgments regarding landscape sensitivity and magnitude of change are combined to reach a final judgment on the significance/importance of the landscape effects.

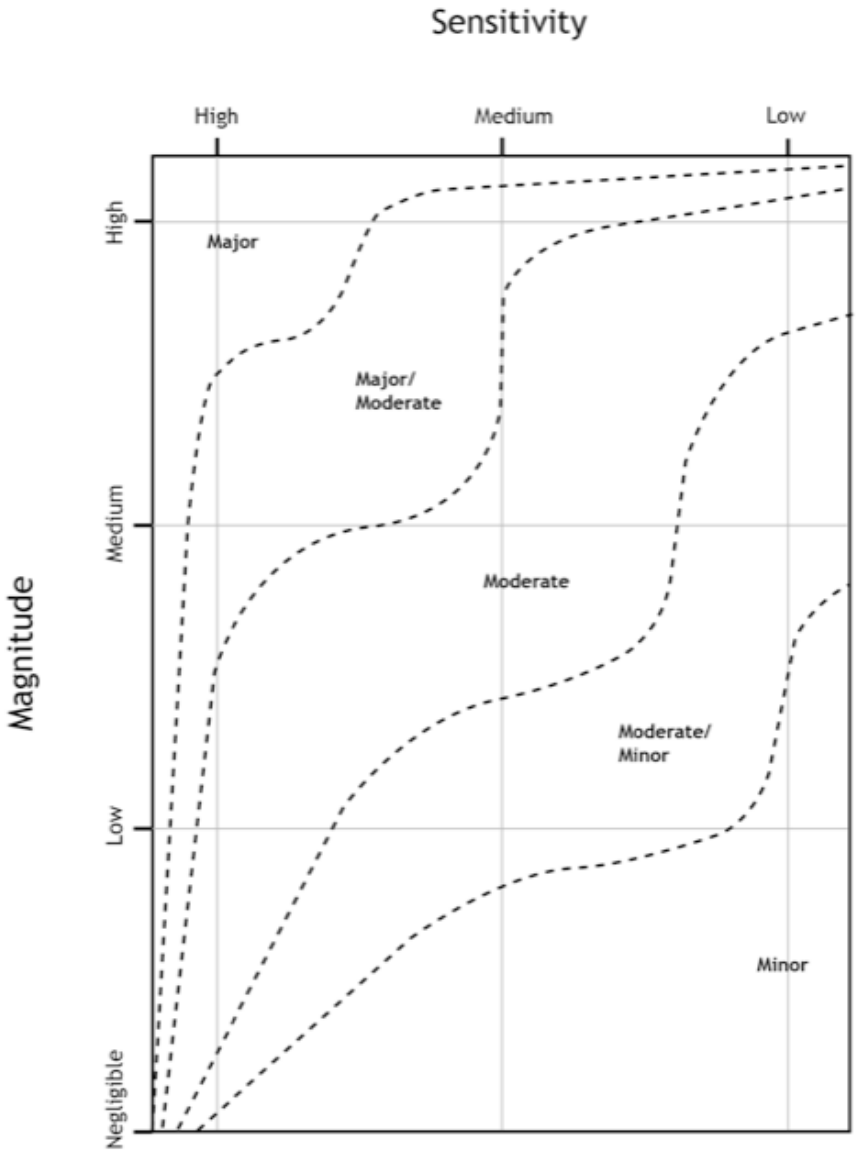

Figure 2 (MBELC) - Significance / Importance of Effects

Visual Effects

18. Judgments about visual effects are derived from a consideration of the sensitivity of visual receptors to the proposed development, and the magnitude of change to their existing visual amenity. Changes in landscape character may also be a result of visual changes but these are considered under landscape effects.

19. GLVIA3 provides guidance on the relative sensitivity of different visual receptors (GLVIA3 paragraphs 6.31-6.37). In summary, the most sensitive receptors are:

- Residents at home;
- People engaged in outdoor activities whose attention is focused on the landscape and view; and
- Visitors to locations where views are an important part of the experience.

20. The least sensitive receptors are:

- People engaged in outdoor sports or activities which do not depend on an appreciation of views; and
- People at their place of work (although this can vary).

21. The sensitivity of road users varies. People on busy or main routes are considered to have medium or low sensitivity, whilst users of rural roads or scenic routes will have medium or even high sensitivity.

22. Judgments are recorded on a verbal scale of high, medium and low. Visual receptors who would be affected by the development are identified in groups and their sensitivity assessed combining issues relating to their susceptibility and the value attached to the views affected.

23. Judgments about the **magnitude of change** for visual effects are recorded on a verbal scale of high, medium, low and negligible based on the principles set out in GLVIA3 paragraphs 6.38-6.41 which includes a consideration of scale, geographical extent and the duration and reversibility of the visual effects.

24. '*Significance of visual effects is not absolute and can only be defined in relation to each development and its specific location'*[10]. Judgments about the overall importance of visual effects are recorded on a verbal scale of major, moderate and minor, based on the principles set out in GLVIA3 paragraphs 6.42-6.45. The underlying principles are summarised in Paragraph 6.44:

> *'There are no hard and fast rules about what makes a significant effect, and there cannot be a standard approach since circumstances varied the location and context and with the type of proposal. In making a judgement about significance of visual effects the following points should be noted:*
>
> - *Effects on people who are particularly sensitive to changes in views and visual amenity are more likely to be significant.*
> - *Effects on people at recognised and important viewpoints or from recognised scenic routes are more likely to be significant.*
> - *Large-scale changes which introduce new, non-characteristic or discordant or intrusive elements into the view are more likely to be significant than small changes or changes involving features already present within the view.'*[11]

25. The reasons for reaching the final judgments on visual effects are always made clear in the text. However, Figure 2 above can assist in understanding the way in which the judgments regarding visual receptor sensitivity and magnitude of change are combined to reach a final judgment on the significance / importance of the visual effects.

Final Note

26. Intermediate judgements such as medium/high or minor/moderate are also used in the assessments where the judgment falls between two levels. Where such a judgement is reached there is no intended difference to be derived from which judgment comes first – so medium/high is the same as high/medium and moderate/major the same as major /moderate.

Last Updated September 2020

[10] Guidelines for Landscape and Visual Impact Assessment, 2013 Page 115 Paragraph 6.42
[11] Guidelines for Landscape and Visual Impact Assessment, 2013 Page 116 Paragraph 6.44

Appendix 3

Landscape and Visual Issues Relating to Site Selection for Onshore Substations Required for East Anglia TWO/ONE North Offshore Wind Farms, September 2018

MICHELLE BOLGER
Expert Landscape Consultancy

Landscape and Visual Issues

Relating to

Site Selection

for

Onshore Substations

Required for

East Anglia TWO/ONE North Offshore Wind Farms

Prepared for

Substation Action Save East Suffolk (SASES)

LPA

Suffolk Coastal (East Suffolk)

September 2018

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CONTENTS

1 Executive Summary and Conclusions

Review of Site Selection Process

1.1 Scottish Power Renewables (SPR) are in the process of consulting with regard to a Development Consent Order (DCO) under the Nationally Significant Infrastructure Projects (NSIPs) consent process for two offshore Windfarms known as East Anglia ONE North and East Anglia TWO (the Offshore Windfarms). This review, commissioned by Substation Action Save East Suffolk (SASES), concerns the location of the onshore Substations and associated National Grid (NG) connection substations.

1.2 SPR have considered a number of potential locations for the Substations and chosen a site near Friston (the Friston Site) as their Substation Refined Area of Search (Figure 01 Location of Sites).

1.3 In August 2018, Michelle Bolger Expert Landscape Consultancy (MBELC) was instructed by Substation Action Save East Suffolk (SASES) to:

- Prepare a review of the site selection process undertaken by SPR.
- Undertake a high-level landscape and visual appraisal of locating the Substations on the Friston Site.
- Undertake a high-level landscape and visual appraisal of locating the Substations on an alternative site on land owned by EDF Energy. This site was put forward in a joint letter to Secretaries of State, dated 11 May 2018, from the three local planning authorities concerned with the application[1].

1.4 SPR identified 7 potential locations (Zones) for the Substations (Onshore Study Area and Potential Substations Zones[2], Appendix 4) The zones fall into two groups. Zones 1-4 are

[1] Suffolk Coastal District Council, Waveney District Council and Suffolk County Council
[2] Dwg No EA1N-EA2-DEV-DRG-IBR-000687

located closer to the coast[3] (coastal locations) either within or close to the Suffolk Coasts and Heaths Area of Outstanding Natural Beauty (AONB). Zones 5-7 are located inland, further to west, (inland zones).

1.5 At a series of Public Information Days (PIDs) during March 2018 (Phase 2 consultation) the public were asked to comment on the locations, but the question asked showed 'survey bias'. It was not an open question but a proposition, concerned with only one aspect of the locations (visual impacts on the AONB). It was skewed to eliciting a positive response to an inland location.

1.6 Despite the survey bias and the lack of a Phase 2 PID in the village most affected by the inland locations, a slight majority of respondents to the question described in 1.5 above preferred a coastal location to any of those locations further inland offered by the Developer as options for EA1N and EA2. However, it is notable that a large majority of those who commented in more detail preferred a coastal location. The key reasons given being:

- Making use of existing infrastructure;
- Locating close to the existing large-scale energy development; and
- Less impact on villages and residents.

1.7 The three Councils concerned with the application (Suffolk Coastal District Council, Waveney District Council and Suffolk County Council) responded to the consultation to say that the approach to site selection should be '*to minimise the degree of harm or impact on public and residential amenity, landscape character and heritage assets notwithstanding the boundary of the AONB.*'[4]

1.8 Following the Phase 2 Consultation SPR published *East Anglia TWO and East Anglia ONE North Summary and Approach to Site Selection* (Site Selection Report) May 2018, which summarised the post Phase 2 site selection process.

[3] Zone 4 is not a coastal location, but it is closer to the coast and to Zones 1-3 and has been grouped with them
[4] Letter from Suffolk Coastal District Council, Waveney District Council and Suffolk County Council dated 17 April 2018 (Appendix 3)

1.9 A Red Amber Green (RAG) Assessment was undertaken of all sites.[5] The full details of this assessment, and in particular the landscape and visual assumptions that underlie it, have not been provided to the public. At the request of the Friston Village Working Group a note/memo was issued by SPR entitled *Summary of Onshore Substation Site Selection RAG Methodology & Matrices* (RAG Methodology & Matrices) (Appendix 5) This document provides some additional detail but insufficient to comply with the *Guidelines for Landscape and Visual Assessment* 2013 (GLVIA3) recommendation that the basis of judgements regarding landscape and visual effects is '*transparent and understandable, so that the underlying assumptions and reasoning can be examined by others.*'[6]

1.10 Despite not being fully informed of all the assumptions on which the RAG Assessment is based, a review of the RAG Methodology & Matrices has identified a number of significant anomalies:

- The Landscape Character and Sensitivity assessment, ought to have distinguished between landscape susceptibility and landscape value.
- The results suggest that landscape value may have been double counted in the assessment, firstly with regard to the location of the sites and then buried in the conclusions with regard to landscape sensitivity; and
- There are clear inconsistencies in judgments when the assessment of inland and coastal zones is compared.

1.11 Following the RAG Assessment an AONB special qualities assessment was undertaken. *Annex A: Onshore Substations- Suffolk Coast and Heaths AONB Impact Appraisal* (AONB Impact Appraisal). The study acknowledges that there are a number of characteristics of the coastal sites which would lessen their landscape susceptibility to large-scale electrical infrastructure. Conversely the inland sites are '*susceptible to change in their own terms, relating to the ability of the existing rural landscape character (which is relatively less modified by existing energy developments), to accommodate substation development of this scale. There are also inherent visual sensitivities due to the proximity of rural residences and small-scale rural villages to these zones, and potential physical landscape*

[5] *Summary and Approach to Site Selection Page 2 Section 2*
[6] GLVIA3 Page 46

effects resulting from the onshore cable route crossing of existing woodland at Aldeburgh Road.'[7]

1.12 As the brief was to consider the potential degree of harm to the AONB for each zone it was a foregone conclusion that in the end the study recommended that the site selection process should concentrate on '*the western zones, which are located well outside the AONB, in areas where the substations would not affect the special qualities of the AONB or its immediate setting.*'

1.13 In addition to the RAG Assessment (the full detail of which has not been released) and the AONB Impact Appraisal (the full detail of which has been released) SPR undertook a high-level landscape and visual impact assessment (LVIA)[8]. We have no detail of this study except its conclusion that '*Zone 7 affects fewer landscape and visual receptors overall*[9]. Again, we cannot examine the underlying assumptions and reasoning behind this conclusion.

1.14 The Site Selection Report states that the conclusion reached with regard to Zone 7 is based on advice from its legal and technical advisors, the detail of which we do not have, so we do not know the width that factors other than landscape and visual considerations were given. The Site Selection Report also states that the conclusion reached was based on a consideration of comments from statutory and non-statutory consultees and the public. However, the results of the PID survey and the letters from the Councils do not appear to have informed the decision.

Landscape and Visual Appraisal

1.15 We have undertaken a high-level Landscape and Visual Appraisal of both Zone 7 (Friston Site) and the EDF site put forward by the Councils.

1.16 The Friston Site is located in Landscape Character Areas (LCA) L1 Heveningham and Knodishall Estate Claylands. (Figure 02 Landscape Character) LCA L1 is identified as having a particularly unified character, a peaceful, deeply rural 'backwater' with little intrusion from modern development. The site lies between the overhead transmission lines, which

[7] 6.2 summary
[8] Summary and Approach to Site Selection Page 3
[9] Summary and Approach to Site Selection Page 3

are more than 1km from the northern edge of the village which includes Friston Parish Church (Grade II*). Although not a designated landscape it is a valued landscape, containing many of the characteristics noted in valued landscapes[10].

1.17 The site has been identified as having **medium/high susceptibility** to large-scale electrical infrastructure. Susceptibility is the ability of a landscape to accommodate a particular form of development '*without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies*'[11] This is due in particular to:

- The proximity of the village;
- The role of the site in providing a setting for the village;
- The presence of Friston Parish Church which forms a local landmark;
- The general lack of large-scale infrastructure apart from the overhead transmission lines which are more than 1km form the village; and
- The existing perceptual qualities of a tranquil deeply rural landscape.

1.18 The simple arable land cover pattern reduces the susceptibility of the area while other aspects, such as scale, enclosure and landform indicate some susceptibility.

1.19 Being a valued landscape the overall sensitivity of the landscape, which is a combination of susceptibility and value, to large-scale electrical infrastructure is **medium/high.** The magnitude of change to the landscape would be **large** due to the scale of the development, its height and extent and its incongruity. The overall impact on the character of the landscape surrounding the site would be **moderate/major** adverse.

1.20 There is potential for **major adverse** visual effects due to the proximity of high sensitivity receptors in Friston and the potential for the development to dominate the northern edge of the village, including from across the village green.

1.21 The EDF site is mostly located within LCA K3 Aldringham and Friston Sandlands LCA. (Figure 02) It is within in an area of significant contrasts. The presence of the coast is not obvious

[10] Guidelines for Landscape and Visual Impact Assessment Box 5.1 Page 84
[11] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 88, Paragraph 5.40

in the area surrounding the site but the presence of the two Sizewell Power Stations, the overhead transmission lines, the Greater Gabbard Substation and, to a lesser extent, the Galloper Substation are evident. The area also contains some scenic areas which are representative of the special qualities of the AONB. The site is located within the AONB and therefore was deemed to be national value when the AONB was established in 1970. Since 1970 the quantity of large-scale infrastructure for electrical generation and transmission in this area has increased significantly.

1.22 Our assessment identifies that the site has **low/medium susceptibility** to large-scale electrical infrastructure due in particular to:

- The level landform;
- The presence of large-scale energy generating and transmitting infrastructure;
- The presence of existing screen planting along Sizewell Road and Lover's Lane;
- The lack of sensitive landmark features; and
- The lack of a sense of remoteness and tranquillity due to the existing large-scale infrastructure.

1.23 Other aspects, such as scale, land cover pattern and the proximity of Leiston indicate some susceptibility.

1.24 The location of the site within the AONB and the national value that this implies means that although the susceptibility of landscape is **low/medium** the overall sensitivity is **medium/high**. The magnitude of change to the landscape would be **medium** because the scale of the development would not be out of keeping with the scale of the surrounding infrastructure. The overall impact on the character of the landscape surrounding the site, including a consideration of its AONB status, would be **moderate** adverse.

Conclusion

1.25 Our assessment has concluded that there would be significantly less harm to existing landscape character and to visual amenity if the Substations were located on the EDF site. The siting of such infrastructure in a landscape that is already characterised by large scale energy infrastructure would reduce their incongruity and limit the harm to the landscape. In contrast, the landscape surrounding the Friston site has a deeply rural, unified character, with limited intrusion from modern development. The substations could not be accommodated without significant harm to the local landscape, the setting of the village and the visual amenity of residents of Friston.

1.26 We do not have confidence in the site selection process undertaken by SPR because, with regard to landscape and visual effects, it is not transparent and is marred by buried, unidentified assumptions.

2 Introduction

Introduction

2.1 Scottish Power Renewables (SPR) are in the process of consulting with regard to a Development Consent Order (DCO) under the Nationally Significant Infrastructure Projects (NSIPs) consent process for two offshore Windfarms known as East Anglia ONE North and East Anglia TWO (the offshore windfarms). The onshore elements for the offshore windfarms include grid connections and onshore substations. It has been proposed that the onshore substations for East Anglia ONE North and East Anglia TWO are located on a single site. SPR are also actively engaging with the National Grid (NG) to include a National Grid Energy Transmission (NGET) substation on the same site[12]. The combined footprint is at least 12 hectares. This review describes all three as **the Substations**. In addition, NG is considering the location of two inter-continental connectors – Eurolink and Nautilus - to be connected to the National Grid at Sizewell. The footprint of these two inter-continental connectors is likely to be around 8 hectares.

2.2 At Stage 2 of the public consultation SPR considered a number of possible locations for the Substations and chose a site near Friston (the Friston Site) shown on their SPR Indicative Onshore Development Area Plan dated 14/05/18 (Appendix 2) as the preferred site; described on the plan as 'Substation Refined Area of Search'.

2.3 In August 2018, Michelle Bolger Expert Landscape Consultancy (MBELC) was commissioned by Substation Action Save East Suffolk (SASES) to:

- prepare a review of the site selection process undertaken by SPR
- undertake an appraisal of the landscape and visual impacts of locating the Substations on the Friston Site

[12] East Anglia TWO and East Anglia ONE North Summary and Approach to Site Selection May 2018 Page 1

- undertake an appraisal of the landscape and visual impacts of locating the Substations on an alternative site on land owned by EDF Energy (EDF Site) located close to Sizewell Nuclear Power Station. This site has been put forward as a preferred site by the three local planning authorities concerned with the application[13] in a letter to Rt Hon Greg Clark MP[14] and Rt Hon James Brokenshire MP[15] dated 11th May. (Appendix 3)

2.4 Figure 01 shows the zones considered by SPR, the Substation Refined Area of Search and the Councils' preferred site.

Landscape and Visual Appraisal Methodology

2.5 The methodology used in this assessment is based on the principles set out by the Landscape Institute (LI) and Institute of Environmental Management Assessment (IEMA) in the *Guidelines for Landscape and Visual Assessment* 2013 (GLVIA3), and guidance from Natural England in *An Approach to Landscape Character Assessment 2014.*

2.6 GLVIA3 sets out a number of key objectives for all assessments which this appraisal adopts:

- Assessments should be written in a narrative style that is easily understood by all those who might be interested;
- Tables should be used to summarise and support the descriptive text, not to replace it;
- The length and complexity of the assessment should be proportionate to the size and complexity of the development and the receiving landscape and to the purpose of the assessment; and
- The underlying assumptions and reasoning for judgments made in the course of the assessment should be transparent and understandable.

[13] Suffolk Coastal District Council, Waveney District Council and Suffolk County Council
[14] Department for Business, Energy and Industrial Strategy
[15] Department for Housing, Communities and Local Government

3 Review of Assessment undertaken by Scottish Power Renewables

Introduction

3.1 This section interrogates the selection process undertaken by SPR which has resulted in the Friston site being chosen as the preferred site for the refined area of search.

Phase 1

3.2 The phase 1 consultation was held in October and November 2017 and Public Information Days (PIDs) were held at Orford, Southwold and Lowestoft and Leiston. The Public Information Boards contained the following information with regard to the Grid Connection:

> *'To comply with the statutory duties under Section 9 of the Electricity Act 1989 (HM Government 1989), the preferred connection design should be* ***the most economic and efficient*** *when considering both offshore and onshore works. National Grid therefore undertook a subsequent review in 2017, which concluded that* ***connecting both the proposed East Anglia TWO and East Anglia ONE North projects in the vicinity of Sizewell and Leiston is the most economical solution****, the key factor being the much shorter onshore cable route required. Both windfarms' physical connection to the electricity transmission network will be into the existing pylons along the overhead lines* ***in the vicinity of Sizewell and Leiston****, with National Grid's required infrastructure located as close as possible to existing pylons.'*[16] (emphasis added)

3.3 Question 5 on the feedback form was as follows:

> *'We are searching a large area to find a suitable location for substations for our projects (see Board 8). Our preferred location would* ***be the most economic and efficient with least impact****. Options to the south west of Leiston will involve underground electrical cables being laid in the grounds of properties on the Aldeburgh*

[16] SPR Public Information Boards as

Road and as such may require the purchase of property, and are therefore not our preference. Options to the south east of Leiston could potentially affect the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB). (emphasis Added)

Have you seen Board 11 regarding constraints to development? If yes, where would you place our substations?

3.4 It has not been possible to identify Board 11 but an Onshore Study area is identified on Board 8 which is the same Study Area as shown on the Indicative Onshore Development Area Plan (Appendix 2).

3.5 The SPR website does not provide a summary of responses to Question 5.

Phase 2

3.6 A second round of consultations was undertaken between 17 March 2018 - 25 March 2018 consisting of a number of further PIDs held in Lowestoft, Southwold, Leiston, Thorpeness, Aldeburgh and Orford. The consultations included a Plan entitled – Onshore Study Area and Potential Substations Zones[17]. (Appendix 4) This plan showed the same study area as identified at Phase One with seven Zones identified – numbered 1-7. They fell into two groups. Zones 1-4 are located closer to the coast and east of the Aldeburgh Road (coastal locations) and Zones 5-7 are located inland, further to west and west of Aldeburgh Road (inland zones).

3.7 At the PIDs a feedback form was provided and Question 6 related to the location of the Substations. The question was "We are currently searching within our agreed study area to find a suitable location for our projects' substations (see Board 5 and our interactive map). An assessment of the landscape impacts specifically in relation to the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) was undertaken. All sites to the West of Aldeburgh Road (B1122) would avoid significant effects on the special qualities of the AONB. **In your view, should potentially adverse visual impacts on the AONB be avoided by placing our substations west of the Aldeburgh Road (B1122)?** (Emphasis added)

[17] Dwg No EA1N-EA2-DEV-DRG-IBR-000687

3.8 The actual question, which is highlighted in bold above, suffers from 'survey bias'. It is not an open question asking for preferences with regard to location but a proposition. It is asking a question regarding only one aspect of the choice of the locations (visual impacts on the AONB) and is skewed to eliciting a positive response. It omits any of the references from the Phase 1 consultation to choosing the location that is most economic and efficient with least impact.

3.9 Friston Parish Council (PC), the closest village to Zone 7 had not been contacted directly as part of Phase 1 (informal consultation) or informed in good time for Phase 2 PIDs[18] nor were any of the meetings during the Phase 2 consultation held in Friston or Knodishall (the villages most affected by the inland locations).[19]

3.10 Despite the survey bias in Question 6 and the lack of a local venue, the number of respondents who disagreed with the SPR proposition was greater than those who agreed. Of those who replied to Question 6, 54 respondents answered "yes", and 55 respondents answered "no" to this question. 23 respondents did not answer this question.[20] If the question had not contained a bias towards eliciting a 'yes' answer and had there been better local representation it very likely that there would have been a much larger majority for siting the Substations east of Aldeburgh Road (the coastal location) rather than west of Aldeburgh Road (the inland location).

3.11 The detailed breakdown on the feedback which is collated in Table 4 Feedback on site zones[21] reveals that by far the majority of people who chose to add a comment to their answer were in favour of siting the Substations east of Aldeburgh Road. From my reading of Table 4, 41 of the 55 respondents who preferred a coastal location explained why and only 8 of the 54 respondents who preferred an inland location commented. This is also likely to be a result of the biased question, which encouraged people to say yes who may not have had strong feelings either way.

3.12 The final section on Table 4 relates to postal respondents and also provides information on the comments with regards to other questions (the details of which are not provided). With

[18] See letter from Michael Mahony to Joanna Young/Gillian Lang dated 3rd July
[19] The meetings were held in Lowestoft, Southwold, Leiston, Thorpeness, Aldeburgh and Orford
[20] *Public Information Days Feedback Summary.* May 2018 Page 4
[21] *Public Information Days Feedback Summary.* May 2018 Page 5

regard to the other questions, 47 people made comments about the location of the Substations and of these 42 preferred a coastal location for the Substations and only 5 preferred the inland location.

3.13 The comments, from all questions, address issues that are not mentioned in Question 6. The key reasons given for preferring the coastal location are:

- Using existing infrastructure;
- Locating close to the existing large-scale energy development; and
- Less impact on villages and residents.

3.14 The Councils[22] also formally responding to the consultation in a letter dated 17 April 2018 (Appendix 3). The letter outlines a number of principles that the Councils wish to see adhered to in the site selection for the onshore elements of the project.

1) Site selection should seek a location / locations which minimises visual harm to the landscape, recreational, and residential receptors. This may be achieved through:

a) A close visual relationship to the existing built environment;

b) The screening by existing blocks of woodland or belts of trees;

c) A location that offers the ability to minimise the need for the additional building height required by noise attenuation structures;

d) The minimisation of bulk and height of the structure(s);

e) The minimum footprint required; and

f) Careful design of the structure(s).

2) Sites both inside and outside the AONB should be properly considered. Although in policy terms a site outside the AONB is to be preferred; in the first instance the approach should also be to minimise the degree of harm or impact on public and residential amenity, landscape character and heritage assets notwithstanding the boundary of the AONB.

[22] Suffolk Coastal District Council, Waveney District Council and Suffolk County Council

Site Selection

3.15 Following the Phase 2 Consultation SPR published *East Anglia TWO and East Anglia ONE North Summary and Approach to Site Selection* (Site Selection Report) May 2018. This document contains a summary of the site selection process undertaken following the Phase 2 consultation.

3.16 The Site Selection Report begins with the statements that 'ScottishPower Renewables (SPR) has recently concluded work in order to inform our onshore site selection process and ultimately inform the decision of a preferred zone for the location of two SPR substations, (one for East Anglia ONE North and one for East Anglia TWO, and one National Grid Energy Transmission (NGET) substation. This technical work has been done in parallel with phase 2 of our consultation process **where we received feedback from members of the public to inform our site selection**.' (emphasis added)

3.17 The Site Selection Report sets out the technical work on site selection process as follows:

- Red Amber Green (RAG) Assessment of all sites[23]
- Identification of six key themes to be further explored[24]
- Consideration of alternatives '*in the context of the comments and consultation feedback of both statutory and non-statutory consultees, the public and potentially affected parties.*'[25]

3.18 The result of that process was the Choice of Zone 7 as the '*most appropriate options for further development.*'[26] This review considers each of these stages in turn.

[23] *Summary and Approach to Site Selection Page 2 Section 2*
[24] *Summary and Approach to Site Selection Page 3 Section 2 continued*
[25] *Summary and Approach to Site Selection Page 5 Section 3*
[26] *Summary and Approach to Site Selection Page 5 Section 4*

RAG Assessment

3.19 The conclusions of the RAG Assessment are presented in the Site Selection Report simply as a summary table[27] without any supporting information about the assumptions behind the assessment or access to the detail of the assessment.

Zone 4	2 x red	18 x yellow	26 x green
Zone 3	3 x red	21 x yellow	22 x green
Zone 1	8 x red	12 x yellow	26 x green
Zone 2	9 x red	10 x yellow	27 x green
Zone 7	2 x red	7 x yellow	37 x green
Zone 6	2 x red	15 x yellow	29 x green
Zone 5	3 x red	16 x yellow	27 x green

3.20 On 30th May, in response to requests from the Friston Village Working Group a note/memo was issued by SPR & Royal Haskoning DHV entitled **Summary of Onshore Substation Site Selection RAG Methodology & Matrices (RAG Methodology & Matrices)** (Appendix 5)**.** This included a more detailed summary table entitled *RAG Assessment – SPR substation results*. This document is not available on the SPR website.

3.21 One of the difficulties encountered in interrogating the SPR documents is that the original RAG assessment (rather than the summary provided in the Site Selection Report) uses a different system for identifying the seven sites than the one adopted in the Onshore Study Area and Potential Substations Zones Plan[28]. (Appendix 4) The RAG assessment groups the site as western (inland) and eastern (coastal) sites and numbers them from West to East rather than from East to West. The table below identifies the two different descriptions used for each site and the remainder of this report will use both descriptions when referring to a site for clarity. The Zones are also shown on Figure 01 in Appendix 1 to this report.

[27] We have assumed that the yellow category in this table is the same as the 'amber' category in the title Red Amber Green
[28] Dwg No EA1N-EA2-DEV-DRG-IBR-000687

Table 1: Names used in the SPR documents

Site Selection Report Leiston Onshore Study Area and Potential Substation Zones[29]	RAG Assessment Figure 3 Potential Substation Zones and AONB[30]
Zone 1	E3
Zone 2	E4
Zone 3	E2
Zone 4	E1
Zone 5	W3
Zone 6	W2
Zone 7	W1

3.22 The RAG Methodology & Matrices begins '*The purpose of this note is to provide a summary of the methodology, assessment and matrices associated with the Red Amber Green (RAG) scoring in the Onshore Substations Site Selection RAG Assessment report (to be provided in full with the Preliminary Environmental Impact Report Chapter 4 Site Selection and Assessment of Alternatives).*'

3.23 It is very unhelpful to be told that the information provided is only a summary of a more extensive report which is being withheld. It is entirely unclear why the **Onshore Substations Site Selection RAG Assessment** report which has been commissioned by SPR and used to inform the site selection, cannot be issued now. If it contains information and/or assumptions on which SPR is basing its decisions it should be available to all statutory and non-statutory consultees. It is very unsatisfactory to be analysing the summary conclusions of a report when the underlying assumptions have not been identified. The summary conclusions of an assessment on their own cannot comply with the GLVIA3

[29] Dwg Nos EA2-GEN-DG-IBR-000241 14/02/18, EA1N-EA2-DEV-DRG-IBR-000687 & EA 1N -EA2-DEV-DWG-IBR-000687 07/03/18
[30] Dwg No EA2-DB-0056

recommendation that the basis of judgements regarding landscape and visual effects is '*transparent and understandable, so that the underlying assumptions and reasoning can be examined by others.*'[31]

3.24 The RAG Methodology & Matrices note sets out the methodology employed only with regard to the following aspects of the study which are considered in more detail in the following paragraphs:

- It lists the Categories considered.
- It identifies and assesses areas sufficient for a single onshore substation only, despite the SPR preference for co-locating both substations and the national grid connection.
- It states that Appendix A provides '*the specific definition of each Red / Amber / Green category.*'
- It identifies that there has been a relative approach to scoring. ('*the performance of the options relative to one another, along with professional judgement, have influenced the criteria of the Red / Amber / Green as well as the scores given*)
- It identifies that there is no weighting between Categories.

3.25 The RAG Methodology & Matrices states that 'RAG is a standard assessment tool used in the pre-EIA process **to assess the potential risks to proposed development options**' (emphasis added). Whilst it is entirely correct that SPR needs to 'assess the potential risks to proposed development options' it is not the same exercise as assessing the **potential environmental impacts** of development options, which ought to be a separate exercise. If considered at the same time as the consideration of potential environmental impacts, it has the potential to contaminate the process and the results.

3.26 The RAG Methodology & Matrices in fact provide two slightly different lists of categories. Neither of them is entirely consistent with the *RAG Assessment – SPR substation results* table.

[31] GLVIA3 Page 46

Table 2 – Categories

Page 1 Paragraph 3 of RAG Methodology & Matrices	Page 2 Paragraph 2 of RAG Methodology & Matrices	RAG Assessment – SPR substation results table
Archaeology/ heritage	Archaeology	Archaeology
Ecology	Ecology and nature conservation	Ecology
Landscape / Landscape and Visual,	Landscape and visual	Landscape
Hydrology and Hydrogeology,	Hydrogeology and flood risk	Hydrology and Hydrogeology
Engineering,	Engineering and design	Engineering,
Community	Community	Community
Property	Property	Property
Planning	Planning	Planning

3.27 Without the full assessment it is not possible to fully examine *the RAG Assessment - SPR substation results* table. The RAG Assessment – SPR substation results table qualifies the Landscape category with '*See Appendix C Table C.1 for explanation of RAG scoring'*. Appendix C Table C.1 has not been provided and the assumptions contained in it are therefore unidentified and the reasoning is left unexplained.

3.28 In addition, the RAG assessment identifies two Sub Areas within each zone (E.g. Sub Area W1[32] and Sub Area W1a). We have assumed that each of the Sub Areas is capable of siting a single Substation. The Sub-Areas do not necessarily have the same score and the total RAG score is the sum of both Sub Areas. The *RAG Assessment - SPR substation results* table

[32] Option W1 is Zone 7

refers to figures 3.3 to 3.9 which we assume show the location of the sub areas, but these figures have also not been released.

3.29 Despite not being fully informed of all the assumptions on which the RAG Assessment is based, a review of the RAG Methodology & Matrices has identified a number of significant anomalies and these are set out in the following paragraphs.

3.30 One of the subcategories under 'Landscape' is Landscape character and sensitivity to development. Appendix A gives the criteria as follows: Red = Higher identified sensitivity, Amber = Moderate, and Green = Lower. These are not criteria they are the judgements. They do not help to understand the criteria, the underlying assumptions, on which these judgments are based. As we do not know the assumptions on which these judgements have been based we do not know if they are based on current best practice as set out in GLVIA3.

3.31 Landscape sensitivity as defined by GLVIA3 is is derived from: 'combining judgements about **susceptibility** [of the landscape] to the type of change or development proposed and the **value** attached to the landscape'.[33]

- **The susceptibility to change of a landscape** is: '*the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular landscape type or areas, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies*'.[34]
- **Landscape Value** '*the relative value that is attached to different landscapes by society, bearing in mind that a landscape may be valued by different stakeholders for a variety of reasons...A review of existing landscape designations is usually the starting point in understanding landscape value but*

[33] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 88, Paragraph 5.39
[34] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 88, Paragraph 5.40

the value attached to undesignated landscapes also needs to be carefully considered'.[35]

3.32 It is particularly important in this instance that landscape value has not been 'double or triple counted' by being included in the subcategory '*Potential to affect the special qualities of the AONB*' and/or the second category '*Proximity to Special Landscape Areas (SLA)'* and then again in the assessment of Landscape character and sensitivity to development. Because we have not been told the assumptions on which the judgments are based we cannot tell if double or triple counting has occurred. We can only suspect this has occurred from the results.

3.33 To be consistent with GLVIA3 the title of this landscape sub-category ought to have been Landscape Character and Susceptibility not sensitivity. A number of the assessments in the category are very surprising and this leads to the conclusion that landscape value has encroached on this category. For example, Both W1 and W1a (Zone 7) are assessed as 'green' implying lower landscape susceptibility, whilst E2 & E2a (Zone 3) are assessed as amber, 'moderate' susceptibility. E2/ Zone 3 is a fairly featureless, flat, intensively farmed landscape, adjacent to a relatively busy road from which there are views of Sizewell A and B. In contrast Zone 7 is an attractive undulating landscape, displaying many of the landscape features identified as valued for the local landscape character area and providing an unspoilt rural setting for the village of Friston. As set out in Section 4 of this report, we consider that in terms of landscape character, W1/Zone 7 has **medium/high susceptibility** to the large-scale electrical infrastructure. Although this review contains an appraisal of the EDF site rather than E2/Zone 3 we consider that those two sites have similar susceptibility to large-scale electrical infrastructure and we consider that the EDF site has **low/medium** susceptibility (See Section 5).

3.34 We understand that a key difference between the two sites is that E2/Zone 3 is partly within and partly adjacent to the AONB whilst W1/Zone 7 is at some distance from it. This difference should be recognised in the appropriate assessment (landscape value) and should not be allowed to 'leak into' other assessments.

[35] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 80, Paragraph 5.19

3.35 E2/Zone 3 is also identified as amber with regard to the subcategory '*opportunity to utilize existing features for screening*' whilst W1/Zone 7 is assessed as green. Again, Appendix A provides no criteria on which these judgments are based. Grove Wood appears to be close to W1/Zone 7 but it lies on the opposite side of Grove Road and provides no screening for the key receptors – users of Grove Road, users of the Public Rights of Way (PRoW) that cross W1/Zone 7, and residents of and visitors to Friston village.

3.36 E2/Zone 3 is also identified as amber with regard to the subcategory '*visual sensitivity to development*' whilst W1/Zone 7 is assessed as green. Both E2/Zone 3 and W1/Zone 7 contain PRoWs and in this respect have similar visual sensitivity to development. However, E2/Zone 3 does not have an adjacent village, currently largely unaffected by large scale infrastructure. It is not clear on what basis E2/Zone 3 has been assessed as having <u>greater</u> *visual sensitivity to development*' than W1/Zone 7.

3.37 We have highlighted these differences, not to say that E2/Zone 3 should have been preferred over W1/Zone 7 - as there may be other, non-landscape and visual issues that make it less suitable - but to draw attention to the fact that the comparative landscape and visual assessments carried out in the RAG assessment contain significant inconsistences. Even without being provided with full information on the underlying assumptions behind the conclusions of the RAG assessment, the conclusions themselves can be seen to be unsound and therefore should not have been relied upon to inform the next stage of the Substations site selection process.

3.38 Of all the zones considered W1/Zone 7 is by far the largest. Within in, the RAG Assessment has identified two Sub Areas, W1 and W1a for the RAG Assessment. Based on the Substation Refined Area of Search both W1 and W1a are located to the west of Grove Road. We have been provided with no information as to why the area to the west of Grove Road has been preferred to the area to the east of Grave Road which represents more than half of Zone 7/W1. (See Figure 01, Appendix 1)

Identification of six key themes to be further explored

3.39 The Site Selection Report identifies six key themes for further exploration:

- Site selection relating specifically to the Suffolk Coast and Heaths AONB.
- The specific landscape and visual impacts of the proposed substation infrastructure.
- Construction impacts relating specifically to access to the substation zones.
- The crossing of the Aldeburgh Road to facilitate a cable route to the west of Leiston and other pinch points along the cable route, including in particular effects on setting.
- The inclusion of Sizewell land within the Onshore Study Area, and
- Cumulative assessment in relation to National Grid Ventures (NGV) projects.

3.40 In order to address the first of these, an AONB special qualities assessment was undertaken. *Annex A: Onshore Substations- Suffolk Coast and Heaths AONB Impact Appraisal* (AONB Impact Appraisal). This study, as the name suggests only considered the potential for effects on the AONB. As the four coastal sites are all either within or close to the AONB, it is inevitable that the development of large-scale infrastructure on these sites will have an adverse impact on their special qualities though the degree of adverse impact might vary. The three inland zones do not have any inter-visibility with the AONB and it is therefore equally inevitable that no matter how great the landscape and visual harm might be to the local landscape character, it would not constitute harm to the *AONB special qualities*.

3.41 It is entirely proper that an assessment of the harm to the AONB special qualities is undertaken and that the sites in or close to the AONB should be assessed in terms of their relative effects. However, it is not reasonable that it should be carried out as a comparative assessment with sites that are not inter-visible with the AONB. Indicative of this is the fact that the individual inland zones were not considered and only W3/Zone 5 assessed as a generic example of an inland zone. It is inevitable that the generic W3/Zone 5 was found to have no significant impacts on the special qualities of the AONB because it was located outside the AONB and its setting.

3.42 The study identifies a number of characteristics of the sites in or adjacent to the AONB which would lessen their landscape susceptibility to large-scale electrical infrastructure. In particular:

- The existing influence of overhead transmission lines, Sizewell Power Station and large-scale electrical infrastructure associated with two existing wind farms, which have a notable influence on the perceived landscape and scenic quality of the area;
- Other urban development influences;
- The intensively farmed arable land with agricultural fleece/polythene and outdoor pig rearing in this area; and
- The potential to consolidate large-scale electrical infrastructure development in an area which is already influenced by this form of development.[36]

3.43 In contrast the inland sites have far fewer characteristics that might be considered to lessen their landscape susceptibility to this form of development. 6.2 Summary of the AONB Impact Appraisal) states that:

'Although the zones to the west are not subject to landscape designation, the western zones are however, susceptible to change in their own terms, relating to the ability of the existing rural landscape character (which is relatively less modified by existing energy developments), to accommodate substation development of this scale. There are also inherent visual sensitivities due to the proximity of rural residences and small-scale rural villages to these zones, and potential physical landscape effects resulting from the onshore cable route crossing of existing woodland at Aldeburgh Road.'[37]

[36] Summarised from Section 6 Conclusions. It is interesting to note the similarity between this professional assessment and the comments from the public (para 31.3 above).
[37] 6.2 summary

3.44 However, because the purpose of the appraisal was to identify potential effects on the AONB, the study has to ignore the susceptibilities it has identified and conclude that the site selection process should concentrate on '*the western zones, which are located well outside the AONB, in areas where the substations would not affect the special qualities of the AONB or its immediate setting.*' This conclusion is the inevitable consequence of the brief set for the study. It could have been reached without undertaking the study at all. What the study has identified is that the inland zones are also susceptible to change and potentially more susceptible as they are relatively less modified by existing energy developments and because of their inherent visual sensitivities.

3.45 The second key theme is 'The specific landscape and visual impacts of the proposed substation infrastructure.' The Summary and Approach to Site Selection states that '*We have also undertaken a high level landscape and visual impact assessment (LVIA) on siting substation infrastructure within the zones we have identified. This work concludes that Zone 7 affects fewer landscape and visual receptors overall when compared to zones 2 and 3. This assessment also identified that Zone 7 benefits from substantial screening as a consequence of existing woodland. In addition, there are notable opportunities for further effective mitigation in the form of new woodland planting.*'[38]

3.46 Although we are provided with the AONB Impact Appraisal in full, even though its conclusions are a foregone conclusion, we are not provided with the *high level landscape and visual impact assessment (LVIA)* the conclusions of which are certainly not a foregone conclusion. The high level LVIA has been requested by SASES on a number of occasions. Unlike the AONB Impact Appraisal, the reasoning behind the conclusion of the high level LVIA that Zone 7 affects fewer landscape and visual receptors is not transparent and cannot be examined.

[38] Summary and Approach to Site Selection Page 3

3.47 The third and fourth 'key themes' are concerned with construction access and crossing the Aldeburgh Road. The Site Selection Report concludes that '*SPR believe there would be no lasting significant impact on the ecology or cultural heritage*' as a result of the cable route. Although this review does not cover ecological or cultural heritage impacts SASES does not accept that \SPR have done sufficient work to show that there would be no lasting ecological or cultural heritage impacts. If dense woodland is removed on either side of the Aldeburgh Road this would also have lasting landscape and visual effects. In addition, selecting one of the inland sites, all of which require a long cable route, will inevitably result in significant temporary landscape and visual impacts.

3.48 The fifth key theme is the inclusion of Sizewell land within the Onshore Study Area. The conclusion reached by the Site Selection Report that '*EDF and Magnox land at Sizewell is not available or appropriate for acquisition*' has been questioned by the Councils.[39] It is not within the scope of this review to judge whether the land is available or not. However, given that the Councils consider that '*on balance this location within the AONB would outweigh any other site in the wider countryside in the vicinity*'[40] this review has undertaken a high level LVIA assessment of the EDF site alongside a similar assessment of the Friston Site.

3.49 The final theme, the issue of Cumulative impacts in relation to National Grid Ventures projects is beyond the scope of this report.

[39] Letter from Suffolk Coastal District Council, Waveney District Council and Suffolk County Council dated 11th May (Appendix 3)
[40]

SPR's Onshore Site Selection Decision Making Approach

3.50 The Site Selection Report states that the final stage in the site selection process was taking a balanced view using:

- The advice of industry leading legal advisors;
- The advice of industry leading technical advisors;
- SPR's project experience; and
- Consideration of the advice: *'in the context of the comments and consultation feedback of both statutory and non-statutory consultees, the public and potentially affected parties.*

3.51 We do not have the full advice from the landscape and visual technical advisors so cannot fully examine whether the conclusions reached by SPR accurately reflect that advice. We do have a record of public comments and the letters from the Councils. It is hard to see how the feedback from members of the public has informed the site selections when, despite a question biased towards an inland location, more residents were in favour of a coastal location and expressed this strongly in their number of comments. Local Public opinion as channelled through the Councils also indicates that the opinion of the public and affected parties has not informed the decision.

4 Landscape and Visual Appraisal – Friston Site (Zone 7)

Introduction

4.1 This high-level landscape and visual appraisal (LVA) considers the existing landscape character, the value of the landscape and its susceptibility to large-scale electrical infrastructure. It also considers the potential for adverse visual effects.

Existing Landscape Character

4.2 The Substation refined area of search north of Friston (W1/Zone 7), (the Friston site) is located in National Character Area 82: Suffolk Coast and Heaths close to the boundary with NCA 83 South Norfolk and High Suffolk Claylands. Within the recent Suffolk Coastal Landscape Character Assessment – for East Suffolk Local Plan – July 2018[41] (Suffolk Coastal Landscape Assessment) it is located within Landscape Character Area (LCA) L1 Heveningham and Knodishall Estate Claylands which is an Ancient Estate Claylands landscape type (LT). (Figure 02) It is immediately adjacent to K3 Aldringham and Friston Sandlands LCA which is an Estate Sandlands LT and lies both south and east of the site.

4.3 The Special Qualities and Features of LCA L1 are (emphasis added):

- Its special qualities are its **particularly unified character - a peaceful, deeply rural 'backwater'**, focused on farming.
- **There is little intrusion from modern development**, especially in the more remote western part. Whist some conversion has taken place of agricultural buildings, the remoteness of the area has helped protect it from development pressure, and it has likely changed little in the 20th and 21st centuries.

[41] The Suffolk Coastal Landscape Character Assessment – for East Suffolk Local Plan – July 2018 was prepared as a supporting document for the Suffolk Coastal First Draft Plan. It has not yet been adopted but as the most recent assessment it is good practice to use it as the most up to date information on landscape character.

- Heveningham Hall and park is valued for its historic interest, links with Capability Brown and scenic setting for events such as Country Fairs in the area.
- Special Areas of Conservation and SSSI designation across a series of ponds at Dews Farm, Bramfield, noted for its population of Great Crested Newts.

4.4 Strategy Objectives for LCA L1 include:

- **Protect the unspoilt, quiet, and essentially undeveloped rural character of the area**.
- Protect the plateau landscape from visual intrusion of development in areas beyond this character area e.g. from new tall vertical features such as masts or turbines or new urban development.
- **Protect the landscape from development of a scale that harms the prevailing light, scattered nature of the existing settlement**.

4.5 The Friston site is typical of LCA1. Friston is a small village connected by a network of quiet lanes. The overhead transmission lines which cross the northern edge of the site are the only intrusive large scale, modern development in the area. However, the transmission lines are also more than a kilometre distant from the village and, whilst visible, they do not have a notable influence on the perceived landscape and scenic quality of the whole area and in particular they no not define the character of the settlement or its setting.

4.6 The Friston site, indicated as the Substation Refined Area of Search on Indicative Onshore Development Area[42] lies between the overhead transmission lines, which form the northern and north western boundaries, and the village edge to the south. The eastern boundary is formed by Grove Road and the western boundary by a footpath and field edge. Another footpath runs through the middle of the site in a north/south direction. The current land use is arable. The site is composed of a number of fields with the field boundaries generally marked by hedgerows.

[42] Dwg no. EA1N-EA2-DEV-DRG-IBR-00TBC25

4.7 The village has a loose knit structure. The Friston Church (the Church of St Mary the Virgin Grade II*) is located on Church Road at the northern edge of the village. It lies within a generous churchyard and its location on the edge of the village accentuates the visibility of the church tower. The tower forms a landmark when seen from the landscape to the north. Nestled amongst mature trees, it signals the presence of the village. In the landscape to the north of the village, close to the substation Refined Area of Search there are a number of Grade II listed farmhouses with High House Farm, which is situated to the north west, being the closest.

4.8 There is a scattering of individual properties along the southern side of Church Road to the west of the Church and a parallel row of properties to the south along Hill Crest. These properties, the Church and Church Farm, which lies to the east of the Church, are separated from the main body of the village by the village green.

4.9 The village pub, the Old Chequers is located at the southern end of the village green at a staggered cross road. It sits at the northern corner of a more compact area of residential development. The footprint of the village has changed little in the last 100 years with the properties to the west of the Church being the most noticeable area of expansion.

4.10 The Sandlings Walk Long Distance Route runs through the village in an east/west direction. The village lies at the centre of a spider's web of PRoWs which run in all directions, from the cross roads. From Church Road two footpaths lead to the north with a third joining from the east off Grove Road. Grove Wood, an area of Ancient Woodland, lies to the east of Grove Road.

4.11 The topography is gently undulating with a series of shallow valleys rising to 23m AOD, both to the west of Friston and to the north. The gentle undulations, combined with the trees, woodland and hedgerows make a significant contribution to the unified character of the landscape. Combined with the lack of any sizeable settlement this creates the sense of a peaceful, deeply rural 'backwater'.

4.12 Although this is not a designated landscape it is a valued landscape containing many of the characteristics noted as helping in the identification of a valued landscape[43]. The condition of the landscape is good, and it has a high scenic quality with the only detractors being the overhead transmission lines. It has conservation interest in that it provides a setting for the village and for a number of listed buildings important in the landscape, in particular Friston Church. It is entirely representative of the L1 Heveningham and Knodishall Estate Claylands. The recreational value of the landscape is high containing as it does a network of PRoWs. Perceptually it is a very tranquil landscape with only the overhead transmission lines detracting from perceptions of its tranquillity.

Susceptibility to large-scale electrical infrastructure

4.13 **The susceptibility to change of a landscape** is: '*the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular landscape type or areas, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies*'.[44] The assessment of susceptibility must be tailored to individual projects. It '*should not be recorded as part of the landscape baseline but should be considered as part of the assessment of effects*'.[45]

4.14 The susceptibility of a landscape to a particular kind of development depends on the characteristics of the development and the characteristics of the landscape. The following landscape characteristics are good indicators of landscape susceptibility to large-scale electrical infrastructure.

- **Scale:** Large scale landscapes are likely to be less susceptible to large-scale electrical infrastructure than small scale intimate landscapes. Landscapes in which small scale elements are frequently found are likely to be more susceptible to large-scale electrical infrastructure.

[43] Guidelines for Landscape and Visual Impact Assessment Box 5.1 Page 84
[44] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 88, Paragraph 5.40
[45] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 89, Paragraph 5.42

- **Enclosure:** Landscapes with a high degree of enclosure are likely to be less susceptible to large-scale electrical infrastructure than open landscapes.
- **Landform & Topography**: A smooth, convex or flat landform is likely to be less susceptible to large-scale electrical infrastructure than a landscape with a dramatic rugged landform, distinct landform features or pronounced undulations.
- **Land Cover Pattern:** Simple, regular landscapes with extensive areas of uniform ground cover are likely to be less susceptible to large-scale electrical infrastructure than landscapes with more complex or irregular land cover.
- **Settlement Pattern and Density:** More sparsely settled areas are likely to be less susceptible than more densely settled areas or areas with a high proportion of historic villages as there will be opportunities to site large-scale electrical infrastructure so that they do not dominate distinctive settlements.
- **Large Scale Visible Built Structures:** Landscapes that contain large scale infrastructure, major communications routes and large-scale developments are less susceptible to large-scale electrical infrastructure although development needs to be carefully sited to avoid visual clutter or cumulative impacts. Landscapes where there is little intrusion from modern development are more susceptible to large-scale electrical infrastructure.
- **Landmark features:** Historic landmarks that generate important views (e.g. to distinctive church spires/towers), or views to and from historic features in the landscape increase susceptibility.
- **Remoteness and Tranquillity:** Relatively remote or tranquil landscapes, due to freedom from human activity and disturbance which have a perceived naturalness or a strong feel of traditional rurality, tend to be more susceptible to large-scale electrical infrastructure.

4.15 It is important to note the difference between the impact of transmission corridors and the Substations. Transmission corridors – when seen in the landscape – are linear infrastructure which by its nature is passing through the landscape. Whilst they do have a significant impact on the character of the landscape they do not require a large footprint. In contrast, the Substations would require a very large site which would replace the existing landscape

and consequently would define the landscape in a very different way to a corridor, which is passing through the landscape.

4.16 **Scale:** The Friston site is not part of a large scale landscape. Although in the western part of LCA L1 there are large-scale agri-businesses, the area around the site the landscape is '*somewhat more fine grained, there is more pasture and less emphasis on large scale agricultural organisation which gives rise to a more textured and rich visual experience.*'[46] Field shapes are irregular and there is considerable variation in field sizes with smaller pastoral land around the settlements such as Friston. There are frequent small-scale features in the view. **Medium Susceptibility**.

4.17 **Enclosure:** There is woodland in the landscape surrounding the site which provides some degree of enclosure and prevents some long-distance views. **Medium Susceptibility**.

4.18 **Landform & Topography**: The site is located on a very gently undulating landscape. To create the extensive level areas required for large-scale electrical infrastructure, it is likely to involve earth works that will run against the grain of the landscape. **Medium Susceptibility**.

4.19 **Land Cover Pattern:** Most of the site and the surrounding landscape is in arable production and this reduces its susceptibility. **Low Susceptibility**.

4.20 **Settlement Pattern and Density:** Friston is a historic village with a strong and attractive relationship to the surrounding landscape. The surrounding landscape is susceptible to large-scale electrical infrastructure which would have the potential to dominate the settlement. **High Susceptibility**.

4.21 **Visible Built Structures:** The landscape in which the site is located has little intrusion of large-scale infrastructure except for the transmission lines. **Medium/high Susceptibility**.

4.22 **Landmark features:** Friston Church is an historic landmark feature. The adjacent landscape is susceptible to large-scale electrical infrastructure which would have the potential to harm the setting of the church. **Medium/high Susceptibility**

[46] Suffolk Coastal Landscape Character Assessment Page 103

4.23 **Remoteness and Tranquillity:** Despite the presence of the transmission lines the landscape surrounding the site has a tranquil, deeply rural quality which would be seriously harmed by large scale electrical infrastructure. **Medium/high Susceptibility.**

4.24 In summary, the overall susceptibility of the landscape to large-scale electrical infrastructure is **medium/high.**

Potential for adverse visual effects

4.25 Visual effects are effects on the visual amenity of people. Visual assessments consider the receptors likely to be affected. With regard to the Friston site there are three key groups who would be affected: Friston village residents; users of the network of PRoWs that surround the village; and users of the road network. This first two groups have high sensitivity to change and it is likely that Friston village residents will also be part of the other two groups.

4.26 The photomontages prepared by SPR (Appendix 7) provide an indication of the impact of the development. Viewpoint 9 is taken from the edge of the Village Green looking across to the northern edge of the village and to Friston Church. Currently the transmission lines form a faint detractor clearly set at some distance from the village. The height and spread of the proposed development – seen above the existing village buildings - is such that it dominates the small-scale features in the view and entirely changes the setting of the village.

4.27 Viewpoint 8 (Appendix 7) is taken from the northern edge of the village on Church Road. It is an attractive rural setting for the village. The transmission lines at 1km distant are detractors but they are not prominent. In contrast the proposed development would dominate this view. The industrial size and scale of the development would be entirely incongruous and at odds with the existing landscape character. The unified character of the landscape and the sense of being within a peaceful, deeply rural 'backwater' would be lost.

4.28 No photomontages have been prepared by SPR from the PRoW that runs through the site. The experience of using this footpath to access or to leave Friston would be entirely changed.

4.29 There would be a **major adverse** impact on residents of Friston, driving through the village and walking, through the village green and into the landscape to the north.

Conclusion

4.30 The magnitude of change to the landscape would be **large** due to the scale of the development, its height and extent and its incongruity. The susceptibility of the landscape is **medium/high** and it is a valued landscape. The overall sensitivity would be **medium/high.** The overall impact on the character of the landscape surrounding the site would be **moderate/major** adverse.

4.31 With regard to the Strategy Objectives for LCA L1[47] large scale electrical infrastructure on this site would not protect the unspoilt, quiet, and essentially undeveloped rural character of the area, it would not protect the plateau landscape from visual intrusion and it would not protect the prevailing character of the existing settlement.

[47] Suffolk Coastal Landscape Character Assessment

5 Assessment of Landscape and Visual Effects – EDF Site

Introduction

5.1 A high-level LVIA has also been undertaken for the EDF site identified by the Councils (Page 4, in Appendix 3).[48] This site, which has not been included in any of the comparative assessments undertaken by SPR, is shown on Figure 01.

Existing Landscape Character

5.2 The EDF site is located in National Character Area 82: Suffolk Coast and Heaths. Within the Suffolk Coastal Landscape Character Assessment, it is mostly located within LCA K3 Aldringham and Friston Sandlands LCA which is an Estate Sandlands LT. (Figure 02) The north eastern edge of the site is located in LCA D3 Minsmere and Sizewell Coast, a Coastal Broads & Marshes LT.

5.3 The Special Qualities and Features of LCA K3 are:

- Much of the southern and eastern part of the Area is within the Suffolk Coast and Heaths AONB. This area features more of the remaining semi-natural habitats and less arable land but also features much more settlement.
- Aldringham Common is SPA and SSSI, part of a large tract of wildlife habitat that forms the Leiston-Aldeburgh SSSI which contains a rich mosaic of habitats
- The settlements of Aldeburgh and Thorpeness are key components of this landscape. They have very different appearance and histories, exerting a significant influence on the overall character of the area and shaping people's experience and recreational focus.

[48] Letter from Suffolk Coastal District Council, Waveney District Council and Suffolk County Council dated 11th May 2018

- Two long distance footpaths pass through the area, The Sandlings Walk follows a route along the south of the and the Suffolk Coast path. The latter follows the route known as the Sailors' Path which connects Snape to Aldeburgh.
- 14th century Leiston Abbey lies north-west of the town and is a Scheduled Monument. The atmospheric ruins of a small chapel can still be seen on the site of the original building.

5.4 Strategy Objectives for LCA K3 include:

- Protect remnant heathlands from any development that would result in their loss or reduction in area.
- Protect the sense of separation and openness between the settlements of Aldeburgh and Thorpeness and avoid ad hoc and incremental development which urbanises this coastal landscape, particularly along the open coast road.

5.5 The description of LCA K3 includes 'Detracting features include the double row of giant pylons that cross the area, carrying power away from Sizewell, passing north of Aldringham. They have a substantial negative impact in the more open areas, and they distort the send of scale within the landscape. The white dome of Sizewell B has a similar effect on scale although is perhaps more an accepted and familiar sight, up and down the coastal zone.'[49]

5.6 The Special Qualities and Features of LCA D3 are:

- Outstanding nature conservation importance, reflected in Site of Special Scientific Interest (SSSI), Special Protection Area (SPA), Special Area of Conservation (SAC), Ramsar (conservation of wetlands) and County Wildlife Site (CWS) designations Minsmere regarded as an 'ark' for rare species of birds.
- The power station provides a dramatic element and contrasts to the otherwise open and often desolate landscape
- Despite the limited human settlement, the area contains important evidence of past settlement.

[49] Suffolk Coastal Landscape Character Assessment Page 92

5.7 Strategy Objectives for LCA D3 include:

- Protect the unspoilt character of much of this coastline from intrusive major infrastructure development which may penetrate areas currently devoid of such influences.

5.8 The EDF site identified by the Councils is located immediately south west of Sizewell Power Station. Lover's Lane and Sizewell Gap, the road that leads to Sizewell Beach, from the western and southern boundaries of the site. They are relatively busy roads with a footway. A belt of tree planting runs around the edge of the site adjacent to Lovers Lane, this belt is particularly wide and effective along Sizewell Gap. Between the site and Sizewell Power Station is a woodland, Rookyard Wood, and an area of dykes and linear tree belts.

5.9 To the east of the EDF site lie Substations for Greater Gabbard Offshore Wind Farm and Galloper Offshore Wind Farm. The Greater Gabbard substation is partly surrounded by Broom Covert. The more recently constructed substation for the Galloper Offshore Wind Farm, occupies approximately twice the footprint of that for Greater Gabbard, and is located closer to the EDF site. Substantial bunding works have been undertaken around the Galloper site, which have greatly assisted in reducing its visibility within the surrounding landscape. Including from a nearby PROWs, which run along the northern and north eastern edges of the EDF site. It then runs north and east of the Greater Gabbard Substation (along Sandy Lane) before joining Sizewell Gap close to the coast. A series of other footpaths lead south from Sizewell Gap.

5.10 Appendix 6 includes some extracts from the Galloper Wind Farm Project Environmental Statement – Chapter 6: Site Selection and Alternatives. This also included a RAG Assessment. Unlike the RAG Assessment for the Substations there are no undefined categories such as 'Landscape Character and sensitivity to development'. Instead the criteria under the landscape section are:

- Is the site located within a designated landscape (AONB)?
- Is the development proposal broadly compatible with the local landscape character?
- How proximity is the site to existing industrial landscape?

5.11 To the west of the site is the urban edge of Leiston which is defined by the line of the Sizewell Railway. The Suffolk Coast Path and Sandlings Walk lie to the east of the site. The coast is not visible from this area.

5.12 As noted above most of the site is located in LCA K3 with only the north eastern edge in LCA D3. Although changes in landscape character are generally gradual rather than abrupt there is a marked change on the site between the north eastern edge, which is at a lower elevation, and the rest of the site. The footpath runs through the north eastern edge and the presence of the adjacent Rookyard Wood limits views of Sizewell Power Station. This area is identified as bracken/heath on the OS map.

5.13 The remainder of the site, within LCA K3, is arable land or was previously in use as arable land as it is not currently cultivated and is developing a scrubby vegetation. From this part of the site, due to the slight increase in elevation, there are clear views of Sizewell A & B and of a long stretch of the overhead transmission lines. There are no views of the urban edge of Leiston.

5.14 The landscape surrounding the site is one of contrasts as noted in the LCA descriptions. The presence of the coast is not obvious in the area surrounding the site but the presence of the two Sizewell Power Stations, the overhead transmission lines and the Greater Gabbard Substation (more so than the Galloper substation) are very evident. These energy generation and transmission installations have a characterizing influence on the perceived landscape and scenic quality of the area. This impression is also reinforced by Sizewell Gap road which is a relatively fast and urbanised road, designed to accommodate construction traffic related to the nuclear power complex at Sizewell. Although the edge of Leiston is not visible from the site, it is about 300m at its closest (Sizewell Crossing).

5.15 The area does however still contain some scenic areas. The north eastern edge of the site is mostly screened form views of the infrastructure and to the north of the site Leiston Common and associated woods have retained a relatively unspoilt character. North and south of the site the nature conservation value of the landscape is evidenced by various ecological designations. There are no ecological designations within the site.

5.16 The site is located within the AONB and therefore was deemed to be national value when the AONB was established in 1970. Since 1970 the quantity of large-scale infrastructure for electrical generation and transmission in this area has increased significantly.

Susceptibility to large-scale electrical infrastructure

5.17 The Susceptibility of the EDF site has been assessed on the criteria identified in the previous section, where useful a comparison with the Friston site has been made.

5.18 **Scale:** The EDF site is not part of a large-scale landscape. Fields are generally regular in shape and are similar to those around the Friston site. **Medium Susceptibility**

5.19 **Enclosure:** There is woodland in the landscape surrounding the site, in particular a woodland belt along Lover's Lane/Sizewell Gap which provides some screening of the site from the adjacent road and prevents some long-distance views. **Low/medium Susceptibility**

5.20 **Landform & Topography**: Most of the site is relatively level. If development avoids the lower north east corner of the site incongruous earthworks will not be required. The letter from the Councils identifies potential for '*re-engineering in order to mitigate the overall height of the structures*.'[50] **Low/medium Susceptibility**

5.21 **Land Cover Pattern:** Although most of the site is or has recently been in arable land use there is a variety of land cover in the surrounding landscape. **Medium Susceptibility**

5.22 **Settlement Pattern and Density:** The urban edge is close to the site but there is unlikely to be a high degree of inter-visibility. The eastern edge of Leiston does not have a strong or attractive relationship to the adjacent landscape. **Medium Susceptibility**

5.23 **Visible Built Structures:** The landscape in which the site is located is notably affected by the presence of large-scale electrical generation and transmission infrastructure. **Low/medium Susceptibility**

5.24 **Landmark features:** There are no sensitive Landmark features whose setting could be harmed by large-scale electrical infrastructure in this location. **Low Susceptibility**

[50] Letter from Suffolk Coastal District Council, Waveney District Council and Suffolk County Council dated 11th May 2018 Page 9

5.25 **Remoteness and Tranquillity:** The presence of large-scale electrical generation and transmission infrastructure has significantly adversely affected the sense of remoteness and tranquillity in this landscape. However, it has not been lost entirely. **Low/medium Susceptibility**

5.26 In summary, the overall susceptibility of the majority of the site to large-scale electrical infrastructure is **Low/medium.**

Potential for adverse visual effects

5.27 There would be three similar visual receptor groups likely to be affected by Substation development on the EDF site: Leiston and Sizewell residents; users of the network of PRoWs between Leiston and the coast; and users of the road network.

5.28 No photomontages have been prepared for development on this site. It is inevitable that there will be some adverse visual impacts in the surrounding landscape and that the area over which large-scale electrical generation and transmission infrastructure will have an influence will be extended. This high-level landscape and visual appraisal has identified Leiston Common as a location where such infrastructure may become visible where currently it is not a notable presence in the landscape.

5.29 There would be views of additional infrastructure for Leiston residents exploring the landscape to the east of the town and for visitors on their way to Sizewell Beach. However, views of such infrastructure are already a part of the experience of the landscape east of Leiston and would not be incongruous.

Conclusion

5.30 The magnitude of change to the landscape would be **medium** because the scale of the development would not be out of keeping with the scale of the surrounding infrastructure. The susceptibility of the landscape is **low/medium** but due to its location in a nationally designated landscape the overall sensitivity would be **medium/high.** The overall impact on the character of the landscape surrounding the site would be **moderate** adverse.

5.31 With regard to the Strategy Objectives for LCA K3[51], large scale electrical infrastructure on this site, assuming it avoids the north eastern edge of the site, would not harm remnant heathland. There would be no impact on the sense of separation between Aldeburgh and Thorpeness. Large scale electrical infrastructure on this site would not introduce intrusive major infrastructure development into an area currently devoid of such influences.

5.32 Large scale electrical infrastructure on this site would cause some harm to the special qualities of the AONB. However, the national importance of the AONB has been factored into the sensitivity of this site and the overall landscape impact would be **moderate adverse**.

[51] Suffolk Coastal Landscape Character Assessment

Appendix 1

Figures

Sources:

Study area and zones derived from: East Anglia ONE North and TWO Onshore Study Area and Potential Substation Zones, 07/03/18, Scottish Power Renewables

EDF site derived from: Letter to Secretaries of State from Suffolk Coastal DC, Waveney DC and Suffolk County Council, dated 11th May 2018.

- Onshore Study Area Boundary
- Substation Zones
- Substation Refined Area of Search
- EDF Site
- Location of Galloper Substation (now built)
- Suffolk Coast and Heaths AONB

250m 1km
0 500m

FIGURE 01

Location of Sites

PROJECT
1080
East Anglia One North

CLIENT
Substation Action Save East Suffolk

Sources:

Study area and zones derived from: East Anglia ONE North and TWO Onshore Study Area and Potential Substation Zones, 07/03/18, Scottish Power Renewables

EDF site derived from: Letter to Secretaries of State from Suffolk Coastal DC, Waveney DC and Suffolk County Council, dated 11th May 2018.

LCTs/LCAs: Suffolk Coastal Landscape Character Assessment, July 2018

- Onshore Study Area Boundary
- Substation Zones
- Substation Refined Area of Search
- EDF Site
- Location of Galloper Substation (now built)
- Suffolk Coast and Heaths AONB

Suffolk Coastal Landscape Character Types

- B. River Valleys
- D. Coastal Broads and Marshes
- K. Estate Sandlands
- L. Ancient Estate Claylands

Suffolk Coastal Landscape Character Areas

- B4: Fromus Valley
- D3: Minsmere and Sizewell Coast
- D4: Thorpness to Aldeburgh
- K3: Aldringham and Friston Sandlands
- L1: Heveningham and Knodishall Estate Claylands

0 250m 500m 1km

FIGURE 02

Landscape Character

PROJECT
1080
East Anglia One North

CLIENT
Substation Action Save East Suffolk

Appendix 2

Indicative Onshore Development Area Plan dated 14/05/18

Legend

- Offshore Export Cable Corridor Area of Search
- Onshore Study Area

Indicative Onshore Development Area

- Landfall Refined Area of Search
- Onshore Cable Corridor Refined Area of Search
- Substation Refined Area of Search
- Indicative National Grid Overhead Line Realignment Area

Note:
- Indicative Onshore Development Area will be subject to change following consultation.
- Indicative Onshore Development Area does not show all areas which may be required for temporary access, mitigation, enabling works compounds, road improvements or public footpath diversions, the need and location for which will be refined during consultation.

Rev	Date	By	Comment		
3	14/05/18	AB	Fourth Issue.		
2	11/05/18	AB	Third Issue.	Prepared:	AB
1	08/05/18	AB	Second Issue.	Checked:	PW
				Approved:	AH

1:25,000 Scale @ A3

0 0.5 1 Km

East Anglia ONE North and East Anglia TWO

Indicative Onshore Development Area

Drg No	EA1N-EA2-DEV-DRG-IBR-00TBC25	
Rev	3	Coordinate System: BNG Datum: OSGB36
Date	14/05/18	
Figure	1	

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Appendix 3

Letters from
Suffolk Coastal District Council, Waveney District Council and Suffolk County Council
to
Scottish Power Renewables (17/04/18)
&
Rt Hon Greg Clark MP and Rt Hon James Brokenshire MP (10/05/18)

Date: 17 April 2018
Enquiries to: Lisa Chandler
Tel: 01473 264084/01394 444538
Email: john.pitchford@suffolk.gov.uk /
lisa.chandler@eastsuffolk.gov.uk

Scottish Power Renewables
East Anglia 1 North and East Anglia 2
Offshore windfarm proposals
eastangliaonenorth@scottishpower.com
eastangliatwo@scottishpower.com

Dear Sir/Madam,

RESPONSE OF SUFFOLK COASTAL AND WAVENEY DISTRICT COUNCILS AND SUFFOLK COUNTY COUNCIL TO THE STAGE 1 CONSULTATION BY SCOTTISH POWER RENEWABLES ON THE EAST ANGLIA 1 NORTH AND EAST ANGLIA 2 OFFSHORE WIND FARMS

The local authorities welcome the opportunity to comment formally and publicly on the proposals for the third and fourth phase of offshore wind farm developments forming the East Anglia Array.

We have participated fully in the previous process for the East Anglia 1 offshore windfarm (currently under construction) and the East Anglia 3 offshore wind farm (consented) and we look forward to continuing to co-operate in discussions for East Anglia 1 North and East Anglia 2.

It is understood that the consultations are taking place concurrently but the two projects will separate and be considered independently of each other in due course. These comments equally apply to both projects as currently presented for consideration in the Public Information Days (PIDs) in March 2018.

The timing of the PIDs is accepted given the requirement to access the maximum local population. However, the absence of printed information to take away and digest is a disappointment given this is intended to be a formal round of public consultation.

In addition, branding the event as information days has taken away some of the formality of the process and is not necessarily clear that this is a stage 1 consultation requiring input from the local population. It is considered that this could have been made clearer in the feedback forms. It is noted that of the 10 questions in the feedback form, only three relate to the impact of the scheme, the rest relate to the process of consultation. It is not clear whether those not attending the exhibitions would have readily found any information on the subject or known when to reply.

The local authorities have been considering these proposals for some time in pre-application discussions and have made representations to SPR in relation to the project. However, not all of these previously raised considerations have made it to the PIDs so it is considered appropriate for the local authorities to publicly raise their concerns and considerations in relation to the proposal to connect both of the offshore windfarm projects at Sizewell to connect to the National Grid Power lines.

Alongside considering SPR's proposal, the local authorities have been made aware via National Grid's TEC register of the offer for two inter-continental connectors – Eurolink and Nautilus - to be connected to the National Grid at Sizewell. Having reviewed other such developments across the country, the local authorities are aware of the associated infrastructure required to facilitate two such proposals including a substation connection to the grid lines and converter stations for each cable. These connectors will cross the North Sea and connect into Belgium and the Netherlands. From connection dates given it can be estimated that there will be a crossover in onshore construction of the inter-continental connectors with the offshore wind farm proposals. In addition, all four of these projects will crossover from a construction phase perspective with construction of the new nuclear power station at Sizewell C, given the recently estimated dates for that project. This is a significant concern for the local authorities and the proposals are all of such a scale and magnitude that they cannot be considered in isolation as independent proposals. The implications for the local population and East Suffolk as a whole are significant too.

Site Selection process

The exhibitions demonstrate a site selection area for the onshore elements of the project. This study area includes sites within and adjacent to the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB).

There are a number of principles that the local authorities would wish to see adhered to in the site selection and mitigation for the onshore elements of the project and these are:

1) Site selection should seek a location / locations which minimises visual harm to the landscape, recreational, and residential receptors. This may be achieved through:

    a) A close visual relationship to the existing built environment;
    b) The screening by existing blocks of woodland or belts of trees;
    c) A location that offers the ability to minimise the need for the additional building height required by noise attenuation structures;
    d) The minimisation of bulk and height of the structure(s);
    e) The minimum footprint required; and
    f) Careful design of the structure(s).

2) Sites both inside and outside the AONB should be properly considered. Although in policy terms a site outside the AONB is to be preferred; in the first instance the approach should also be to minimise the degree of harm or impact on public and

residential amenity, landscape character and heritage assets notwithstanding the boundary of the AONB.

3) The local authorities would expect sites within both the east and west of the site selection zone to be considered in detail.

4) Where additional soft landscaping is required to mitigate the visual and amenity impacts of the project it is suggested the following are appropriate;

    a) Recessive colouring and simplicity of form and design;
    b) Meaningful lowering of the floor level of the building given the opportunities offered by a free draining substrate; and
    c) An unlit structure, unless staff are present on site, with the use of Low Light surveillance or IR lighting to provide security.

Notwithstanding the above principles, the local authorities have significant concerns with the limiting of the site selection area as illustrated and considered by SPR, the non-inclusion of EDF Energy owned / controlled land to the north of the identified onshore study area has not been included – north of Sizewell Gap Road (land owned by EDF Energy). It is considered that this piece of land adjacent to the Greater Gabbard and Galloper offshore wind farm substations, offers an opportunity to site onshore infrastructure in close proximity to similar infrastructure in a location already screened by landscaping with potential for additional screening.

In pre-application discussions, local authority officers have requested in writing that SPR should extend the area of search for a connection site beyond the area defined to date and we still consider this to be appropriate. The request was made to ensure that all reasonable options to accommodate the projects were considered, having particular regard for the need to minimise harm and identify a site which could accommodate both SPR and the inter-continental connector projects alongside each other in order to minimise the overall impact of the proposals.

In the absence of satisfactory evidence in relation to the suitability or unsuitability of the site north of the Sizewell Gap Road, the local authorities consider that in this respect the site selection process to date is inadequate and flawed.

The proximity of parts of the eastern side of the search area to existing development – major energy infrastructure, is considered a potential positive, therefore extending the site selection zone to include the fields to the north of the Sizewell Gap Road in close proximity to the Greater Gabbard and Galloper substations and with the back drop of Sizewell A and Sizewell B could be a more appropriate setting for the large structures required for the onshore substations to service SPR's projects and the converter stations required for the inter-continental connector projects. Therefore, the local authorities consider that land both north and south of Sizewell Gap Road should be evaluated as a potential location, as set out below.

Next steps required for the selection of a site

The local authorities consider that further work is required to inform site selection within the current or the extended search area that is:-

1) A detailed examination of the impacts of the preferred east and west options *and* their associated cable corridors in terms of both construction and operation. This should cover a range of issues, (such as transport, ecology, noise, landscape historic environment etc.) to be agreed in advance with the local authorities and other statutory consultees. It is important that the cable corridor can accommodate both SPR and National Grid projects. If this cannot be achieved or will present significant loss of amenity then those site options should be dismissed.

2) Evaluation of the findings, and selection of the initial preferred option on that basis.

3) Evaluation of this initial preferred option against the policies within the relevant National Policy Statements.

4) Identification of the preferred site in consultation with the statutory consultees

The current position of the local authorities based on the information presented to date

Notwithstanding the fact that the local authorities consider that further work is required to evaluate the siting options, they are conscious that SPR in particular have a very short time in which to make a final decision on this matter. Therefore in a spirit of clarity and cooperation they are prepared to set out their *interim* view and rationale at this stage.

Given the national status of the AONB's designation, the local authorities felt that it was important that the impact of development on alternative sites outside the AONB should also be tested. *Based on the information and discussions to date* and being mindful of the need for both SPR and the inter-continental connector projects to connect to the Grid, possibly and hopefully via the same connection substation, our views are:

Although the western sites are outside of the AONB, they are open countryside which is to be protected from development as detailed in Local Plan policy and the National Planning Policy Framework. The question then needs to be tackled of whether the overall harm to the environment of developing the sites to the west exceeds that of the eastern sites, including their AONB status. In addition, siting to the west of the search area will involve the construction and creation of a longer cable corridor, (the detail of which we do not yet have), and the loss of woodland to the south of a Grade II listed building. Having reviewed the proposals to take out the woodland to the south of Aldringham Court, Grade II listed building, we do have serious concerns on the adverse impact of this on the setting of the listed building. Full details are included at the end of this letter.

In addition, to date there has been no detailed ecological, landscape, archaeological, heritage asset or other constraints assessment of accessing either the eastern or western sites in the site selection area and this has limited our ability to comment in full on the suitability of any site to date. However, if the destruction of the woodland is the only acceptable location to access the west, then as local authorities, we would have great difficulty in supporting a route through to the western sites at this location.

It is considered that the eastern sites within the study area in close proximity of the existing buildings of Sizewell A (being decommissioned) and Sizewell B (in operation) and the Greater Gabbard and Galloper substations may be preferable to the western sites which are more open and rural / agricultural in their nature. The opportunities for screening potential are more limited in the western area given the existing landforms.

There is a balance to be struck between the impact of extensive new development in the open countryside in a rural area and the creation of new development within the AONB. At this stage, there is not enough information provided to give a fully justified opinion on whether east or west would be more appropriate but currently, on the basis of information to date, the impact on the open countryside to the west is potentially more detrimental than the impact on development within the east given potential mitigation and screening methods that could be available.

Furthermore, it is apparent that construction of a cable route to the west that has the capacity to accommodate all projects carries with it significant additional technical challenges. Given the sequencing of the projects the local authorities have not been given any confidence that all projects could be accommodated and consider there is a risk that a second grid connection would be required, or more likely that it would not be possible to parallel the cable corridors for the two SPR and the two inter-continental connector projects along their entire length, especially at the Aldeburgh Road pinch point.

It is the current position of the local authorities that eastern sites adjacent to the Sizewell Gap Road should, despite their location within the AONB, be incorporated in SPR's site selection zone and properly assessed and considered.

The locations adjacent to the Sizewell Gap Road still require further investigative work and while no conclusions have been reached, they could:

- Minimise the impacts of construction and operation of the site and the cable corridor on local communities and public/ residential amenity - although there would be additional challenges in sharing a construction route with EDF Energy construction traffic for Sizewell C and this would need to be mitigated and potentially compensated for.
- Minimise the permanent loss of habitat and the severance of ecological corridors. However, further work on this, including any habitat mitigation or compensation that may be required, will be needed.

- Minimise harm to both archaeological features and the setting of historic assets, additional work on cable runs and their exact siting will be required to explore this further.
- Minimise the technical risks to the delivery of a shared connection and joint siting of all projects, subject to further information and detailing relating to all of the proposals.
- Minimise the magnitude of landscape change at the connection site given the presence of an existing energy cluster of a comparable scale. This is a key advantage which sites on the western side of the site search area do not have in comparison.
- Offer opportunities for dense planting of conifers which provide comparatively rapid and effective screening and the opportunity to modify the landform to dig in the structures. This would be appropriate for both the character of area and the sandy soil type.
- Possibly offer opportunities to utilise soil which will need to be stripped from EDF Energy land as part of the Sizewell C development for bunding purposes.
- Utilise the higher background noise environment which already exists close to Sizewell B, Greater Gabbard and Galloper substations.
- Utilise the better road network close to Sizewell to reach any haul roads and the new substations during the operational phase.

The local authorities' current position is that we cannot support any of the western or eastern sites put forward on the basis of information received to date. They would all have significant visual, landscape, and economic impacts alongside heritage impacts, archaeological impacts and ecological impacts not yet fully considered by the project.

Yours faithfully,

Cllr Geoff Holdcroft

Deputy Leader and Cabinet Member for Economic Development
Suffolk Coastal District Council

Cllr Matthew Hicks

Cabinet Member for Environment, Public Protection and Broadband
Suffolk County Council

[redacted]

Cllr Tony Fryatt
Cabinet Member for Planning
Suffolk Coastal District Council

Full details of the conservation concerns:

Aldringham Court was Grade II listed in 2005 and is a large house that was designed and built by the C20th Suffolk architect Cecil Lay (1885-1956) for his mother (and originally named Raidsend) in 1912-14. The list description identifies the house as '*probably his finest creation and is of special interest for the survival, little altered, of the exterior, an imaginative essay in an unusual art nouveau style with much fine-quality decoration*'. Aldringham was the birthplace of Lay and most of his buildings are in the locality. He was articled to the well known Suffolk architect J S Corder and studied in France and Belgium. Lay was responsible for some of the town planning of nearby Leiston as well as for the restoration of Aldeburgh parish church. Lay is, therefore, an architect of great local importance. Aldringham Court is basically an E-plan with sub-Dutch gables, striped and chequered brickwork decorative details and stucco decoration. It is currently a nursing home.

The significance of Aldringham Court is derived from its designer's local importance; it's an unusual and rare illustration of the Art Nouveau in Suffolk; its plan form; its distinctive features including decorative brickwork, stucco, windows and details; and its garden setting including woodland.

The site's location adjacent the Hundred River is historically significant as rivers so named formed the boundaries between the Hundreds, which were Saxon-era administrative units. Indeed, Hodskinson's map of 1783 shows the river as a parish boundary and it partly so remains today. The parish church, a common and identified tumuli are all apparent within the vicinity of this site at the parish edge and this is significant for potential archaeology.

Historic map regression suggests that the site of Raidsend was not previously developed and had been heathland typical of the Suffolk sandlings. When the site was developed by Lay the existing enclosed area became the new garden curtilage and appears to have been intentionally planted with trees to provide a degree of privacy along Aldeburgh Road and a setting to the substantial house, in contrast to the former open heath. When viewed today, the character of the building is expressed as a minor gentry house within a well tree-ed setting that provides glimpsed views from Aldeburgh Road. Its status is signified by impressive gate piers at the vehicular entrance.

On these bases, therefore, it is judged that the existing woodland surrounding Aldringham Court contributes importantly to its significance and that this importance is derived from the evidence that its planting is substantially contemporary with the design and construction of Raidsend and, thereby, forms part of its design as its garden setting. Any proposal to remove the woodland would cause harm to the significance of the designated heritage asset that is the listed building. For listed buildings, s.66 of the Planning (Listed Buildings and Conservation Areas) Act 1990 imposes a duty to have special regard to the desirability of preserving listed buildings or their settings or any features of special architectural or historic interest which they possess. The duty is engaged when the planning authority is considering whether to permit development which affects a listed building or its setting. Therefore, even if a listed building is not directly affected by a proposed development, the duty will still apply if the development affects the setting of the building. In the case of *East Northamptonshire DC v Secretary of State* ('Barnwell Manor'), the Court of Appeal held that the desirability of preserving the settings of listed buildings should not simply be given careful consideration by the decision-maker for the purpose of deciding whether there would be some harm, but should be given "considerable importance and weight" when the decision-maker carries out the balancing exercise; and that a finding of harm to a listed building or its setting gives rise to a "strong presumption" against granting permission.

Full details of the archaeological concerns:

Data regarding known above and below ground heritage assets present within the onshore study area comes from information recorded within the County HER and from designated heritage assets.

The Hundred River flows throughout the study area, the majority of which is situated on light soils, meaning that this is a favourable location for archaeological activity from all periods. This is attested to by the multi-period finds scatters which have been recorded throughout the study area.

However, as the majority of the onshore study area has never been subject to systematic archaeological investigation, there is high potential for additional, and as yet unknown, important heritage assets to survive across much of this area. Some of these may be of national significance and worthy of preservation in situ. This has been clearly demonstrated by the East Anglia 1 offshore windfarm scheme, where a significant number of archaeological sites have been defined, the majority of which were not previously recorded on the County Historic Environment record, or associated with finds scatter or cropmark evidence which indicated the likely presence of surviving below ground remains.

Archaeological investigations immediately adjacent to the study area (mainly confined to the north around Leiston and Sizewell) have yielded extensive multi-period archaeological remains. This highlights that similar archaeology is likely to continue into the study area, particularly given the comparative soils and topography.

Below are specific comments relating to each of the proposed substation option sites and the suggested cable route, as per the published potential substation zones, as well as details of current known archaeological sites recorded within each of the option areas:

W1

Known sites within the option area:
KND 010 Grove Wood ancient woodland
KND 007 A ring ditch cropmark situated south of Grove Wood which may be the remains of a prehistoric burial mound (potential for associated human remains)
KND 017 Ring ditch cropmark likely to be the site of a post mill
KND 023 Roman and medieval coin scatter
KND 009 Ruined chapel site marked on early maps (potential for associated human remains)
Finds scatters of Roman, Saxon, medieval and Post-Medieval date identified through metal detecting

As such, there is high potential for multi-period archaeological remains across option W1, particularly within the eastern half of this area given its position on light soils overlooking the Hundred River. Sites which have the potential to be associated with human remains are particularly sensitive. Unknown earthwork features may also be present within Grove Wood and this historic landscape features should not be removed as part of the scheme.

The western half of option W1 is an area of early (pre 18th century enclosure). Any surviving early boundaries should be maintained.

Friston Church (II*) as well as Woodside farm and Church Walls (Grade II) are located to the south of this option. The impact of proposals upon the setting of these historic buildings needs to be assessed.

W2

Known sites within the option area:
KND 004 A Roman villa site to the north-west of Knodishall, identified through large scatters of Roman finds and building material (potential to be worthy of preservation in situ)
KND 013 Prehistoric finds scatter

There is high potential for significant archaeological remains across option W2, given the archaeology recorded within this area and its proximity to the Hundred River. A potential for preservation in situ of significant archaeological remains can already be identified for this option.

Option W2 is within an area of early (pre 18th C enclosure). Any surviving early boundaries should be maintained.

Knodishall Church (II*), Knodishall Place and Pattles Farm (Grade II) are located close to this option area. The impact of proposals upon the setting of these historic buildings needs to be assessed.

W3

Known sites within the option area:

KND 002 A Bronze Age axe
LCS 021 A cropmark of an undated enclosure

There is high potential for archaeological remains across option W3 given its position on light soils overlooking the Hundred River. There is a specific potential for medieval remains in association with Knodishall Church, however, recent archaeological investigations just to the north of this area at Johnson's farm have identified features of prehistoric, Roman and medieval date (LCS 221).

Option W2 is within an area of early (pre 18th C enclosure). Any surviving early boundaries should be maintained.

Knodishall Church (II*) and Knodishall Place (Grade II) are located adjacent to this option area. The impact of proposals upon the setting of these historic buildings needs to be assessed.

Cable route- west

The current proposed cable route, not yet clearly defined but assumed to be crossing the Aldeburgh Road at the woodland, will impact upon KND 017 (ring ditch cropmark likely to be the site of a post mill) and will potentially pass through areas where multi-period finds scatters have been recorded. It is also potentially located to the south of KND 003, a group of 9 upstanding tumuli on Coldfair Green. As a result of the recorded heritage assets in the vicinity of the route, as well as the fact that it follows the Hundred River through an area of light soils, the planned cabled route potentially passes through an area of high archaeological potential. However, as there has been very limited previous archaeological evaluation across the study area, there is high potential for previously unknown remains to survive along any chosen route.

Aldringham crossing

The crossing avoids current recorded archaeological remains, however, Scheduled barrow monuments are situated on other side of the river at Aldringham Common and so there is potential to encounter further archaeological remains at this location. This part of the cable route which potentially crosses the Hundred River also has palaeo-environmental potential.

E1

Known sites within the option area:
ARG 064 Aldringham Green
ARG 019 and 073 Cropmarks and scatters of medieval finds, likely to relate to an area of medieval settlement to the south-east of Aldringham
Scheduled round barrows are also recorded on either side of this option area on Aldringham Common and in Aldringham plantation

There is high potential for archaeological remains across option E1 given its position on light soils overlooking the Hundred River. There is a specific potential for medieval remains in associated with Aldringham Green and within the area of the recorded medieval finds and cropmarks. There is also potential for the remains of additional burial mounds to

survive below ground within this area, given the proximity to other known monuments. If present, these monuments are likely to be associated with human remains.

E2

Known sites within the option area:
LCS 215 The site of a possible Bronze Age round barrow or medieval to post medieval mill mound surviving as a cropmark, to the east of Halfway Cottages
LCS 210 cropmarks of unknown date
ARG 017 A well preserved and extensive group of Second World War anti glider ditch earthworks at The Walks (surviving as below ground remains in cultivated areas).
LCS 213 A Second World War Diver anti-aircraft battery is visible as structures and earthworks on aerial photographs. The site was dismantled at the end of the war, but parts of the trackways still survive, as may some of the hardstandings.

There is high potential for archaeological remains across option E2 given its position on light soils close to the Minsmere River. Archaeological evaluations to the north of Sizewell Gap Road and to the south of Leiston have identified extensive multi-period archaeological remains (LCS 148/150, 161, 175, 218, 219 and 223), which are likely to extend into this area. Activity relating to occupation, industry, agriculture and burial has been identified during these works. Areas of heathland are likely to offer an excellent level of preservation for any surviving below ground remains. Extant earthworks and structures associated with WWII activity should not be disturbed by the scheme.

E3

Known sites within the option area:
ARG 028 and 029 former Second World War trenches
ARG 031 former WWII strongpoint and anti-aircraft battery
Scatters of prehistoric finds

There is potential for archaeological remains across option E3 given its position on light soils overlooking a tributary of the Hundred River. There is a particular potential for further military remains to be present, although there have been limited archaeological investigations in this part of the study area to inform assessments of potential.

E4

Known sites within the option area:
LCS 214 Cropmarks west of Sizewell common
ARG 018 Earthwork enclosure on Sizewell common
ARG 017 A well preserved and extensive group of Second World War anti glider ditch earthworks at The Walks

There is high potential for archaeological remains across option E4 given its position on light soils close to the Minsmere River. Archaeological evaluations to the north of Sizewell Gap Road and to the south of Leiston have identified extensive multi-period archaeological remains (LCS 148/150, 161, 175, 218, 219 and 223), which are likely to extend into this area. Activity relating to occupation, industry, agriculture and burial has been identified during these works. Areas of heathland are likely to offer an excellent level of preservation

for any surviving below ground remains. Extant earthworks should not be disturbed by the scheme.

Suffolk Coastal & Waveney District Councils

in partnership

eastsuffolk.gov.uk

Suffolk County Council

Date: 11 May 2018
Enquiries to:
Tel: 01394 444432
Email: philip.ridley@eastsuffolk.gov.uk

Rt Hon Greg Clark MP
Department for Business, Energy and Industrial Strategy

Rt Hon James Brokenshire MP
Department for Housing, Communities and Local Government

Dear Secretaries of State

Local authority concerns regarding the cumulative impacts of Nationally Significant Energy Development on the Suffolk Coast -Offshore wind energy and international interconnector proposals making landfall and grid connection at Sizewell in Suffolk and the development of Sizewell C new nuclear power station

Overview

The east Suffolk Coast, in the vicinity of Sizewell, in the Suffolk Coastal DC area, is soon to be inundated with further major energy infrastructure projects which will provide in the region of 25% of the UK's electricity requirement. In addition to the existing Sizewell A and B nuclear power stations and sub-stations for the Galloper and Greater Gabbard offshore wind farms, the area is now expecting the Sizewell C nuclear power station plus two sub-stations for Scottish Power Renewables East Anglia Offshore 2 and 1 (North) schemes; two inter-continental connector converter stations for National Grid Ventures and a single major National Grid Transmission sub-station connecting these to the pylon lines.

The location of these developments, set out below, is set within a highly sensitive landscape, being within the Suffolk Coast and Heaths AONB and Heritage Coast. The area is also poorly served by transport infrastructure, and given the significant scale of these projects there are serious reservations with regard to how the construction of all these developments, in combination, can be delivered without further exacerbating adverse impacts on the locality and reducing the attractiveness of the area to residents and visitors alike. The points below relate to the Scottish Power Renewables and National Grid proposals, though this needs to be considered in the context of Sizewell C coming forward at the same time.

Whilst we are supportive of Government policy on the transition to renewable energy and the requirement to maintain security of supply, this letter sets out the strong concerns that Waveney District Council, Suffolk Coastal District Council and Suffolk County Council (the Councils) have about the impact of the current and future set of proposals in the Sizewell and describes an initial four practical measures that the Government could take to ensure the impacts are properly assessed and mitigated. It asks for the opportunity to meet with Ministers to explain this further.

The area also has its socio-economic challenges so these developments are seen very much as game changers, as part of a wider package of economic development investments in the area that we want to embrace and support whilst acknowledging that to do this comprehensively, for the future benefit of the area needs the support of Government to help get it right. Suffolk County Council and Suffolk Coastal and Waveney District Councils (The Councils) support and embrace the principle of low carbon energy generation and the trading of energy across a European wide transmission network and want to help them be delivered if the local dividend is for the benefit of the whole area. Therefore the Councils are committed to working together to ensure that where such schemes are brought forward they will have a positive impact on Suffolk, and East Suffolk in particular; supporting significant local growth by delivering:

- substantial economic benefits;
- significant and sustained training and skills opportunities; and
- substantial community benefits.

The Councils are also committed to driving forward substantial housing expansion and other infrastructure development in the vicinity, including the A12 Suffolk Energy Gateway, flood protection scheme at Lowestoft, the expansion of the Port of Felixstowe and the development of new river Crossings in Ipswich and Lowestoft, as well as the development of the Ipswich Northern by-pass. This letter is the first stage in a hopefully productive relationship between Government and the Councils to facilitate wider investment and infrastructure improvements in Suffolk, in particular, East Suffolk.

The Councils consider that Sizewell C is of the highest importance to Suffolk and that it offers significant local employment and skills opportunities, as well as long term economic benefits associated with 900 full time positions in the District and associated annual spend in the local economy. The Councils consider that, subject to comprehensive mitigation as well as compensatory and other packages, these benefits may balance the significant environmental, social and public amenity impacts arising from the construction and operation of Sizewell C.

The Councils note that, in addition to the extensive offshore elements of the wind projects proposed by Scottish Power Renewables (SPR), the combined onshore footprint of the offshore wind and interconnector projects, (based on preliminary discussions between Suffolk Coastal District Council (SCDC) and National Grid Ventures), is of approximately the same order as that of the Sizewell A and B stations combined.

There are four key areas where we are looking for Government to intervene at this time:

1. The proposed Scottish Power Renewables sub-stations and National Grid Transmission sub-station are intended to be treated as Nationally Significant Infrastructure Projects to be dealt with through the Development Consent Order process and will eventually be the subject of decision making by the Secretary of State for Business, Energy and Industrial Strategy. National Grid Ventures by contrast proposes that their schemes should be the subject of Town and Country Planning Act processes and decided by the District Council as local planning authority with recourse, if necessary, to the Secretary of State for Housing, Communities and Local Government. It is our view that the schemes need to be considered as a whole, in particular as the location of the first proposals to seek approval will inevitably influence the location of subsequent schemes. This will be challenging with different consenting regimes, particularly given the sensitivities of this location and the

environmental designations therein. We ask that the Government ensures that the National Grid Ventures schemes are treated as Nationally Significant Infrastructure Projects in this instance so that all of the impacts of construction and operation can be considered in the round.

2. As we understand it, consideration of the various schemes by the same regime will not of itself ensure that the in-combination impacts can be assessed before in principle decisions on location are made. The current guidance used by the Planning Inspectorate appears to be that the first of the schemes to come forward will not be able to assess the cumulative impact of schemes that will follow. However, the location of the National Grid Transmission sub-station, which will come as part of the first application, will inevitably draw subsequent development to the same broad vicinity. Yet the longer term consequences of the first decision will not be capable of being assessed when looking at its implications. The ask here is that Government should ensure that there should be recognition of the cumulative consequences of the precedent being laid down by the first decision.

3. In the view of the Councils, the most advantageous site for the location of the sub-stations and convertor stations has not been capable of being included for consideration by Scottish Power Renewables because it is owned by EDF Energy (see map appended). Although within the Area of Outstanding Natural Beauty, the landform, the existing landscaping and the relationship with the existing built structures at Sizewell A and B mean that it will be able to accommodate the scale of development required much better than any of the locations suggested by Scottish Power Renewables. Although not part of the operational land required for Sizewell B or a future Sizewell C, EDF Energy is unwilling to lose the land as they state that it is to be used for environmental mitigation of the construction of the new Sizewell C. In the view of the Councils, there is other land capable of meeting these purposes in the vicinity but which cannot so readily accommodate the substantial structures being proposed for the new energy projects. The ask of Government here is that pressure is brought to bear on EDF Energy to treat with Scottish Power Renewables to bring this land into the assessment process.

4. While other schemes in the area, notably Sizewell nuclear power station, have an on-going benefit to the area due to the additional economic activity they can bring, the Scottish Power Renewables and National Grid sub-stations and convertor stations will continue to blight the area for many years wherever they are located, yet will bring no benefit to the immediate area. The construction, care and maintenance of the offshore windfarms will have benefit in some of our ports, 30 miles or more away, but the inter-connectors will have no employment attributed to them once construction is complete. The communities need to see some sort of compensation for the impact on their areas, but it is not clear how this would come forward. We would ask the Government to support the local authorities, both in terms of encouraging the developers to compensate local communities for their impact on the environment and communities and in responding to the strategy proposed for the wider growth of East Suffolk, of which the energy projects are a part (set out in more detail later on in this letter).

We recognise the importance of the Government's energy strategy and the move towards more renewable forms of generation but would ask that we meet you in the near future so that we can

explain these issues described above in more detail and explore how Government may assist in ameliorating what appears likely be very considerable impacts on our area which is having to bear the significant growth of renewable energy. This letter has also been signed by the Leader of Waveney District Council as by the time that examination of any of the schemes, Waveney and Suffolk Coastal Districts will have been merged into East Suffolk District and there are wider implications for the whole of East Suffolk with all of these projects converging in this sensitive landscape.

Yours sincerely

[redacted]

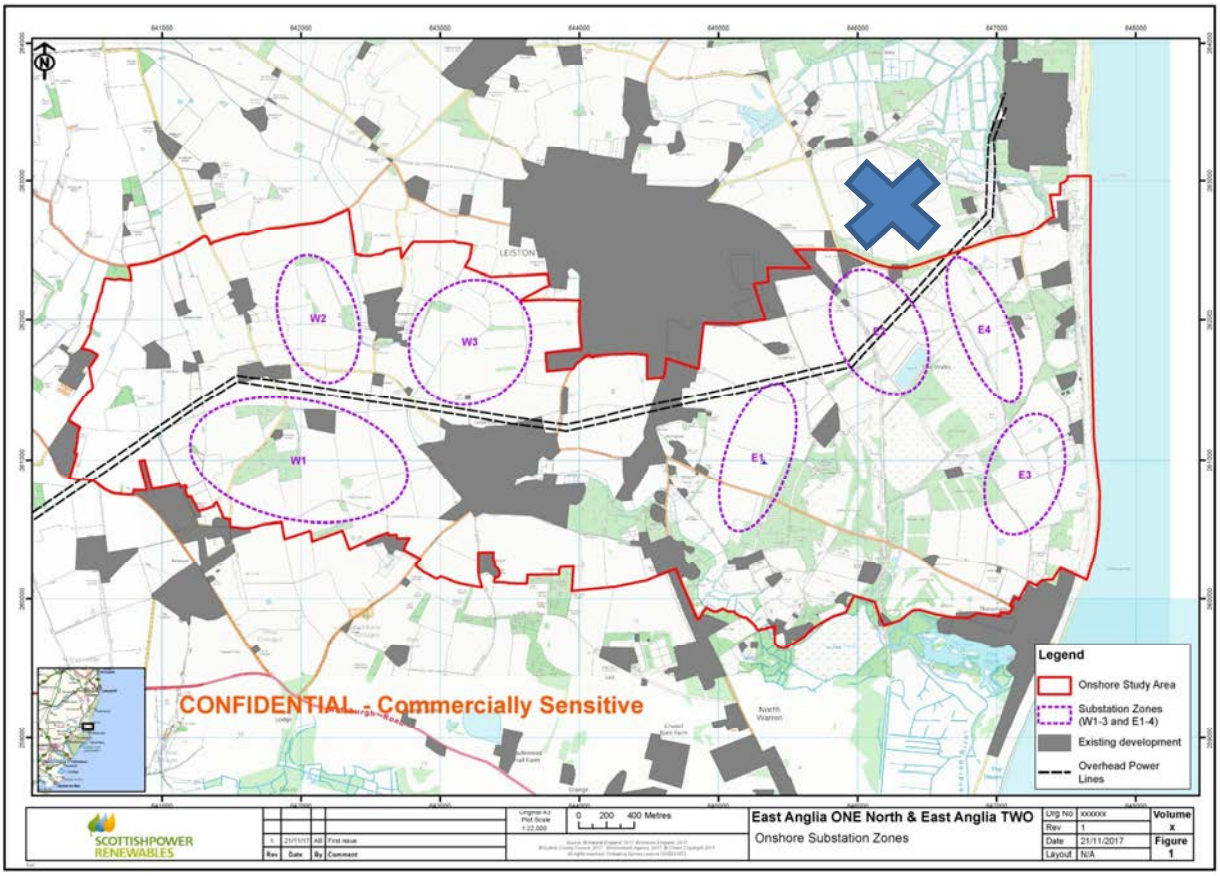
[redacted]

[redacted]

Cllr Ray Herring
Leader
Suffolk Coastal District Council

Cllr Mark Bee
Leader
Waveney District Council

Cllr Colin Noble
Leader
Suffolk County Council



The Councils preferred location for onshore equipment

Further detailed information:

Introduction

The purpose of this letter is to highlight the following key strategic issues based on the work and discussions with the various projects that has been carried out to date, relating to:

a) The proximity of the Sizewell C new nuclear, Scottish Power Renewables offshore wind farms and National Grid Ventures intercontinental connector projects;
b) The overlapping construction periods of the Sizewell C, Scottish Power Renewables, and National Grid Ventures projects;
c) The cumulative and sequential environmental, public amenity, socio-economic and infrastructure impacts of the construction and operation of these projects; and
d) The variation in consenting regimes between these projects.
e) The wider economic growth of the east Suffolk area and the linkages with these projects.

It is important to recognise that there will be other localised / detailed issues arising from the construction of the onshore infrastructure needed to support the proposed offshore wind farms and inter-continental connectors. Such detailed issues will continue to be addressed by all the Councils in their statutory role as local planning authorities; and the County Council as statutory highway authority, lead local flood, and the minerals and waste planning authority.

Background

The proposals - There are currently two Nationally Significant Infrastructure Projects (NSIPs) for offshore wind farms and one for a twin reactor Nuclear Power Station which will be going through the Development Consent Order (DCO) process in Suffolk and are currently at pre-application stage:

- East Anglia TWO (SPR)
- East Anglia ONE North (SPR)
- Sizewell C (EDF Energy)

These proposals will be determined by the Secretary of State for Business, Energy and Industrial Strategy as they are defined as a Nationally Significant Infrastructure Projects (NSIP) under the Planning Act 2008.

In addition there are two projects for International interconnectors the Councils have been made aware of via National Grid's TEC register: the offer for two inter-continental connectors – Eurolink and Nautilus to be connected to the National Grid at Sizewell.

The onshore elements of these proposals will be determined under the Town and Country Planning Act (TCPA) 1990 by Suffolk Coastal District Council as local planning authority, yet onshore, are of a similar if not more significant scale as the onshore elements of the offshore wind proposals. These proposals are not within the District's current Local Plan and should they be approached negatively, have the potential to be determined through the existing planning appeal process which is determined by the Secretary of State for Housing, Communities and Local Government. The difference in consenting regimes for the various projects has the potential to lead to risk for the promotors / developers of these various projects.

Action required –

Having reviewed the proposals and considered the benefits and dis-benefits of each of the projects proposed, it is considered that in order to optimally address the proposals singularly and cumulatively, all of the projects should be considered as Nationally Significant Infrastructure Projects under the Planning Act 2008. The interconnector projects by virtue of their international significance in maintaining security of energy in the UK and abroad and having regard to the sensitive landscape and cumulative impacts of the two National Grid Ventures projects with the new nuclear proposal and offshore wind farms necessitate and justify consideration of all of these significant energy projects under a single regime – namely the NSIP process under the Secretary of State for Business, Energy and Industrial Strategy.

Regionally

In addition, our colleagues in Norfolk are facing their own challenges with multiple offshore wind energy proposals making landfall and grid connection in Norfolk. To the south, Bradwell in Essex is proposed for a new nuclear power station; cumulatively East Anglia is proposed to be responsible for these numerous new grid connections providing for the next generation of low carbon energy supply for the UK as a whole. It has been calculated and estimated that East Suffolk alone will be responsible for approximately 30% of the UK's power generating supply to the National Grid once these projects come on line (to include connections at Sizewell and Bawdsey).

National Policy – at a national level the key energy objectives are:

- Reducing greenhouse gases (carbon reduction);
- Providing energy security; and
- Maximising economic objectives.

In order to meet these objectives more energy infrastructure is required with an increased emphasis on energy generation from renewable and low carbon sources.

The Government is committed to the following targets by 2030:

- A 40% cut in greenhouse gas emissions compared to 1990 levels;
- At least a 27% share of renewable energy consumption; and
- At least 27% improvement in energy efficiency.

It is understood that the proposals for new nuclear and offshore wind farms are recognised as being broadly consistent with national targets and objectives on renewable energy and climate change. In addition, the proposals for inter-continental connectors support the key energy objective of providing energy security by enabling energy exchange with international partners, in this instance Belgium and the Netherlands.

Grid Connection and Electricity Supply Issues

Collaboration – there have been ongoing meetings between EDF Energy and the Councils, between SPR and the Councils and at Suffolk Coastal District Councils behest between EDF Energy, SPR, National Grid Ventures and National Grid in order to understand, discuss and potentially address the cumulative impacts to East Suffolk of hosting the numerous energy projects proposed. In addition, the East Suffolk authorities with the County Council have been meeting with

Essex County Council and Maldon District Council (Bradwell) to discuss potential synergies between new nuclear projects and opportunities for collaboration, knowledge sharing and potentially resource combining.

Given the significant infrastructure required onshore to facilitate these primarily offshore projects (not the nuclear) consideration should be given to an offshore hub hosting the onshore substation requirements for all of the projects thus eliminating the massive intrusion into the rural landscape resulting from the individual projects.

Action required –

Any energy promotor / developer making landfall and grid connection in East Suffolk must work together and with the Councils to address the cumulative impacts whether beneficial or detrimental to the host communities.

Consideration should also be given to investing in an offshore hub to host necessary substation requirements and to avoid adverse significant impact on the rural environment of East Suffolk.

Socio-economic issues

There are potentially significant economic benefits arising from the new nuclear proposal at Sizewell, however, there have not been significant economic benefits arising from the offshore wind farms that have been identified to date.

Suffolk and East Suffolk is seeking:

- High quality jobs;
- Supply chain opportunities; and
- Longer term jobs – operations and maintenance.

Proposals at Sizewell C new nuclear power station will provide for 900 operational jobs located at Sizewell, there will be annual sums of millions of pounds into the local economy resulting from Sizewell C. The onshore wind farm infrastructure and onshore interconnector infrastructure do not appear to provide for any operational jobs in the local area with the main benefit being in the operations and maintenance of the wind turbines offshore. Some of this is being provided by the Port of Lowestoft and it is good to note the increased activity and jobs growth in this town which is in need of investment. However there is an unacceptable impact on the communities hosting the new infrastructure that is unlikely to be mitigated and will therefore require significant compensation.

In addition to seeking economic benefits, there must be an opportunity for the Energy Companies to work with schools, colleges and the Councils to develop a Skills Strategy aimed at creating:

- Local apprenticeships and training initiatives;
- Work experience opportunities;
- Internship opportunities; and
- Significant upskilling opportunities.

The Councils are already working closely and collaboratively with EDF Energy in this area and would welcome further investment and input from Government and the Energy Companies.

Action required –

Joint working with Government, Energy Companies and Council to develop and invest in a skills strategy which will benefit the local community and provide schools and colleges with the means to teach the new skills required to facilitate the energy projects.

Community Issues

Sizewell and its surrounding areas are proposed to be massively impacted by up to five energy projects over the next 10 – 15 years, including a new nuclear power station, landfall and onshore infrastructure associated with two offshore wind farms and landfall and infrastructure associated with two intercontinental connectors. All significant development and only the new nuclear proposal will result in permanent jobs in the locality and an ongoing supply chain opportunity.

The impact on these communities will need to be assessed, mitigated and compensated for by the Energy Companies and by Government. This also needs to be considered against the wider growth opportunities that are being brought forward in East Suffolk.

Action required –

The Energy Companies within their individual Environment Statements should provide supporting documentation on how the impacts of the onshore construction of their proposals on local communities can be satisfactorily mitigated. Any disruption caused by a cable route and the laying of cables must be kept to a minimum.

Where appropriate construction timetables between the projects should be aligned, development footprints minimised and where appropriate facilities shared such as compounds, highway routes, haul routes etc. in order to minimise adverse impacts on the local community and businesses.

In-combination effects of all projects regardless of what stage in the process they are must be considered. It is unacceptable for certain projects not to be assessed because they have yet to be formally embarked upon given the potential cumulative impacts of these large scale projects.

An appropriate compensation package is to be identified by each individual project to mitigate their own individual adverse impacts on the local community – residents and businesses, in addition a cumulative package needs to be assessed addressing and acknowledging the adverse cumulative impacts of the five projects on this part of East Suffolk and finally a Government led package of mitigation and compensation to the hosting community in recognition of their sacrifice and adverse impact resulting from their significant contribution to maintaining the UK's energy supply.

Environment

The coast at Sizewell is at the narrowest point of the Suffolk Coast and Heaths Area of Outstanding Natural Beauty, a national designation, of which East Suffolk is proud and protective. In addition, there are a suite of landscape and ecological designations on this part of the Suffolk coast, both onshore and offshore that have the potential to suffer adverse harm from these projects, in addition to the expected impacts of the construction and operation of Sizewell C.

This area currently hosts the decommissioning Sizewell A Magnox nuclear power station, the Sizewell B EDF Energy operating nuclear power station, the Greater Gabbard offshore wind farm onshore substation, the Galloper offshore wind farm, onshore substation and is proposed to host

the new nuclear power station Sizewell C. This is a significant section of the AONB hosting industrial and large scale infrastructure on behalf of the country. It is considered by the Councils to currently be mitigated by significant planting in the vicinity. However, no amount of planting can successfully mask the nuclear power station buildings.

However, it is considered that co-locating the proposed onshore infrastructure to service the offshore windfarms and intercontinental interconnectors could have a significant benefit to the wider environment and community. This conclusion has been reluctantly reached having regard to the wider issues resulting from locating the infrastructure in the agricultural countryside with greater impact on residential populations. A benefit of co-locating adjacent to the existing energy infrastructure at Sizewell is the reduction in residential properties directly impacted by the proposals. A plan of the proposed location is attached to this letter. It is land currently owned by EDF Energy and proposed for ecological mitigation in the form of reptile habitat. However, there are alternative sites that this mitigation and compensation could be located on and therefore it is considered that the optimum use of this land for the community would be to co-locate the onshore infrastructure associated with the offshore developments in this location. The land is suitable to allow re-engineering in order to mitigate the overall height of the structures and there is adequate available land to provide mitigation in the form of planting. The new buildings will still be visible but it is considered that with two existing and one proposed nuclear power stations in the background that this would help to mitigate against the developments as proposed and would ensure that the industrialisation is kept within close vicinity of each other rather than affecting a wider landscape. There would need to be significant work undertaken to minimise the adverse impact on the AONB but overall it is suggested that this could be achieved and that on balance this location within the AONB would outweigh any other site in the wider countryside in the vicinity.

Further to the socio-economic benefits and dis-benefits associated with such developments, the cumulative and in-combination effects of the construction of these projects is of particular concern given the duration and extent of disturbance and disruption to, or severance of, habitats.

This may lead to the disruption, or permanent loss, of Priority Habitats both within and outside the designated areas, which support the resilience of designated sites and sensitive species, including European Protected Species.

The area has a high number of nationally designated archaeological sites and listed buildings, and sites of high archaeological significance and potential. Proposals will have a direct impact upon surviving below-ground archaeological remains and a setting / visual impact upon above-ground heritage assets.

Action required –

EDF Energy should be required as statutory provider of energy and landowner to consider alternative arrangements for ecological mitigation / compensation land, and to consider permitting the offshore energy providers to co-locate their onshore infrastructure on EDF Energy owned land adjacent to the existing energy infrastructure including their own existing nuclear power station and proposed station Sizewell C.

Further detailed work is to be carried out to assess in-combination and cumulative impacts of the development proposals on the environment as identified previously.

Wider Economic Growth and Infrastructure requirements

East Suffolk is also embarking upon an ambitious growth programme to support the ambitions of the New Anglia LEP growth strategy and the wider support necessary to deliver much improved required transport and other infrastructure.

Embracing the development of the major energy investment helps to articulate the scale of the opportunity but that comes with some significant challenges in terms of coordinating and delivering the development in the right way for the investors but also for the host communities.

The East Suffolk Council's Local Plans will be aiming to deliver a minimum of 21000 homes by 2036, many of which are predicated on the jobs requirements of the energy businesses. In addition the east Suffolk area hosts the Port of Felixstowe which handles 44% of all container traffic imports into the UK. It needs to expand and update its facilities. This will also need improved transport connectivity along the A14/A12 and east rail. The energy developments will also have to utilise these routes for access for their construction vehicles. The offshore wind, as mentioned earlier, is having a positive impact on the regeneration of Lowestoft. Lowestoft is seeing investment in its port and related business but also CEFAS are redeveloping their premises with a £20m new development that will allow it to grow as well as develop incubator businesses too.

Action Required -

Whilst the above summary only really scratches the surface of the economic opportunities that the three councils are looking to deliver it is hoped it provides an indication of our ambition but also the challenges we face. It is in all our interests to facilitate these developments but it is requiring a planned coordinated approach with appropriate interventions as necessary to ensure that the sequencing of development and delivery of mitigation and compensations is properly and fully considered.

Summary

In summary, the Councils want to support the energy infrastructure proposed in East Suffolk but to date have not been given the confidence that to do so would not result in unacceptable harm to the local environment and the existing communities.

The potential for economic benefits in relation to the offshore proposals have to date not been demonstrated as being significant enough to outweigh the disruption and longer term adverse impact on the local environment and communities. There has been to date inadequate demonstration by Energy Companies that their proposals would be adequately mitigated and there has been no discussion to date on compensation for the residual harm which will arrive from all of the Energy Projects proposed, on the communities, residents, businesses, environment and in particular the designated landscape and coastline.

The Councils want to be able to support such proposals in the vicinity of Sizewell, but to do so, need to be convinced that such developments can be appropriately accommodated in a suitable location and that adequate mitigation and compensation will be forthcoming in particular for the local communities.

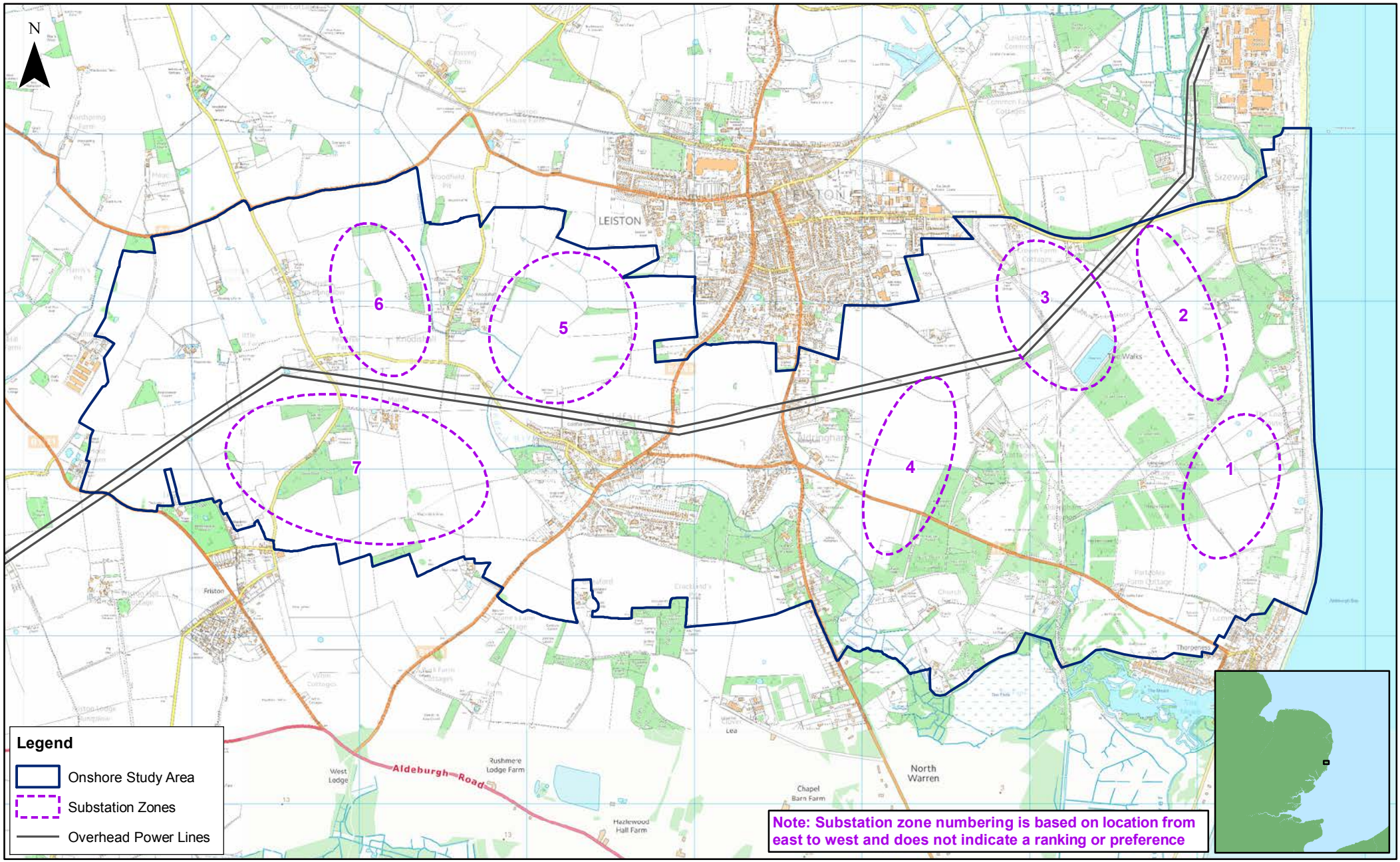
We welcome the opportunity to work closely with Government and the promotors and developers in relation to this sensitive and significant matter and would welcome a meeting at your earliest convenience.

This letter will be copied to:

1. Stephen Speed, Director, Civil Nuclear and Resilience Directorate, BEIS
2. Simon Ridley, Director General, Decentralisation and Growth
3. National Grid
4. Planning Inspectorate
5. UK Power Networks
6. EDF Energy
7. Scottish Power Renewables
8. National Grid Ventures
9. Dr Daniel Poulter MP Central Suffolk and North Ipswich
10. Peter Aldous MP Waveney
11. Dr Therese Coffey MP Suffolk Coastal

Appendix 4

Onshore Study Area and Potential Substations Zones



SCOTTISHPOWER RENEWABLES

Rev	Date	By	Comment
0	07/03/2018	AB	First Issue.

Prepared: AB
Checked: PW
Approved: AH

1:30,000 Scale @ A3

0 0.25 0.5 1 Km

East Anglia ONE North and TWO
Onshore Study Area and Potential Substation Zones

Drg No	EA1N-EA2-DEV-DRG-IBR-000687
Rev	0
Date	07/03/18
Figure	1

Coordinate System: BNG Datum: OSGB36

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Appendix 5

Summary of Onshore Substation Site Selection RAG Methodology & Matrices

Note / Memo

HaskoningDHV Nederland B.V.
Industry & Buildings

To:	Friston Village Working Group
From:	Scottish Power Renewables
Date:	30 May 2018
Copy:	
Our reference:	I&BPB4842N001D0.1
Classification:	Internal use only
Subject:	**Summary of Onshore Substation Site Selection RAG Methodology & Matrices**

The purpose of this note is to provide a summary of the methodology, assessment and matrices associated with the Red Amber Green (RAG) scoring in the Onshore Substations Site Selection RAG Assessment report (to be provided in full with the Preliminary Environmental Impact Report Chapter 4 Site Selection and Assessment of Alternatives).

Methodology

A Red / Amber / Green (RAG) methodology has been used to inform site selection. This is considered appropriate to compare a number of sites for similar infrastructure, given the ability to capture and classify the main differentiating issues in 3 fundamental categories. A RAG assessment of this type enables a clear and direct comparison between each site.

Development considerations captured within the RAG assessment include archaeology / heritage, ecology, landscape, hydrology and hydrogeology, engineering, community, landscape and visual, property and planning. These were assessed by a team of specialists comprising engineers, Environmental Impact Assessment (EIA) consultants, landscape, archaeology and ecological experts throughout the site selection process. This was undertaken using the RAG system which ranks the influence of the consideration on future development, either using defined parameters, professional judgement, or assessing the issue relative to the other potential options.

RAG is a standard assessment tool used in the pre-EIA process to assess the potential risks to proposed development options.

Each development consideration is given a score of Red / Amber / Green. These scores indicate the adverse or positive attributes to development respectively. The specific definition of each Red / Amber / Green category is detailed in Appendix A. It should be noted that if a site is awarded a Red score, this will not necessarily prevent an option being taken forward as preferred into the next stage if, overall, it performs better than others.

The surveys and desk-based investigations undertaken to date and the performance of the options relative to one another, along with professional judgement, have influenced the criteria of the Red / Amber / Green as well as the scores given. Information about the considerations is provided within the individual cells of the RAG assessment tables.

The method presents all the identified development considerations equally, i.e. there is no weighting of different development considerations relative to each other. Whilst any weighting is not incorporated in the RAG assessment findings, professional judgement, specific guidance and feedback through the consultation process is taken into consideration to inform decisions.

Assessment

Feedback from the previous East Anglia ONE and East Anglia THREE developments indicated that onshore substations for different projects, accessing the same national grid connection point, should

preferably be located together. However, a process was undertaken to identify a preferred location in which to locate a single onshore substation so that all potential onshore substation locations could be assessed individually under the RAG scoring system. The development considerations were:

- Archaeology;
- Ecology and nature conservation;
- Landscape and visual;
- Hydrogeology and flood risk;
- Engineering and design;
- Community;
- Property; and
- Planning

The RAG assessment has been undertaken for each of the onshore substation site options individually (E1, E1a, E2, E2a, E3, E3a, E4, E4a, W1, W1a, W2, W2a, W3, W3a). Criteria selected for the RAG assessment are based on criteria for judging environmental parameter capacity and sensitivity, for example proximity to, susceptibility, sensitivity / presence of environmental receptors and opportunities for mitigation. Each criterion is given a score of Red / Amber / Green, indicating the relative scale of adverse or beneficial attributes to siting development, of the nature proposed, in each location. RAG assessment scores are based on professional judgement, desk study and a field survey visit to each site location.

Onshore substation site options to the west of Leiston (W1, W1a, W2, W2a, W3 and W3a) will require a cable route from landfall to substation that crosses the Aldeburgh Road. Initial high-level engineering review of Aldeburgh Road cannot identify a suitable crossing point for a cable route that would not require the removal of woodland. As such, a Red score will be attributed to the "Proximity to mature woodland" parameter for all western NG substation site options (i.e. west of Aldeburgh Road) as this is in conflict with one of SPR's site selection principles to not interact with mature woodland

Summary Table of SPR Substation RAG Assessment
By summing the combined substation Red / Amber / Green scores for each onshore substation site option individually, the scoring for each substation zone is totalled.

Zone E1	2 x red	18 x yellow	26 x green
Zone E2	3 x red	21 x yellow	22 x green
Zone E3	8 x red	12 x yellow	26 x green
Zone E4	9 x red	10 x yellow	27 x green
Zone W1	2 x red	7 x yellow	37 x green
Zone W2	2 x red	15 x yellow	29 x green
Zone W3	3 x red	16 x yellow	27 x green

The RAG assessment did not complete the decision-making process for substation site selection. Following the RAG assessment, Zone E1, Zone E2 and all of the western sites scored below three red scores in the RAG assessment and therefore all of these zones were recommended for further investigation (as outlined at Friston Working Group presentation – AONB impact appraisal study; AONB planning policy legal discussions; traffic & access feasibility study; further landscape & visual site visits and appraisal) and discussion with statutory consultees.

Appendix A – RAG Assessment Criteria

Definitions of Red / Amber / Green for development considerations – SPR onshore substations

Consideration	Criteria	Source / survey
Archaeology		
Proximity to National Designations (SMs, grade 1 Listed Buildings)	Amber = <500m Green = >500m (or <500m but screened)	MAGIC
Proximity to Regional Designations – Local Historic Environment Records, grade II Listed Buildings	Amber = <500m Green = >500m (or <500m but screened)	MAGIC
Ecology		
Proximity to National Designations – SSSI / SPA	Amber = <500m Green = >500m	MAGIC
Proximity to Local Designations – Local Nature Reserves (LNR) / Suffolk County Wildlife Site	Amber = <500m Green = >500m	MAGIC
Proximity to mature woodland	Red = Encroaching into woodland Amber = <500m Green = >500m	OPEN site selection desk based assessment / site visit
Landscape		
Potential to affect the special qualities of the AONB	Red = Higher potential identified Amber = Moderate Green = Lower	OPEN site selection desk based assessment / site visit
Proximity to Special Landscape Areas (SLA)	Amber = If present within the sector, local authority level policy applies Green = Absent	OPEN site selection desk based assessment / site visit
Landscape character and sensitivity to development	Red = Higher identified sensitivity Amber = Moderate Green = Lower	OPEN site selection desk based assessment / site visit
Opportunity to utilise existing features for screening	Amber = Reduced identified opportunity Green = Assessment identified opportunity	OPEN site selection desk based assessment / site visit
Visual sensitivity to development	Red = Higher identified sensitivity Amber = Moderate Green = Lower	OPEN site selection desk based assessment / site visit

Consideration	Criteria	Source / survey
Hydrology / hydrogeology		
Proximity to licenced abstraction points	Red = <50m Amber = <100m Green = >100m	Environment Agency
Presence of potentially contaminated land	Amber = Present Green = Absent	Envirocheck
Source Protection Zone	Red = Sector falls within Inner zone Amber = Sector falls within the Outer zone Green = Outside all zones	Environment Agency
Proximity to fluvial flood risk	Red = <50m Amber = <500m Green = No flood risk	Environment Agency
Engineering		
Site efficiency	Amber = No identified ability to co-locate substation and NG asset Green = Option to co-locate	SPR engineering team
Highway access (construction and operational)	Red = Major constraints identified in regards to gaining access Amber = Minor constraints to gaining access Green = No constraints to access	OS 10k colour raster mapping
Proximity to high voltage electrical transmission infrastructure (overhead lines)	Red = >1km Amber = 500m – 1km Green = <500m	OS 10k colour raster mapping
Community		
Presence of residential properties	Red = Residential properties within 50m Amber = Properties located within close proximity (<250m) Green = No residential properties within 250m	OS 10k colour raster mapping
PRoW / National trails (NT)	Amber = PRoW / NT within close proximity of (<100m), or crossing site Green = No trails within 100m of	ERoY database

Consideration	Criteria	Source / survey
	site	
Agricultural Land Classification	Red = Grade 1 Amber = Grades 2 and 3 Green = Grades 4 and 5	Natural England
Sensitive land uses (schools and hospitals)	Red = Within 50m Amber = Within close proximity (<250m) Green = None present within 250m	EDUdatabase
Property		
Number of landowners	Amber = < 1 landownerships at site Green = Site within one landownership	SPR land team
Planning		
Current planning applications or knowledge of other developments	Amber = Presence of other proposed developments which may affect siting Green = No proposed developments	SPR land team

RAG assessment – SPR substation results

Criteria	Option E1 (Fig3.3)	Option E1a (Fig3.3)	Option E2 (Fig3.4)	Option E2a (Fig3.4)	Option E3 (Fig3.5)	Option E3a (Fig3.5)	Option E4 (Fig3.6)	Option E4a (Fig3.6)	Option W1 (Fig3.7)	Option W1a (Fig3.7)	Option W2 (Fig3.8)	Option W2a (Fig3.8)	Option W3 (Fig3.9)	Option W3a (Fig3.9)8)
Archaeology														
Proximity to National Designations – SMs, Grade 1 Listed Buildings	<500m but screened by woodland	<500m but screened by woodland							<500m but screened by woodland	<500m of Listed Building	<500m but screened by woodland	<500m but screened by woodland	<500m but screened by woodland	<500m but screened by woodland
Proximity to Regional Designations – Local Historic Environment Records, grade II Listed Buildings	<500m but screened by woodland	<500m but screened by woodland	<500m of HER monument	<500m of HER monument		<500m of HER monument		<500m but screened by woodland	<500m but screened by woodland	<500m of HER record	<500m of HER record	<500m of HER record	<500m of HER monument	<500m of HER monument
Ecology														
Proximity to National Designations – SSSI / SPA	<500m to SPA / SSSI	<500m to SPA / SSSI			<500m to SPA / SSSI	<500m to SPA / SSSI	<500m to SPA / SSSI	<500m to SPA / SSSI						
Proximity to Local Designations – Local Nature Reserves (LNR) / Suffolk County Wildlife Site														
Proximity to mature woodland	<500m to mature woodland	<500m to mature woodland	<500m to mature woodland	<500m to mature woodland	<500m to mature woodland	<500m to mature woodland	<500m to mature woodland	<500m to mature woodland	Cable route requires removal of mature woodland	Cable route requires removal of mature woodland	Cable route requires removal of mature woodland	Cable route requires removal of mature woodland	Cable route requires removal of mature woodland	Cable route requires removal of mature woodland
Landscape – see Appendix C Table C.1 for explanation of RAG scoring														
Potential to affect the special qualities of the AONB														
Proximity to Special Landscape Areas (SLA)														
Landscape character and sensitivity to development														
Opportunity to utilise existing features for screening														
Visual sensitivity to development														
Hydrology / hydrogeology														
Proximity to licenced abstraction points				<50m to abstraction										
Presence of potentially contaminated land														
Source Protection Zone									Within SPZ2	Within SPZ2	Within SPZ2	Within SPZ2	Within SPZ2	Within SPZ2
Proximity to fluvial flood risk		<500m to FZ3									<500m to FZ3	<500m to FZ3	<500m to FZ3	<50m to FZ3
Engineering														
Site efficiency					Limited co-location potential	Limited co-location potential							Limited co-location potential	Limited co-location potential

RAG assessment – SPR substation results

Criteria	Option E1 (Fig3.3)	Option E1a (Fig3.3)	Option E2 (Fig3.4)	Option E2a (Fig3.4)	Option E3 (Fig3.5)	Option E3a (Fig3.5)	Option E4 (Fig3.6)	Option E4a (Fig3.6)	Option W1 (Fig3.7)	Option W1a (Fig3.7)	Option W2 (Fig3.8)	Option W2a (Fig3.8)	Option W3 (Fig3.9)	Option W3a (Fig3.9)8)
Highway access (construction and operational)	Access via Aldringham	Access via Aldringham	Access via Aldringham	Access via Aldringham	Access via Aldringham	Access via Aldringham	Access via Sizewell Gap Road	Access via Sizewell Gap Road						
Proximity to high voltage electrical transmission infrastructure (overhead lines)	>500m to OHL				>1km to OHL	>1km to OHL	>500m to OHL				>500m to OHL		>500m to OHL	
Community														
Presence of residential properties	Properties <250m but screened by woodland		Properties within 50m	Properties within 50m	Properties <250m but screened by woodland		Properties within 250m	Properties within 50m	Properties <250m but screened by woodland			Properties <250m but screened by woodland		Properties within 250m
PRoW / National trails (NT)			Public bridleway <100m	Public bridleway <100m	Public footpath <100m			Public bridleway <100m		Crosses public footpath	Public footpath <100m	Public footpath <100m		
Agricultural Land Classification	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3		ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3
Sensitive land uses (schools and hospitals)				School <250m										
Property														
Number of landowners														
Planning														
Current planning applications or knowledge of other developments														
SCORE	1 red 9 yellow 13 green	1 red 9 yellow 13 green	1 red 10 yellow 12 green	2 red 11 yellow 10 green	4 red 6 yellow 13 green	4 red 6 yellow 13 green	4 red 5 yellow 14 green	5 red 5 yellow 13 green	1 red 2 yellow 20 green	1 red 5 yellow 17 green	1 red 8 yellow 14 green	1 red 7 yellow 15 green	1 red 8 yellow 14 green	2 red 8 yellow 13 green

Appendix 6

Extracts from the Galloper Wind Farm Project Environmental Statement

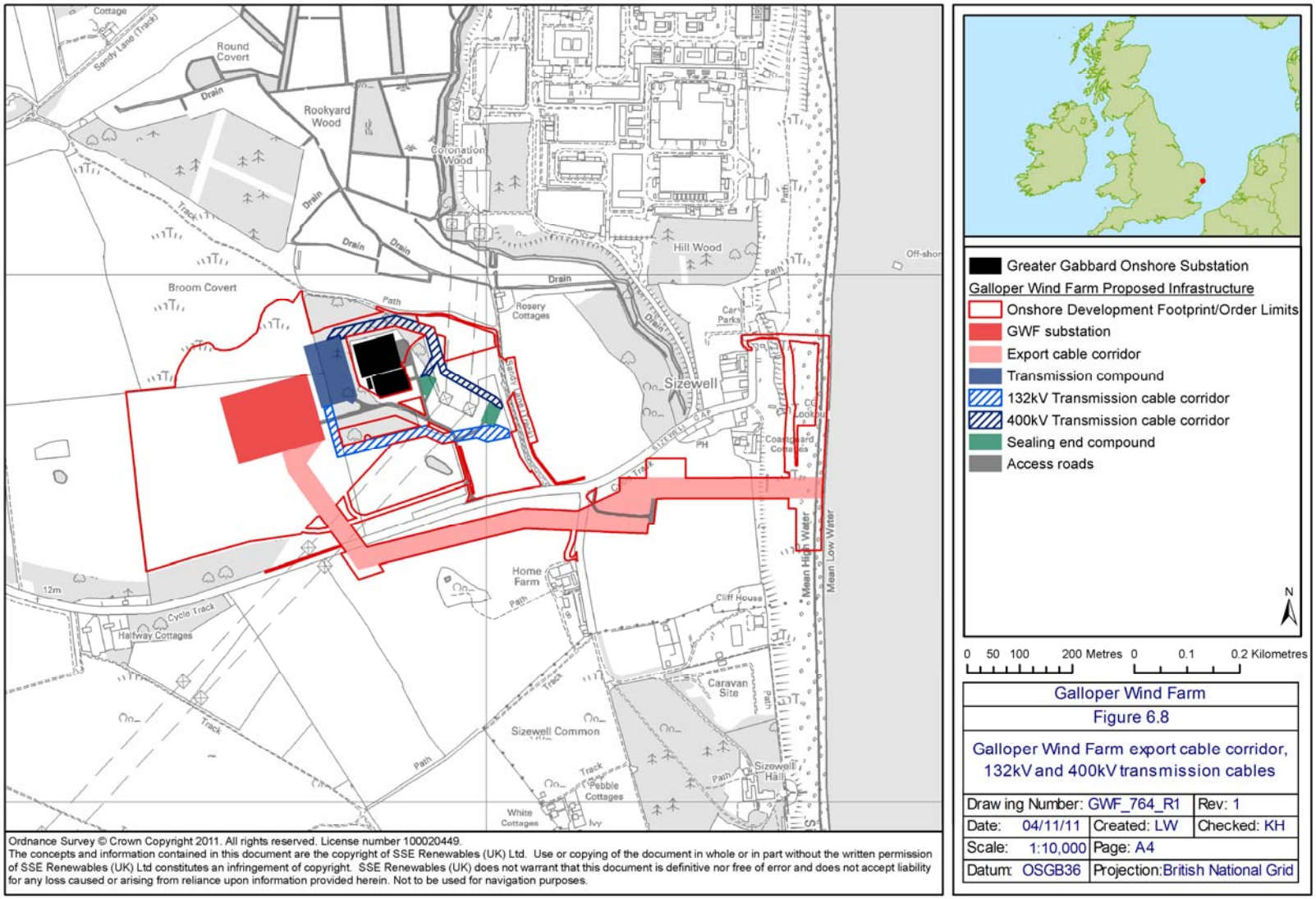
Galloper Wind Farm Project

Environmental Statement – Chapter 6: Site Selection and Alternatives

October 2011

Document Reference – 5.2.6

Galloper Wind Farm Limited



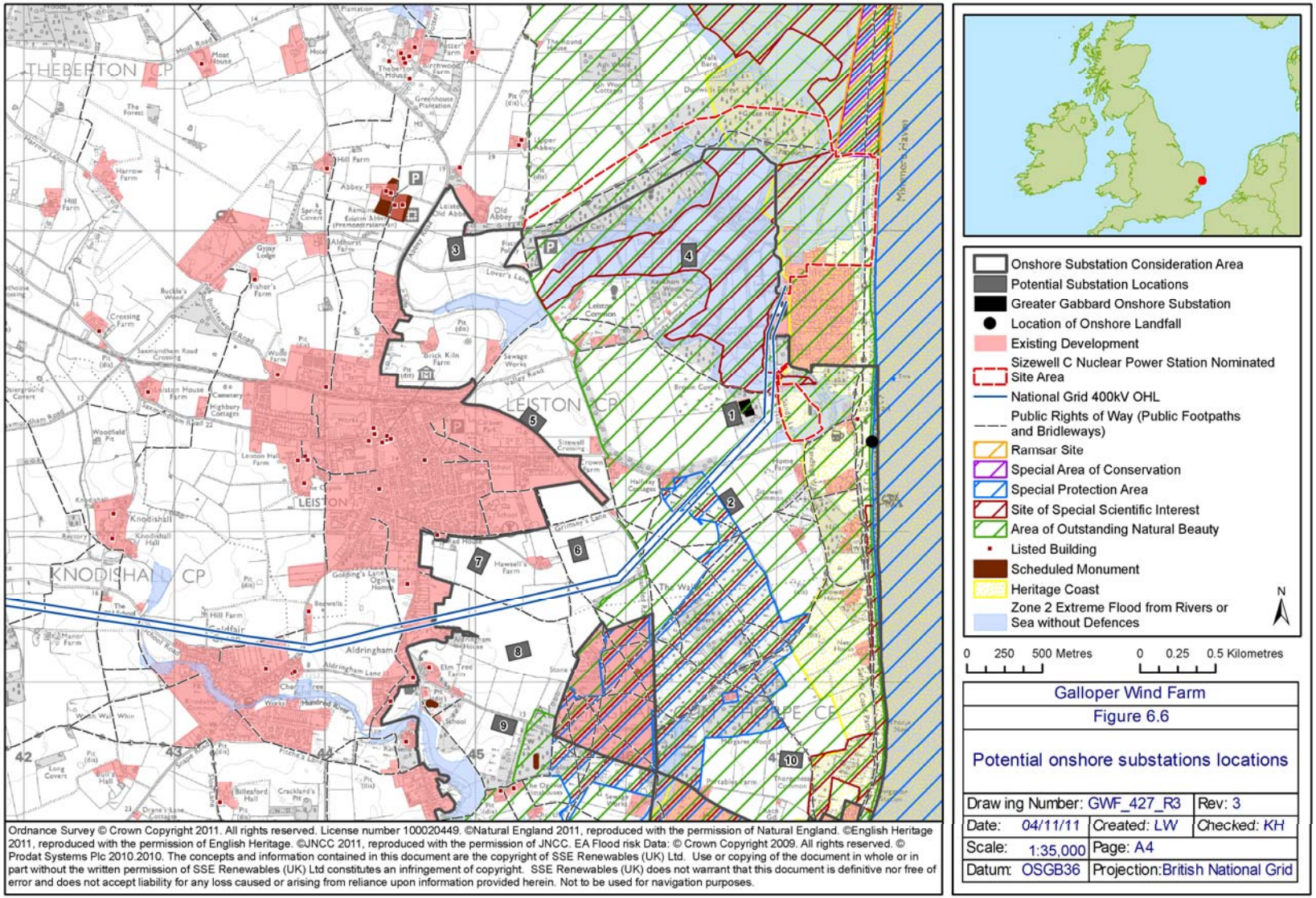


Table 6.4 Appraisal of long list of GWF compound site options

CONSTRAINTS	CRITERIA	OPTION									
		1	2	3	4	5	6	7	8	9	10
Nature conservation											
Proximity to international NC designation (Ramsar, SPA or SAC)	Amber = <0.5km,	350m	adj.	2650m	1200m	930m	500m	900m	400m	450m	300m
Proximity to national NC designation (SSSI, NNR)	Red = within, Amber = <0.2km,	250m	adj.	680m		580m	500m	900m	400m	450m	220m
Hydrology and flood risk											
Proximity to areas at risk from flooding (Zone 2)	Red = within, Green = not within										
Landscape											
Site located within a designated landscape (AONB)	Amber = within, Green = not within										
Development proposal broadly compatible with the local landscape character	Amber = not compatible, Green = compatible										
Proximity to existing industrial landscape	Amber = distant, clear = close, Green = very close										
Visual amenity											
Consistently visible from primary vehicular routes within 2km	Amber = consistently visible, Green = not consistently visible										
Consistently visible from PRoW (within 1km)	Amber = consistently visible, Green = not consistently visible										
Visible from principal settlements	Amber = visible, Green = not visible										
Visible from dwellings within 1km	Amber = visible, Green = not visible										

Landscape & visual mitigation opportunities											
Opportunity for sensitive cut and fill	, Green = opportunity, Amber = no opportunity										
Opportunity to utilise the existing planting framework	Green = opportunity, Amber = no opportunity										
Opportunity for additional planting	Green = opportunity, Amber = no opportunity										
Archaeology & cultural heritage											
Proximity to Scheduled Monuments and Listed Buildings	Amber = <0.5km, Clear = 0.5-1km, Green = >1km	2500 m	2150m	320m	1800m	1530m	1350m	900m	750m	270m	1600m
Traffic & access											
Highway access	Amber = poor, Clear = acceptable, Green = good										
Distance & constraints to connection point											
Proximity to existing NGET Infrastructure (Sizewell PS or 400kV OHL)	Amber = >1km, Clear = 0.5-1km, Green = <0.5km	160m	120m	2300m	750m	1100m	170m	200m	230m	830m	1650m
Physical/technical constraints between connection point & option (e.g. roads, settlements, industry, floodplain)	Amber = significant constraints, Clear = acceptable constraints, Green = none										
Environmental constraints between connection point & option (e.g. nature conservation designations, habitats)	Amber = significant constraints, Clear = acceptable constraints, Green = none										
Distance & constraints to landfall point											
Proximity to landfall point/area	Amber = >2km, Clear = 1-2km, Green = <1km	900m	880m	3100m	1800m	2100m	2000m	2700m	2800m	3300m	2250m
Physical/technical constraints between option location & landfall (e.g. roads, settlements, industry, floodplain)	Amber = significant constraints, Clear = acceptable constraints, Green = none										
Environmental constraints between option location & landfall (e.g. nature conservation designations,	Amber = significant constraints, Clear = acceptable constraints,										

habitats)	Green = none										
Appraisal											
Appraisal result	Y = carry forward to Step 9, N = discount	Y	Y	N	N	Y	N	N	N	N	N
	Key										
	Showstopper										
	Adverse option attribute										
	Neutral option attribute										
	Positive option attribute [note 1]										
	Notes										
	1. Positive option attribute is with respect to option selection process, does not imply a beneficial environmental impact										
	2. Distances approximate and taken from centre point of option to site boundary of designation/feature										

Appendix 4

Review of Site Selection Criteria & Application, March 2020

Landscape Briefing Note 2

Project: 1080 East Anglia One North and East Anglia Two
Date: 16th March 2020
Purpose: Review of site selection criteria & application
Reference: 1080 BN02 RAG criteria & application .docx

Introduction

1. To assess and compare potential onshore substations sites Scottish Power Renewables (SPR) and the National Grid (NG) used a Red/ Amber/ Green (RAG) assessment approach. RAG assessments were carried out separately for potential SPR substation sites (serving East Anglia ONE North & East Anglia TWO) and NG substation sites. The criteria were almost identical.[1] Substation Action Save East Suffolk (SASES) have instructed Michelle Bolger Expert Landscape Consultancy (MBELC) to review the criteria used within the RAG assessments and their application.

2. Appendix 1 to this Note contains the relevant RAG criteria and their application with regard to the scoring of the site options near Friston. For the SPR substations the relevant site references were 'Options 7/7A' and 'NG7' for the NG substation. We have set out below our comments with regards to each criterion and where relevant commented on any issues with its application.

[1] 'site efficiency' was only used in the SPR assessments and not the NG assessment

Potential to affect the special qualities of the AONB

3. Criterion is considered to be appropriate.

Proximity to Special Landscape Areas (SLA)

4. Criterion is considered to be appropriate however we are concerned that it has not been applied consistently. The impact of the proposed cable route connection on this criterion with regard to site options in the west of the Study Area (including Options 7/7A) was not identified. This cable route connection option runs across the Hundred Valley SLA. The tree loss caused by the cable route was accounted for under the criteria '*proximity to mature woodland*' for all applicable options but this is not the same as acknowledging the impact on the SLA's overall landscape qualities.

Landscape character and sensitivity to development

5. To be consistent with GLVIA3 the title of this landscape criterion should have been Landscape Character and Susceptibility not sensitivity. This is because landscape sensitivity as defined by GLVIA3 is derived from: 'combining judgements about **susceptibility** [of the landscape] to the type of change or development proposed and the **value** attached to the landscape'.[2] (See Appendix 2 for definitions of susceptibility and value). Value has therefore been double counted, as a value judgement it is also intrinsically part of the AONB/SLA criteria.

6. Options 8/8A scored Amber against *Landscape character and sensitivity to development* whereas Options 7/7A scored Green. The RAG assessment specifically acknowledges that the landscape character area (LCA) in which Options 8/8A are located is less susceptibility to substation development than the LCA in which Options 7/7A are located. Despite this Options 8/8A scored Amber, because it is within the AONB and the value of the AONB has been counted again, whilst Options 7/7A scored Green.[3] The difference between the two sites is their proximity to the AONB and this has already been recognised in response to the criterion *Potential to affect the special qualities of the AONB*. It should not have been allowed to 'leak into' this assessment as well.

7. We are also concerned that the *Landscape character and sensitivity to development* criterion does not appear to have been applied consistently or fairly. This is particularly evident in a comparison of Options 6/6A and Options 7/7A. Both Options are in the same LCA but Options 6/6A scored Amber whereas Options 7/7A scored Green. The assessment of Options 7/7A refers

[2] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 88, Paragraph 5.39

[3] East Anglia ONE North Offshore Windfarm, Environmental Statement Volume 3, Appendix 4.2, Table C.1

to detracting influences, such as the A12 road and '*intrusion of suburbanisation*'. Neither of these factors are relevant to Options 7/7A. At the same time there is no description of the local landscape context at Friston which is relevant to Options 7/7A.

8. We assume the A12/suburbanisation are referenced because they are relevant to the overall LCA in which Options 7/7A are located (the Ancient Estate Claylands LCA). However, these same influences have not been referenced in the assessment of Options 6/6A which is also within the Ancient Estate Claylands LCA. Furthermore, unlike 7/7A the assessment of Options 6/6A does highlight the local landscape context of Options 6/6A.

9. It is significant that in the RAG assessment of the NG sites (which was undertaken separately but using the same criteria) NG7 (at Friston) scored Amber. The accompanying text is worded almost exactly the same as that undertaken for Options 7/7A, the SPR substations. We assume therefore that the Green scoring of the SPR substations, Options 7/7A, is a mistake as similar sites have been scored higher and there is no explanation why Options 7/7A should be scored lower.

Opportunity to utilise existing features for screening &
Visual sensitivity to development

10. Both criterions rely upon an assessment of the screening provided around a site and the '*potential to mitigate the visual effects*'. At Friston the woodland around the site is referenced under both criteria and appears to have been a key factor in Options 7/7A scoring green for both. We are concerned that the basis on which the criteria have been assessed are very similar and amounts to double counting.

11. We are also concerned that this criterion also does not appear to have been applied consistently. For example, it is unclear why Options 6/6A scored Amber with regard to '*visual sensitivity to development*' whilst Options 7/7A were assessed as Green. Both are located in open countryside, near to settlement, and contain PRoWs and in this respect have similar visual sensitivity to development. Locally, Options 7/7A are described as highly visible whereas visibility of 6/6A is described as more limited. The assertion that the existing overhead lines have a 'strong influence' over visual amenity for Options 7/7A is considered to be an exaggeration. No description is provided of the attractive views such as views towards Friston Church whereas the description of Options 6/6A highlights the area's '*distinctive character*'.

12. As with the landscape criterion, the RAG assessment for the NG7 substation site, also located north of Friston, scored Amber with regard to '*visual sensitivity to development*'. It not logical that there should be a difference between the two assessments and there is no explanation of the discrepancy.

Proximity to Mature Woodland

13. This criterion is the only one to consider the impact on vegetation, but its scope, focusing only on mature woodland, is considered to be unduly limited. For a project of this scale and nature a criterion should have been included/ or this criterion amended to consider the potential impact on other vegetation such as important hedgerows. Without considering other vegetation, the RAG assessment failed to recognise the potential of Options 7/7A/NG7 to have a particularly harmful impact on the vegetation framework north of Friston.

PRoW/NTs

14. Only a Green or Amber score was possible against this criterion. The RAG assessment should have included a Red score to acknowledge sites which sever a PRoW such as Option 7. A wider consideration of the overall impact of the development on PRoWs (e.g. resulting from access roads etc), not just the substation site specifically, should have also been considered.

Missing Criteria

15. The following considerations were not included in the RAG criteria and should have been:

    - The overall amount of land required (or development footprint). This is significantly greater for sites in the west of the study area (e.g. Options 7/7A) compared to those in the east due to the land required for the cable route.
    - Relationship to settlements. This is a significant omission particularly in the case of the Friston options.
    - Local landscape character. It is not appropriate to focus only on LCAs which was the case for Option 7/7A.
    - Highways access was considered but not in terms of the length of access road required and its impact on the landscape resource. As such options 7, 7A and NG7 scored Green for highway access even though they require an excessively long access road, 1,700m.
    - The impact on important views and landmarks such as views towards Friston Church were not considered and this is another significant omission.

Comments on Methodology

16. We note the following concerns regarding the RAG methodology more generally.

- The RAG Methodology states that '*RAG is a standard assessment tool used in the pre-EIA process **to assess the potential risks to proposed development options***'[4] (emphasis added). Whilst it is entirely correct that SPR/ NG need to 'assess the potential risks to proposed development options' it is not the same exercise as assessing the **potential environmental impacts** of development options, which ought to be a separate exercise. If considered at the same time as the consideration of potential environmental impacts, it has the potential to contaminate the process and the results.
- No RAG assessment considered the impacts of all three substations in one location as the RAG assessments were undertaken separately for the SPR and NG substations. ES Appendix 4.2 explains that there was no RAG assessment which considered the impact of co-locating three substations on one site:

  > *'This report does not provide a recommendation for preferred co-location of SPR substations and a NG substation as the issue of cumulative impact and capacity of the landscape to accommodate three substation sites of the size proposed is not considered in the RAG assessment – the relative merits of each site is assessed individually, to inform which areas to explore further as part of the site search. **The RAG assessment does not consider the combined effect / suitability of co-locating three substation sites for EA1N, EA2 and NG AIS together in one location. This would require a different scoring/RAG assessment***'.[5] (Emphasis added)

  Reference is made to a 'landscape capacity study' looking at the cumulative impact of locating three substations together undertaken after the site selection stage. We have not yet reviewed the capacity study in detail but will do as part of our ongoing review work.
- A number of criteria could not score Red (only Amber or Green). Therefore, the conclusion in the RAG methodology that all criteria (considerations) were treated equally is incorrect.[6] Of particular relevance to Friston is the fact that a Red score was omitted from the scoring

[4] East Anglia ONE North Offshore Windfarm, Environmental Statement Volume 3, Appendix 4.2, Paragraph 26

[5] East Anglia ONE North Offshore Windfarm, Environmental Statement Volume 3, Appendix 4.2, Paragraph 53

[6] East Anglia ONE North Offshore Windfarm, Environmental Statement Volume 1, Chapter 04, Paragraph 126

used to assess impacts on PRoW. The Friston site is one of only two that would actually sever a PRoW; an impact which we consider should have warranted a Red score.

- The original RAG assessment was based on an assessment of broad development zones or areas of search. It is not clear when the assessment changed to an assessment of the substation options shown in ES Appendix 4.2 Figure 3.2 which are for specific substation sites.
- ES Appendix 4.2 Figure 4.1. shows that the assessment of NG substation option at Friston was for a different location to that which is now proposed. It is shown further north and west from its proposed location and Friston village.

Conclusion

17. The RAG assessment is flawed because it:

    - Failed to include key criteria such as local landscape character and the relationship to settlement.
    - Inconsistently applied criteria.
    - Contains double counting.
    - Weighted certain criteria differently without explanation (e.g. no Red score for PRoWs)
    - Did not consider all three substations together.
    - Was an exercise focused on assessing '*the **potential risks to** proposed development options*' rather than the **potential impacts of** proposed development options.

18. The findings of the RAG assessment are therefore considered to be unsound and should not have been relied upon to inform the next stage of the substations site selection process.

Appendix 1: Considerations and Criteria used in RAG Assessment

The following table provides the 'considerations' and 'criteria' used within each RAG assessment as stated in ES Appendix 4.2 Appendix B. Also provided are the reasons for the inclusion ('*why this criteria?*') of the specified landscape considerations and the RAG assessment scores for each consideration as stated in Appendix C Table C.1 (SPR substations) and Appendix D Table D.1 (NG substation).

Consideration (SPR/NG)	Reason for Inclusion (SPR/NG)	Criteria (SPR/NG)	RAG Scores for Friston Substation Options (SPR/NG)
Landscape			
Potential to affect the special qualities of the AONB	Special qualities of the AONB are the qualities against which landscape effects of development would be measured.	Red = Higher potential identified Amber = Moderate Green = Lower	SPR 7 = Green SPR 7a = Green NG 7 = Green
Proximity to Special Landscape Areas (SLA)	SLA designation is identified in SCDC LDP and is an indicator of potential local landscape (scenic) value.	Amber = If present within the sector, local authority level policy applies Green = Absent	SPR 7 = Green SPR 7a = Green NG 7 = Green
Landscape character and sensitivity to development	Identification of the LCA in which development is located and an initial judgement about the sensitivity of the site in this LCA (in terms of its overall character, its quality and condition) and any individual landscape elements that are sensitive to development.	Red = Higher identified sensitivity Amber = Moderate Green = Lower	SPR 7 = Green SPR 7a = Green NG 7 = Amber
Opportunity to utilise existing features for	Scope for mitigating potential visual impacts and likelihood that changes could be mitigated, for	Amber = Reduced identified opportunity	SPR 7 = Green SPR 7a = Green

Consideration (SPR/NG)	Reason for Inclusion (SPR/NG)	Criteria (SPR/NG)	RAG Scores for Friston Substation Options (SPR/NG)
screening and modify/mitigate visual impacts	example through utilising existing woodland features to screen development, potential to plant trees to screen development, or create appropriate landscape design proposals that integrate the development with the landscape.	Green = Assessment identified opportunity	NG 7 = Amber
Visual sensitivity to development	Judgement of the visual sensitivity of each site, in terms of its general visibility and potential scope to mitigate the visual effects of any change that might take place. Visibility will be a function particularly of the landform and of the presence of potentially screening land cover, especially trees and woodland. It will also be a reflection of the numbers of people/sensitivity of receptors who are likely to perceive the landscape and any changes that occur in it, whether they are residents, road users, walkers or visitors.	Red = Higher identified sensitivity Amber = Moderate Green = Lower	SPR 7 = Green SPR 7a = Green NG 7 = Amber
Ecology			
Proximity to mature woodland	No explanation.	Red = Higher potential identified Amber =	SPR 7 = Red SPR 7a = Red NG 7 = Red

Consideration (SPR/NG)	Reason for Inclusion (SPR/NG)	Criteria (SPR/NG)	RAG Scores for Friston Substation Options (SPR/NG)
		Moderate Green = Lower	
Community			
PRoW / National trails (NT)	No explanation.	Amber = PRoW / NT within close proximity of (<100m), or crossing site Green = No trails within 100m of site	SPR 7 = Green SPR 7a = Amber NG 7 = Amber

Appendix 2: Definitions of Landscape Sensitivity

19. Landscape sensitivity as defined by GLVIA3 is is derived from: 'combining judgements about **susceptibility** [of the landscape] to the type of change or development proposed and the **value** attached to the landscape'.[7]

    - **The susceptibility to change of a landscape** is: '*the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular landscape type or areas, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies*'.[8]
    - **Landscape Value** '*the relative value that is attached to different landscapes by society, bearing in mind that a landscape may be valued by different stakeholders for a variety of reasons...A review of existing landscape designations is usually the starting point in understanding landscape value but the value attached to undesignated landscapes also needs to be carefully considered*'.[9]

[7] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 88, Paragraph 5.39

[8] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 88, Paragraph 5.40

[9] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 80, Paragraph 5.19

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SASES
Substation Action Save East Suffolk **27th October 2020**

Scottish Power – EA1N and EA2 – Report on Proposed Mitigation Planting

1. Introduction

I have been asked to provide comment on the Scottish Power Renewables Outline Landscape and Ecological Management Strategy.

The document I have reviewed:

Applicant: East Anglia ONE North Limited
Document Reference: 8.7
SPR Reference: EA1N-DWF-ENV-REP-IBR-000389 Rev 01
Pursuant to APFP Regulation: 5(2)(q)
Author: Royal HaskoningDHV
Date: October 2019
Revision: Version 1

2. My background & Expertise

2.1 I will offer detail of my experience and knowledge as background on my ability to comment. I have gained over 40 years direct and hands on experience within the horticultural and landscape industries. All of this has been in Suffolk and the immediate surrounding counties.
2.2 I act for both private and commercial clients in both an advisory and consultative capacity. I have worked for local authorities including Suffolk County Council, Ipswich BC and Suffolk Coastal DC (as was). In the Commercial Sector, I have designed and built schemes for clients including British Sugar and Anglian Water
2.3 I am Managing Director of Botanica Plant Collections Ltd (T/A Botanica Nursery and Arboretum) which has a nationwide reputation for growing rare and unusual trees and shrubs and also growing purely UK grown and UK Provenance native trees and shrubs – we do not import any plant material
2.4 Botanica is Holder of the Plant Heritage National Collection Holder of Santolina and provisional holder of Osmanthus.
2.5 I am also manager of Landscapes by Botanica a specialist landscape contracting company involved in native tree planting and creation of woodland and wildlife habitats as well as construction of lakes and wildlife ponds. We work mainly in Suffolk with some work in the neighbouring counties.

2.6 I can provide testimonials and referees should you feel this necessary.

Chantry Farm, Campsea Ashe, Woodbridge, Suffolk IP13 0PZ. Tel 01728 747113 e-mail: info@botanic.org.uk

3. My Findings Para 78

3.1 No reference to soil structure, ph test or EC readings are given to recommend the suitability of these choices other than 'planting reflects the prevailing landscape character and growing conditions'.

3.2 Core Native Woodland (W1, W3, W4)
The selection of alder may be suspect due to the increasing susceptibility and spread of the fungal pathogen 'Phytophthora' affecting Alnus species and causing death of the tree.

3.3 Core Native Woodland (W3)
Black Poplar is chosen as a species in the Native Screening Mix. Though a fast growing rare native, it is and was usually found as a solitary or small group specimen often near to farmsteads. I would say that the species would then over dominate and be against the natural order.

3.4 Core Native Woodland (W3)
The choice of Sorbus as a "quicker growing native" tree in this region is in my opinion suspect. It generally makes a relatively small tree of poor to medium growth rate.

3.5 No mention has been made to ensure that the stock planted will be UK grown and UK provenance ideally originating from Forestry Commission region 405 or 406.

4. My findings Para 79:

4.1 Species mixes for these areas of woodland are shown in Table 3.2 to Table 3.5
I would comment on the choice of Prunus padus as a core mix species. This species requires a moisture retentive soil and drier locations may be unsuitable. The species is not therefore suitable for general planting and would be better suited to the drier fringes of the Native wet woodland (W4)

4.2 Native Edge Woodland Mix: Salix caprea is often regarded as a 'Pioneer Species' of very poor planting conditions. Given that it is 10% of the overall mix it will self-seed and may overtime become over dominant.

5. My findings Para 84:

5.1 It is unlikely that all the cell grown plants species listed will be as large as 60cm. They are usually listed by nurseries supplying cell grown stock (such as Alba Trees or Cheviot Trees) as between 20cm to 60cm. My experience is that dependent on species many are often not much more than 40cms.

5.2 The expected growth rates of 30cm per year for the first five years followed by 50cm per year for the ten years following is in my opinion optimistic given the present dry summers experienced in Suffolk. I would say that these growth rates are only possible

given a nursery situation of intensive irrigation and care. I question whether in reality, bearing in mind the size and area of planting, that an embedded best practice maintenance regime, to the high level required, would take place to achieve such excellent predicted growth rates. This would necessitate the installation and continuous use of an extensive irrigation system together with mulching to retain moisture. This is as well as weed and herbage control to maintain weed free areas around the plants. Without this I would anticipate much less than 'the assumed growth rates'. Given the latest predisposed weather conditions of very dry Springs with little if any rain during the critical establishment period and given the types of soils in the area; high losses could be expected. I have seen losses up to 70% - 85% in nearby locations, necessitating a replanting program.

5.3 I have extensive experience of large-scale planting in this geographical area. Observation of schemes locally show poor or minimal growth rates using cell grown stock with inadequate maintenance regimes. As an example, I have seen only 1.2m achieved after 5 years.

5.4 I advise assuming Year 1 to be the establishment year where growth can often be as little as 10 cm on some species. The following and successive years and given dry summers, growth rates can often be 50% or less of what is predicted.

6. My findings Para 89:

6.1 Individual Tree Planting. Reference to proposed hedgerows are supplemented with larger hedgerow trees being planting at a larger size (e.g. 1.6m). This size is not a recognised industry standard size. To be clearer the size could be specified as either 1.5/1.8m feathered tree or 1.8/2.1 feathered tree.

7. Conclusion

I hope you find these comments helpful in your deliberations and I would be happy to expand should you wish. I have not at this stage provided alternative recommendations for planting and aftercare but would be able to do so if required in the future.

Jon Rose

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