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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)**

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Suffolk Coastal (East Suffolk)

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CONTENTS

I	Executive Summary	I
2	Introduction	8
3	Landscape Planning Policy Context	11
4	Proposed Development	15
5	Published Landscape Character Assessments	20
6	Local Landscape Character Context at Friston	26
7	Landscape Effects	31
8	Visual Effects	43
9	Cumulative Effects	46
10	Submitted Landscape and Visual Impact Assessment (ES Chapter 29)	48
11	Mitigation Proposals	57
12	Compliance with landscape related planning policy	63

APPENDICES

Appendix 1: Figures (Provided in a separate A3 document)

Appendices 2-4 are provided in a separate A4 document.

Appendix 2: Methodology

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

Appendix 4: Review of site selection criteria & application, March 2020.

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 components¹, 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

⁵ EN-1 4.5.1

⁶ EN-1 4.5.2

⁷ EN-1 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 landscape⁸ 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 I Chapter 6 Glossary of Terminology

¹⁹ Overarching National Policy Statement for Energy (EN-I), 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 I Chapter 6 Project Description 6.7.7

²² East Anglia ONE North Offshore Windfarm Environmental Statement Volume I 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 I 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. Whilst 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 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 landscape³⁸. 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 micro-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 design⁴⁰ 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 components⁴², 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 AOD⁵², whilst the village is at 8-15m AOD).
- The development features numerous elements (up to 18m high⁵³) 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 PRoWs⁵⁵ north of Friston village:

- Fp 6⁵⁶ - 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 7⁵⁷ - 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 L1⁶² 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 5 years. 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 acknowledge 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 Assessment⁶⁴. 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	<u>High</u> on localised area to north of Friston within approximately 1.0km around the onshore substation and National Grid substation.	<u>Significant</u> , short-term and temporary on localised area to north of Friston within approximately 1.0km around the onshore substation and National Grid substation.
<p>MB Comments - A high magnitude of change on a landscape with medium/high sensitivity results in a major adverse or moderate/major impact.</p> <p>As the construction period may be in excess of 4 years the constructions effects should be assessed as medium term.</p>			
Operation (Year 1)	Medium-high	<u>High</u> (text as above)	<u>Significant</u> , long-term and temporary. (text as above)
<p>MB Comments - A high magnitude of change on a landscape with medium/high sensitivity results in a major adverse or moderate/major impact.</p> <p>As there the effect remains significant at 15 years it is incorrect to say that this effect will be temporary.</p>			
Operation (Year 15)	Medium-high	<u>Medium/High</u> (text as above)	<u>Significant</u> , long-term and permanent. (text as above)
<p>MB Comments - A medium/high magnitude of change on a landscape with medium/high sensitivity results in a moderate/major impact.</p> <p>It is important to note that there is no significant difference between operation Year 1 and Year 15.</p>			

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

- 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 years⁶⁵) and scenario 1 a short-term effect (1 to 4 years⁶⁶).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 term⁶⁸ (more than 10 years⁶⁹). 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 from 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 public 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 difficulty 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 AOD⁷⁹ (not 20.7m as stated in the OLMP) and for the western SPR substation the ground levels would be 19.8m AOD⁸⁰ (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 framework⁸¹, 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 than 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 Guidelines⁸³ 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 landscape⁸⁷ 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-1 4.5.1

⁸⁵ EN-1 4.5.2

⁸⁶ EN-1 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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