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

SITE SELECTION

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

Date: 2 November 2020 **Issue:** 4

Summary

1. The Applicant's site selection process is fundamentally flawed and has resulted in a proposed grid connection at Friston which causes significant adverse effects as reported elsewhere in Written Representations.

2. The relevance of the site selection process, and the need to scrutinise it through this process, is made clear by law and policy. In terms of the law, the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 require consideration of the reasonable alternatives studied by the applicant (regulation 14(2)(d)). However, as a matter of general principle alternatives may be relevant where the proposed development would cause such adverse effects that alternative locations should be considered, or where there is a specific policy requirement to consider alternatives. Both apply here. The considerable adverse effects of the proposed development in the Friston area are set out in other representations. There are specific policy requirements to consider alternative locations through sequential testing for flood risk, and also through the need to avoid significant adverse noise effects, and to seek to avoid harm to heritage assets.

3. In those circumstances the Applicant's assessment falls to be scrutinised.

4. However, there is an additional point of considerable significance relating to National Grid proposals which form part of these applications. The DCOs seek to authorise three NSIPs: two for offshore windfarm projects, and one for National Grid infrastructure. Accordingly, the process undertaken by National Grid to make a grid connection offer in the Leiston area is also a matter which falls to be scrutinised. That process was flawed. It has subsequently constrained the the Applicant's consideration of alternative sites.

Approach to locating grid connection in the Leiston area

5. The starting point for the consideration of the Applicant's assessment is the process by which the general area for a connection was identified. It is important to note here that the proposals in the DCOs include a new National Grid substation: this is not a case where National Grid have made a grid connection offer in respect

of a defined location, but rather where National Grid expect the Applicant to propose a new National Grid substation and associated infrastructure.

6. Since a National Grid NSIP comprises part of the proposed development under each DCO, the site selection process used by National Grid to identify the location of a grid connection must also be considered. If it were not, then the duties to report on alternatives would be avoided simply by the site selection process being carried out by the true developer, but the application being made by a third party[1].

7. National Grid is under specific statutory duties in respect of its operation of the grid. Section 3A of the Electricity Act 1989 sets the "principal objective and general duties" of the Secretary of State and the regulator. One of the general duties it to promote efficiency and economy on the part of licence holders, and in carrying out those functions regard must be had to the effect on the environment of activities connected with the transmission and distribution of electricity. These duties are reflected in National Grid's obligations as the licence holder for the electricity transmission network.

8. Section 9 of the Electricity Act 1989 imposes general duties on licence holders including to develop and maintain a "co-ordinated" system of transmission as well as an efficient and economical system. Section 38 applies Schedule 9 to the Act which imposes duties in respect of amenity and other matters. In particular, in formulating proposal the licence holder must for example have regard to the desirability of preserving buildings of historic interest and do what reasonably can be done to mitigate the effects of the proposals. These duties are expressly referred to in EN-5 (paragraph 2.2.6).

9. The licence holder is also required to explain how these duties have been discharged (see EN-5 paragraph 2.2.7). National Grid must demonstrate that it has met its commitments in respect of these duties with respect of the decisions on the siting of its infrastructure.

10. National Grid establishes grid connection offers through the Connection and Infrastructure Options Note Process[2] ("CION"). Regrettably National Grid's approach to this process is opaque, despite the fact that it may significantly influence the form of energy projects through identifying a limited list of connection options. The public explanation of the process by which a connection offer was made in the Leiston area is set out in a note dated 28 June 2018[3].

[1] In this respect it is noted that the Funding Statement explains that the DCOs seek land and rights on behalf of National Grid to enable it to construct and operate the new infrastructure.

[2] https://www.nationalgrideso.com/document/45791/download

[3] https://www.scottishpowerrenewables.com/userfiles/file/National_Grid_COIN_Process_Connection_Assessment_Note.pdf

11. The first point to note is that the CION process for these projects considered alternative locations for connection, including at Bramford. The latter was rejected on the basis that a new cable corridor would be required. There are a number of important points to be made about Bramford:

    a. Bramford is an existing large substation site;

    b. Bramford was originally identified as the connection location for all of the EA windfarms (see ES Ch 4 para 49). The EA ONE DCO provided for a cable corridor which would accommodate a number of other cables to accommodate later phases of the EA projects. However, the project was altered to accommodate only EA ONE and EA THREE OFWs. Whilst a new cables would have to be laid, there is no explanation of any impediment to doing so (the route having been previously consented);

    c. Scottish Power Renewables and National Grid have substantial landholdings at Bramford which could accommodate new infrastructure without the need for compulsory purchase.

12. The Applicant has provided very little information about the CION process and the options considered in it. Table 4.3 in Chapter 4 of the ES does not appear to provide any justification for the selection of the Leiston area as opposed to Bramford. For example, the Bramford option could have a cable route which "could avoid designations" and a suitable landfall has been identified. Whilst cumulative effects at Bramford are noted, it is also recorded that there are no high-level designations there and there is already notable electricity infrastructure planned for it. It is not suggested in that table that the Bramford cable route is constrained by the existing EA cables. The ES fails to explain why the proposed connection in the Leiston area is "the most economic and efficient" and what consideration was given to "environmental and programme implications". Further, in light of the statutory duties described above, the justification should address (a) the co-ordination of the grid and (b) compliance with the environmental duties imposed by Schedule 9 and the licence. None of that explanation has been offered by the Applicant or by National Grid.

13. It is essential that these issues are the subject of further scrutiny in the examination process. At the very least, the Applicants have failed to demonstrate why Bramford would be less acceptable than the creation of a new grid connection point and substantial electricity infrastructure at Friston.

14. Since development consent is sought for National Grid infrastructure to enable the connection to be made at Friston, the basis upon which National Grid has selected the Leiston area is a matter plainly within the scope of the examination. The selection process is not properly explained. Nor has National Grid explained how it has met its statutory duties in respect of the environment in making the grid connection offer. For the reasons set out above, it is no answer to say that the

Applicant is not National Grid, because development consent is sought of the National Grid NSIP on its behalf.

15. Consideration also needs to be given to the BEIS Offshore Transmission Network Review[4]. As noted at the Preliminary Meeting, these projects are within the scope of the review. The need to ensure a coordinated approach to transmission may fundamentally alter the way in which sites are selected. The ExA has already indicated that this matter will be considered further in the examination

Applicant's assessment

16. There are numerous shortcomings in the Applicant's site selection process. At the outset, it is noted that the Applicant has understated the environmental effects of the proposed development at Friston (see further Written Representations). If those effects are properly and fully assessed the conclusions in the site selection process can no longer stand.

17. There are also conceptual issues which undermine the assessment. For example, the Applicant proceeds on the basis that the co-location of the substations with the National Grid substation is required. Once that assumption is removed, it is possible that more sites would be capable of accommodating the infrastructure.

18. Detailed consideration has been given to the Applicant's "RAG" assessment in the attached appendices. In summary:

    a. No consideration has been given to the length of the cable route required for each potential location;

    b. There is no or no proper weighting to the criteria;

    c. There are number of technical errors in the assessments which are addressed further below.

19. There is a further fundamental error in respect of the application of the sequential test for flood risk. The Applicant now accepts that the proposals are in a location at high risk of pluvial flooding. However that type of flooding was excluded from the site selection process and in applying the sequential test. The point is considered further below and in the Written Representation concerning Flood Risk.

Conclusion

20. For the reasons set out above and in more detail in the appendices to this representation, the Applicant's approach to site selection is fundamentally flawed, and the ES is inadequate in explaining the alternatives. These are material

[4] https://www.gov.uk/government/publications/offshore-transmission-network-review

considerations and on proper scrutiny, the selection of the Friston location cannot be justified.

APPENDIX 1

APPLICATION OF CRITERIA FOR EA1N, EA2 & NG RAG ASSESSMENT

Generally

The RAG Assessment dated September 2017 carried out for the NG substation is for a different site than that now proposed. Figure 4.5, dated 3 Dec 2018, annexed to the RAG shows the NG site to the north of the pylons and further to the west than the current site. The NG RAG Assessment was not released until Phase 4 of Consultation in 2019, by which time the decision to come to Friston had been made. There are inconsistences between the NG and SPR RAGs.

Archaeology

These sections only really apply to known Designated sites or known sites recorded in the Historic Environment Record – they do not capture the archaeological potential of each of the sites, as geophysical surveys and trial trenching have not been applied to these sites and the nature of the buried archaeology on each of the sites remains explored at this stage.

The first category – Proximity to National Designations – only refers to Scheduled Monuments and Grade I Listed buildings. There is no mention of Grade II* listed building here, and there should be, not least because there are two in proximity to the site.

The criteria given only specify Amber and Green, presumably because Red would be applied to sites within the proposed development area, although this is not made clear.

The 500m distance given is a very arbitrary figure and fails to differentiate between the impact of a scheme within 500m and say 100m, which would arguably have a much greater impact.

The idea that a distance of over 500m might reduce an impact to green is similarly arbitrary, and in the case of the church, for example, is demonstrably not the case.

This Green scoring also has the implicit presumption that screening is a suitable mitigation measure to reduce the impact of the scheme. The Historic England guidance on the Setting of Heritage Assets has a great deal to say about screening (see para 40 of https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/heag180-gpa3-setting-heritage-assets/).

The upshot is that proximity should have been scored on a basic scale of distance, irrespective of screening, which is a separate consideration, the Red category should have been used to capture close proximity to a Designated Heritage Asset rather than it lying within the site.

There is also no multiplier built into these figures, so that sites seem to have been assessed on this scale whether they are in proximity to one, two or more sites, so there is no recognition or quantification of cumulative impacts at particular locations.

The same points apply to proximity to regional designations. Grade II listed buildings are also national designations, albeit of lesser significance than Grade I and II*, and should have been included in the national designations.

The major problem with this section is that entries in the Suffolk Historic Environment Record are not Regional Designations and do not have a designated status. Under the NPPF, some HER records might be considered to be of equivalent significance to Designated Heritage Assets and labelled as Non-Designated Heritage Assets, but this does not apply to all records. While proximity to these records is a factor, what each record represents is different and they need to considered on a record by record basis to give a fuller picture of what they represent. These should not be conflated with heritage designations.

It does not appear that all HER records within the wider footprint of the scheme have been considered at in the assessment.

The criteria applied are not sufficiently subtle or nuanced to have given a fair indication of the likely heritage impact of each proposed location. Heritage impact of this kind is much more complicated than a simple traffic light system, and really each site should have been fully assessed in the manner set out in the ES for the main site. A particular problem here is the fact that there appears to be no mechanism for weighting or quantifying the number of affected assets beyond a simple presence or absence measure.

Ecology

The classification of Grove Wood as a Local Wildlife Site has been mistakenly omitted from the RAG and this element of the RAG (*proximity to Local Designations)* scores Green. There is a small footnote explaining this and the fact that an Amber score should have been applied. However the RAG itself has not been amended, despite the fact that It had been updated to include Site 8 (Broom Covert) in the autumn of 2018. The error regarding Grove Wood should have been properly corrected before the Phase 3a Consultation.

Landscape

A detailed note from Michelle Bolger is appended at Appendix 3.

Hydrology/hydrogeology

The following observations are made with respect to the adequacy of the criteria chosen by SPR:

i) Three initial criteria have been used – one is exclusion in Flood Zone 3, others are residential housing & gardens, and SPAs/SSSIs;
ii) A second more detailed assessment includes: Hydrogeology and Flood Risk, with the RAG assessment apparently includes a field survey visit;
iii) There is no weighting given between the categories, so each criteria is given the same importance as others. This is highly questionable: an area of contaminated land can be removed or treated and the risk removed, whereas proximity to a public water supply will always remain high risk even with mitigation measures;
iv) Whilst some of the criteria are quite absolute, eg in SPZ 2, the definition of these bands appears have been left to Expert Judgement only. There is no justification provided for these definitions eg why <50m from Flood Zone 3 is Red, whilst 50-100m and 450-500 m is Amber;

v) The RAG is a GIS desk based assessment only, relying on accuracy of third party shape files to make classifications based on 1m of accuracy eg <50m or >50m from Flood Zone 3. These shape files will not have adequate accuracy to be relied upon for this purpose;

vi) There is no explanation of how the RAG approach is compared between different site. Does 1 RED = 6 AMBER ? This is not clear at all. Are equal REDs compared and then these site decided on lowest RED and then lowest AMBER for these ?

vii) Hydrogeology and Flood Risk – uses 4 criteria: Proximity to licenced abstraction points, potentially contaminated land, source protection zones (these are groundwater protection zones); and fluvial flood risk.

viii) Fluvial flood risk is not defined in the criteria on Page 23. The country is actually divided into 3-4 zone types: Zone 1 (<1 in 1000 Years); Zone 2 (100-1000 Years); Zone 3 (<100 Years), sometimes split into 3a and 3b where 3b is the Functional Floodplain. Using a criteria of 'distance from a flood risk' is meaningless in this context – which flood risk is the distance from? Flood Zone 3 extends from the south into the southern end of Friston Village, perhaps 400m from the southernmost proposed site.

ix) The Source Protection Zones (SPZs) referred to on Page 23 are Inner Zone, Outer Zone and Outside All Zones ie are divided into 3 zones, whereas SPZs are actually referred to as SPZ1 (Inner), SPZ2 (Outer) and SPZ3 (Total), which is four zones including the area outside of SPZ3. This criteria is therefore both wrong and requires a decision on what to classify SPZ2 and SPZ3. The tables on pages 10 and 17 do refer to SPZ2 and SPZ3 – confirming the criteria being used are at variance from the bands stated;

x) There is **NO** consideration of Pluvial (rainfall run-off) flood risk. This is a clear oversight as the NG7 sub-station footprint is directly on a high and medium risk surface water flooding area. A quick review of the entire Onshore Development Area shows that with the exception of the Main River crossing, the only other location on the entire 12-13 km route that has an equivalent level of pluvial flood risk is Aldringham. In short, SPC could have put the sub-stations anywhere else (other than Aldringham) and they would have been at less pluvial flood risk and generated less pluvial flood risk. If a Pluvial Flood Risk existed, the score would be RED;

xi) If a Pluvial Flood Risk criteria did exist, the combined risk of pluvial flood risk and SPZ location risk together is at its highest for the chosen site compared to any other locality along the route; and

xii) What happens to the RAG site selection if different locations are finally chosen than used in the RAG assessment – what opportunity is there for re-evaluation?

Engineering

The criteria for Site Efficiency is confined to whether it is possible to co-locate the SPR substation with the NG asset. Whilst this may be convenient it is not essential for the SPR substations to be in close proximity to the NG asset and other energy projects active in the area are considering sites their substations up to 5km from the nearest NGET substation. The suggested scoring for co-location is therefore unnecessarily constraining as it prevent consideration of sites in a much wider area.

Similarly the criteria for "proximity to overhead lines" is not essential for the SPR substations for the same reason, whereas a close location for NG substation is desirable. These two items of Site Efficiency and Proximity to Overhead Lines also overlap and produce double-counting. The criteria are forcing the co-location of both NG and SPR substations, which is not necessary.

There is a major and unexplained anomaly in the SPR RAG when comparing Friston (7,7a) to Broom Covert (8,8a Sizewell) in regard to Engineering. This deals with *Site Access,* where Friston scores Green and Broom Covert Red. Friston is accessed by a network of mostly minor rural roads whereas access to Sizewell is on a classified heavy goods route constructed for Sizewell B. The scoring on the RAG has to be incorrect.

A Criteria on the SPR RAGs scores for *"proximity to high voltage cables".* It is not necessary for the SPR substations to be in close proximity to these cables, as previously described, with regard to co-location with the NG substation. This should not have been a Criteria for the SPR RAG.

Community

Again there is an additional criteria added to the RAG itself saying properties within 250M but "*screened by woodland".* This is not the case in all instances and also suggests that only visual effects have been taken into consideration. For example Woodside Farm and Woodside Cottages in Grove Road are not screened. The issue of noise and disturbance appears to have been overlooked.

PRoWs – The development of all 3 substations will result in the extinguishment of the footpath (FP6) which extends through the site. The need for this permanent closure should have been fully assessed and not categorised as Green for EA2 and Amber for EA1N.

The effects on the Parish Church have not been properly assessed in terms of setting, noise and disturbance, and visual harm to the community which uses it. This should have been flagged up under *sensitive uses*.

Property

There is a Consideration in the RAG Assessments for both SPR and NG entitled "*Property".* This is defined as the number of landowners on the site and given as one owner for SPR (Green) and two or more for NG (Amber). This is incorrect as the current proposed site for all three substations is in one ownership. However this Criteria is rendered useless when, despite being the furthest west of the 8 zones considered, the site involves multiple land ownership along the cable route. No assessment has been made cumulatively on all elements of the proposed development, including all 3 substations, cable route, contractors'

compounds, pylon works etc. The omission of a cumulative assessment is a major failing in the site assessment.

Planning

There is so much information in the public domain regarding proposed energy projects in the Friston area that renders the Green score for this category untenable.

APPENDIX 2: SEQUENTIAL TEST

- The process by which SPR have selected Grove Wood for the National Grid substation and their EA1N and EA2 substations is believed to be defective for a variety of reasons and this decision is strongly challenged. This document provides detail of what are believed to be defects with the Flood Risk Sequential Test. The quoted documents are for EA1N but the equivalent documents for EA2 also apply.

- In May 2018 SPR published the results of their Phase 2 Site Selection RAG assessment (Ref. 1). Selection of the Grove Wood site was advised based on the scoring at that stage. However it was noted at the time that although there was a criterion for Fluvial Flood Risk, there was no criterion for Pluvial Flood Risk (surface water flooding), even though runoff from the Grove Wood site is widely known to be a cause of flooding in Friston village, a fact which was communicated to SPR at preceding PID consultations in March 2018, at public meetings and otherwise. The RAG matrix below was shown at public meetings and is taken from the copy slide set provided by SPR.

RAG assessment – SPR substation results

Criteria	Option E1 (Fig3.3)	Option E1a (Fig3.3)	Option E2 (Fig3.4)	Option E2a (Fig3.4)	Option E3 (Fig3.5)	Option E3a (Fig3.5)	Option E4 (Fig3.6)	Option E4a (Fig3.6)	Option W1 (Fig3.7)	Option W1a (Fig3.7)	Option W2 (Fig3.8)	Option W2a (Fig3.8)	Option W3 (Fig3.9)	Option W3a (Fig3.9)8)
Archaeology														
Proximity to National Designations – SMs, Grade 1 Listed Buildings	<500m but screened by woodland	<500m but screened by woodland							<500m but screened by woodland	<500m of Listed Building	<500m but screened by woodland	<500m but screened by woodland	<500m but screened by woodland	<500m but screened by woodland
Proximity to Regional Designations – Local Historic Environment Records, grade II Listed Buildings	<500m but screened by woodland	<500m but screened by woodland	<500m of HER monument	<500m of HER monument		<500m of HER monument		<500m but screened by woodland	<500m but screened by woodland	<500m of HER record	<500m of HER record	<500m of HER record	<500m of HER monument	<500m of HER monument
Ecology														
Proximity to National Designations – SSSI / SPA	<500m to SPA / SSSI	<500m to SPA / SSSI			<500m to SPA / SSSI	<500m to SPA / SSSI	<500m to SPA / SSSI	<500m to SPA / SSSI						
Proximity to Local Designations – Local Nature Reserves (LNR) / Suffolk County Wildlife Site														
Proximity to mature woodland	<500m to mature woodland	<500m to mature woodland	<500m to mature woodland	<500m to mature woodland	<500m to mature woodland	<500m to mature woodland	<500m to mature woodland	<500m to mature woodland	Cable route requires removal of mature woodland	Cable route requires removal of mature woodland	Cable route requires removal of mature woodland	Cable route requires removal of mature woodland	Cable route requires removal of mature woodland	Cable route requires removal of mature woodland
Landscape – see Appendix C Table C.1 for explanation of RAG scoring														
Potential to affect the special qualities of the AONB														
Proximity to Special Landscape Areas (SLA)														
Landscape character and sensitivity to development														
Opportunity to utilise existing features for screening														
Visual sensitivity to development														
Hydrology / hydrogeology														
Proximity to licenced abstraction points				<50m to abstraction										
Presence of potentially contaminated land														
Source Protection Zone									Within SPZ2	Within SPZ2	Within SPZ2	Within SPZ2	Within SPZ2	Within SPZ2
Proximity to fluvial flood risk		<500m to FZ3									<500m to FZ3	<500m to FZ3	<500m to FZ3	<50m to FZ3
Engineering														
Site efficiency					Limited co-location potential	Limited co-location potential							Limited co-location potential	Limited co-location potential

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Criteria	Option E1 (Fig3.3)	Option E1a (Fig3.3)	Option E2 (Fig3.4)	Option E2a (Fig3.4)	Option E3 (Fig3.5)	Option E3a (Fig3.5)	Option E4 (Fig3.6)	Option E4a (Fig3.6)	Option W1 (Fig3.7)	Option W1a (Fig3.7)	Option W2 (Fig3.8)	Option W2a (Fig3.8)	Option W3 (Fig3.9)	Option W3a (Fig3.9)8)
Highway access (construction and operational)	Access via Aldringham	Access via Aldringham	Access via Aldringham	Access via Aldringham	Access via Aldringham	Access via Aldringham	Access via Sizewell Gap Road	Access via Sizewell Gap Road						
Proximity to high voltage electrical transmission infrastructure (overhead lines)	>500m to OHL				>1km to OHL	>1km to OHL	>500m to OHL				>500m to OHL		>500m to OHL	
Community														
Presence of residential properties	Properties <250m but screened by woodland		Properties within 50m	Properties within 50m	Properties <250m but screened by woodland		Properties within 250m	Properties within 50m	Properties <250m but screened by woodland			Properties <250m but screened by woodland		Properties within 250m
PRoW / National trails (NT)			Public bridleway <100m	Public bridleway <100m	Public footpath <100m			Public bridleway <100m		Crosses public footpath	Public footpath <100m	Public footpath <100m		
Agricultural Land Classification	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3		ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3
Sensitive land uses (schools and hospitals)				School <250m										
Property														
Number of landowners														
Planning														
Current planning applications or knowledge of other developments														
SCORE	1 red 9 yellow 13 green	1 red 9 yellow 13 green	1 red 10 yellow 12 green	2 red 11 yellow 10 green	4 red 6 yellow 13 green	4 red 6 yellow 13 green	4 red 5 yellow 14 green	5 red 5 yellow 13 green	1 red 2 yellow 20 green	1 red 5 yellow 17 green	1 red 8 yellow 14 green	1 red 7 yellow 15 green	1 red 8 yellow 14 green	2 red 8 yellow 13 green

This is the equivalent matrix for the proposed NGET substation:

National Grid Substation Options (by relevant Zone)	NG4 (Fig4.2)	NG2 (Fig4.3)	NG1 (Fig 4.6)	NG7 (Fig4.4)	NG6 (Fig4.5)	NG5 (Fig 4.7)	NG8 (Fig4.8)
Archaeology							
Proximity to National Designations – SMs, Grade 1 Listed Buildings)		<500m to Heritage Coast		<500m to Listed Buildings	<500m but screened by woodland	<500m but screened by woodland	
Proximity to Regional Designations – Local Historic Environment Records, grade II Listed Buildings	<500m to HER monument	<500m to HER monument	<500m to HER monument	<500m to HER monument	<500m to HER monument	<500m to HER monument	<500m of HER monument
Ecology							
Proximity to National Designations – SSSI / SPA	>500m to SSSI / SPA	>500m to SSSI / SPA	>500m to SSSI / SPA				<500m to SPA / SSSI
Proximity to Local Designations – Local Nature Reserves (LNR) / Suffolk County Wildlife Site							<500m to Sizewell Belts Nature Reserve
Proximity to mature woodland / Environmental Stewardship scheme	<500m to mature woodland	<500m to mature woodland	<500m to mature woodland	Cable route requires removal of mature woodland	Cable route requires removal of mature woodland	Cable route requires removal of mature woodland	<500m to mature woodland
Landscape – see Appendix D for explanation of RAG scoring							
Potential to affect the special qualities of the AONB							
Proximity to Special Landscape Areas (SLA)							
Landscape character and sensitivity to development							
Opportunity to utilise existing features for screening							
Visual sensitivity to development							
Hydrology / hydrogeology							
Proximity to licenced abstraction points							
Presence of potentially contaminated land							
Source Protection Zone					Within SPZ2	Within SPZ2	
Proximity to fluvial flood risk					<500m to FZ3	<500m to FZ3	<500m to FZ3
Engineering							

National Grid Substation Options (by relevant Zone)	NG4 (Fig4.2)	NG2 (Fig4.3)	NG1 (Fig 4.6)	NG7 (Fig4.4)	NG6 (Fig4.5)	NG5 (Fig 4.7)	NG8 (Fig4.8)
Highway access (construction and operational)	Access via Aldringham	Access via Sizewell Gap Road	Access via Aldringham				Access via Sizewell Gap Road
Proximity to high voltage electrical transmission infrastructure (overhead lines)			Requirement for sealing end compound + >1km cable			Requirement for sealing end compound + >500m cable	
Community							
Presence of residential properties		Properties within 250m		Properties within 250m	Properties within 250m	Properties within 250m	
PRoW / National trails (NT)	Public footpath <100m	Public bridleway <100m	Public footpath <100m	Crosses public footpath	Crosses public footpath		
Agricultural Land Classification	ALC Zone 2 or 3		ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3	ALC Zone 2 or 3
Sensitive land uses (schools and hospitals)							
Property							
Number of landowners				2 or more landowners		2 or more landowners	
Planning							
Current planning applications or knowledge of other developments							Proposed Sizewell C reptile mitigation land
SCORE	1 red 9 amber 12 green	4 red 7 amber 11 green	4 red 7 amber 11 green	1 red 9 amber 12 green	3 red 6 amber 13 green	1 red 9 amber 12 green	1 red 8 amber 13 green

Table 4.1: RAG assessment table of development considerations for the seven potential NG AIS substation locations

*Note: Consultation with Suffolk Wildlife Trust identified that Grove Wood woodland should be identified as a Local Wildlife Site. This would result in an additional Amber score for NG7 as this site would be within 500m. This would result in a zone score of 1 red, 10 amber and 11 green for Zone 7. This is not reflected in the table as this consultation response was received post-publication. This update does not alter the conclusions of this document or the site selection process.

- In December 2018 SPR published the results of their Phase 3.5 Site Selection assessment (Ref. 2) and advised the community that the Broom Covert site was regarded as unsuitable.

- In May 2019 SPR published the results of their Phase 4 Site Selection RAG assessment as part of their PEIR documentation for EA1N (Ref. 3). This RAG assessment also failed to have a criterion for Pluvial Flood Risk (surface water flooding) despite the Surface Water Flood Map (Ref. 4, last page) provided in the PEIR documentation clearly showing a high risk of surface water flooding within the proposed NGET site and the adjacent land to the North within the overhead line realignment area.

- Moreover in para 113 of the EA1N PEIR Flood Risk Assessment (page 18 Ref 4) SPR state (author's emphasis):

  "113. The Environment Agency's Long Term Flood Risk Information map (Environment Agency undated) (Figure 20.1.2) shows the onshore substation and National Grid infrastructure to be in an area at primarily low risk of surface water flooding i.e. outside the extent of the 1 in 1,000 year surface water flooding event. However, there is ***an area along the western perimeter*** *which is at medium risk of surface water flooding i.e. there is a risk of flooding during the 1 in 100 year event. In addition, there are* ***small isolated locations*** *where there is a high risk of surface water flooding i.e. during the 1 in 30 year event. This is likely to be due to the presence of localised land drainage combined with areas of low-lying land."*

- However, this wording does not seem consistent with the actual surface water flood risk shown in the Environment Agency map (see Fig. 1 below which has been assembled from Figure 20.1.2 of Ref. 4 and the OLMP plan from Ref. 5). The NGET substation is the structure on the North-West side. The required Pylon and Sealing End Compounds and structures are also shown, and also fall within the surface water flood area.

Figure 1. Surface Water Flood Risk to NGET Substation and OHL Works

- Given this clear flood risk to the NGET substation area and adjoining land required for NGET realignment and other works as part of the linked NSIP, the applicant's obligations under the NPPF (as confirmed by NPS EN-1, EN-3 and EN-5) are understood to require the Sequential Test for flood risk to be undertaken, whereby the Grove Wood site is compared with other relevant sites also in Fluvial Flood Zone 1. <u>There is no evidence that this has been done.</u> Indeed it is not clear how the Grove Wood NGET site could pass such a test given that sites adjacent to the overhead lines in the other zones considered by SPR as part of their Site Selection process can be seen as not having a surface water flood risk (Figure 2 below). (Note that Zone 7 is also referred to as 'W1').

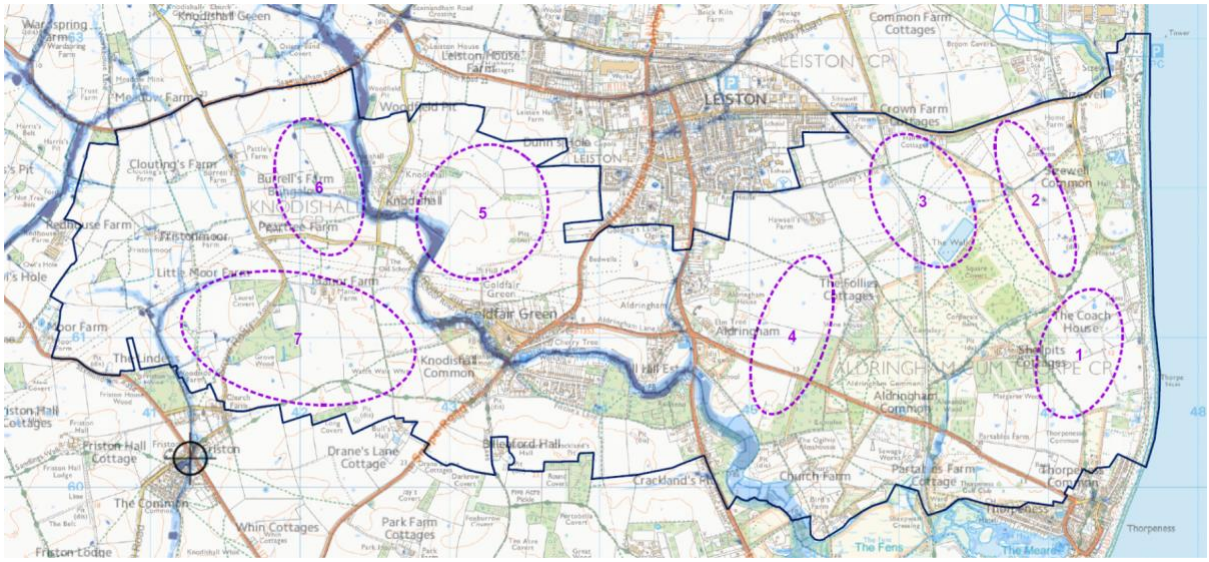

Figure 2. Surface Water Flood Risk to SPR selection zones (except Broom Covert)

- Suffolk County Council and East Suffolk District Council issued a joint response to the SPR PEIR documentation (Ref 6). Page 40, para 136 states (author's emphasis):

  "The Flood Risk Assessment (FRA) briefly assesses surface water flood risk (paragraphs 113-116). SPR (113) ***incorrectly state*** *the substations are located outside the extent of the 1:1000 year surface water flooding event. The only surface water flood map provided by SPR is to a scale of 1:25,000. Upon further investigation, it is evident that* ***the National Grid substation is located directly on a 1:30, 1:100 & 1:1000 surface water flow path.****"*

- In addition Ref. 6, page 107, documents the Council's response to the Flood Risk Assessment provided with the PEIR and finds many areas of this to be non-compliant with the required standard for such documents.

- In November 2019 SPR published their Environmental Statement in which it is stated (Ref. 8) (author's emphasis) that:

  "From the outset, careful siting of the onshore substation and National Grid substation has set out to avoid key areas of sensitivity wherever possible. Embedded mitigation has included:

  ~ (lines omitted as not relevant)

  - ***Siting the East Anglia ONE North onshore substation and National Grid substation in an area of low flood risk (Flood Zone 1****)."*

  This statement appears inconsistent with the surface water flood risk referred to above and elsewhere.

- In November 2019 SPR published the Environmental Specification Flood Risk Assessment (Ref. 7) as part of their DCO application for EA1N. This refers to a further copy of the Environment Agency Surface Water Flood Risk Map (Ref. 7, Fig. 20.3.3) and now states in para. 125 (author's emphasis):

*"125. However, the National Grid Substation, National Grid CCS, cable sealing end compounds and permanent access road are located in an area with **varying risk of surface water flooding**. The northern and western boundary around the National Grid substation, including the cable sealing end compounds, and part of the footprint of the National Grid substation, includes areas at both **high risk of surface water flooding** i.e. during the 1 in 30 year event and medium risk of surface water flooding i.e. there is a risk of flooding during the 1 in 100 year event. This flood risk is associated with the drainage of surface water from the north in proximity to Little Moor Farm."*

- It is clear, therefore, that SPR now accept that the National Grid site area **is** subject a serious surface water flood risk and in that case a **Flood Risk Sequential Test** would have been expected as part of the overall Site Selection and DCO Application processes. But no documented evidence has been found that this test has been carried out across the various sites available (see Figure 2 and Broom Covert), or that the test has been approved by the relevant Local Authority (ESDC and/or SCC). The selection of Grove Wood as the site for EA1N, EA2 and NGET substations and associated overhead line works must therefore be unsound.

REFERENCES

Ref. 1 SPR Summary and Approach to Site Selection
https://www.scottishpowerrenewables.com/userfiles/file/summary_and_approach_to_site_selection.pdf?v=4

Ref. 2 SPR Phase 3.5 Decision Summary
https://www.scottishpowerrenewables.com/userfiles/file/EA1N_2_Phase_3_5_Decision_Summary.pdf

Ref. 3 Chapter 4 Site Selection – Assessment of Alternatives
https://www.scottishpowerrenewables.com/userfiles/file/EA1N_PEI_Chapter_04_Site_Selection_Assessment_of_Alternatives.pdf

and associated appendix:
https://www.scottishpowerrenewables.com/userfiles/file/EA1N_PEI_Chapter_4%20Appendix_4-1_East_Anglia_ONE_North_and_East_Anglia_TWO_Onshore_Substations_Site_Selection_RAG_Assessment.pdf

Ref. 4 EA1N PEI Chapter 20 Appendix Flood Risk Assessment
https://www.scottishpowerrenewables.com/userfiles/file/EA1N_PEI_Chapter_20_Appendix_20-1-FRA.pdf

Ref. 5 [APP-401] EA1N ES Outline Landscape Management Plan Figure 29.11a
https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010077/EN010077-001493-6.2.29.11a%20EA1N%20ES%20Figure%2029.11%20Outline%20Landscape%20Mitigation%20Plan%20(OLMP)%20General%20Arrangement.pdf

Ref. 6 SCC and ESC Response
https://www.eastsuffolk.gov.uk/assets/Planning/Offshore-Windfarms/Phase-4-Consultation-Response-from-SCC-and-SCDC-26.03.19.pdf

Ref. 7 [APP-496] EA1N Environmental Specification – Appendix 20.3 Flood Risk Assessment
https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010077/EN010077-001292-6.3.20.3%20EA1N%20ES%20Appendix%2020.3%20Flood%20Risk%20Assessment.pdf

Ref. 8 [APP-054] EA1N Environmental Specification – Chapter 6 Project Description Page 91 para 426
https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010077/EN010077-001060-6.1.6%20EA1N%20Environmental%20Statement%20Chapter%2006%20Project%20Description.pdf

APPENDIX 3: NOTE FROM MICHELLE BOLGER RE RAG ASSESSMENT

Landscape Briefing Note 2

Project: 1080 East Anglia One North and East Anglia Two

Date: 16th March 2020

Purpose: Review of site selection criteria & application

Reference: 1080 BN02 RAG criteria & application .docx

Introduction

1. To assess and compare potential onshore substations sites Scottish Power Renewables (SPR) and the National Grid (NG) used a Red/ Amber/ Green (RAG) assessment approach. RAG assessments were carried out separately for potential SPR substation sites (serving East Anglia ONE North & East Anglia TWO) and NG substation sites. The criteria were almost identical.[5] Substation Action Save East Suffolk (SASES) have instructed Michelle Bolger Expert Landscape Consultancy (MBELC) to review the criteria used within the RAG assessments and their application.

2. Appendix 1 to this Note contains the relevant RAG criteria and their application with regard to the scoring of the site options near Friston. For the SPR substations the relevant site references were 'Options 7/7A' and 'NG7' for the NG substation. We have set out below our comments with regards to each criterion and where relevant commented on any issues with its application.

[5] 'site efficiency' was only used in the SPR assessments and not the NG assessment

Potential to affect the special qualities of the AONB

3. Criterion is considered to be appropriate.

Proximity to Special Landscape Areas (SLA)

4. Criterion is considered to be appropriate however we are concerned that it has not been applied consistently. The impact of the proposed cable route connection on this criterion with regard to site options in the west of the Study Area (including Options 7/7A) was not identified. This cable route connection option runs across the Hundred Valley SLA. The tree loss caused by the cable route was accounted for under the criteria '*proximity to mature woodland*' for all applicable options but this is not the same as acknowledging the impact on the SLA's overall landscape qualities.

Landscape character and sensitivity to development

5. To be consistent with GLVIA3 the title of this landscape criterion should have been Landscape Character and Susceptibility not sensitivity. This is because landscape sensitivity as defined by GLVIA3 is derived from: 'combining judgements about **susceptibility** [of the landscape] to the type of change or development proposed and the **value** attached to the landscape'.[6] (See Appendix 2 for definitions of susceptibility and value). Value has therefore been double counted, as a value judgement it is also intrinsically part of the AONB/SLA criteria.

6. Options 8/8A scored Amber against *Landscape character and sensitivity to development* whereas Options 7/7A scored Green. The RAG assessment specifically acknowledges that the landscape character area (LCA) in which Options 8/8A are located is less susceptibility to substation development than the LCA in which Options 7/7A are located. Despite this Options 8/8A scored Amber, because it is within the AONB and the value of the AONB has been counted again, whilst Options 7/7A scored Green.[7] The difference between the two sites is their proximity to the AONB and this has already been recognised in response to the criterion *Potential to affect the special qualities of the AONB*. It should not have been allowed to 'leak into' this assessment as well.

7. We are also concerned that the *Landscape character and sensitivity to development* criterion does not appear to have been applied consistently or fairly. This is particularly evident in a comparison of Options 6/6A and Options 7/7A. Both Options are in the same LCA but Options 6/6A scored Amber

[6] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 88, Paragraph 5.39
[7] East Anglia ONE North Offshore Windfarm, Environmental Statement Volume 3, Appendix 4.2, Table C.1

whereas Options 7/7A scored Green. The assessment of Options 7/7A refers to detracting influences, such as the A12 road and '*intrusion of suburbanisation*'. Neither of these factors are relevant to Options 7/7A. At the same time there is no description of the local landscape context at Friston which is relevant to Options 7/7A.

8. We assume the A12/suburbanisation are referenced because they are relevant to the overall LCA in which Options 7/7A are located (the Ancient Estate Claylands LCA). However, these same influences have not been referenced in the assessment of Options 6/6A which is also within the Ancient Estate Claylands LCA. Furthermore, unlike 7/7A the assessment of Options 6/6A does highlight the local landscape context of Options 6/6A.

9. It is significant that in the RAG assessment of the NG sites (which was undertaken separately but using the same criteria) NG7 (at Friston) scored Amber. The accompanying text is worded almost exactly the same as that undertaken for Options 7/7A, the SPR substations. We assume therefore that the Green scoring of the SPR substations, Options 7/7A, is a mistake as similar sites have been scored higher and there is no explanation why Options 7/7A should be scored lower.

Opportunity to utilise existing features for screening &
Visual sensitivity to development

10. Both criterions rely upon an assessment of the screening provided around a site and the '*potential to mitigate the visual effects*'. At Friston the woodland around the site is referenced under both criteria and appears to have been a key factor in Options 7/7A scoring green for both. We are concerned that the basis on which the criteria have been assessed are very similar and amounts to double counting.

11. We are also concerned that this criterion also does not appear to have been applied consistently. For example, it is unclear why Options 6/6A scored Amber with regard to '*visual sensitivity to development*' whilst Options 7/7A were assessed as Green. Both are located in open countryside, near to settlement, and contain PRoWs and in this respect have similar visual sensitivity to development. Locally, Options 7/7A are described as highly visible whereas visibility of 6/6A is described as more limited. The assertion that the existing overhead lines have a 'strong influence' over visual amenity for Options 7/7A is considered to be an exaggeration. No description is provided of the attractive views such as views towards Friston Church whereas the description of Options 6/6A highlights the area's '*distinctive character*'.

12. As with the landscape criterion, the RAG assessment for the NG7 substation

site, also located north of Friston, scored Amber with regard to '*visual sensitivity to development*'. It not logical that there should be a difference between the two assessments and there is no explanation of the discrepancy.

Proximity to Mature Woodland

13. This criterion is the only one to consider the impact on vegetation, but its scope, focusing only on mature woodland, is considered to be unduly limited. For a project of this scale and nature a criterion should have been included/ or this criterion amended to consider the potential impact on other vegetation such as important hedgerows. Without considering other vegetation, the RAG assessment failed to recognise the potential of Options 7/7A/NG7 to have a particularly harmful impact on the vegetation framework north of Friston.

PRoW/NTs

14. Only a Green or Amber score was possible against this criterion. The RAG assessment should have included a Red score to acknowledge sites which sever a PRoW such as Option 7. A wider consideration of the overall impact of the development on PRoWs (e.g. resulting from access roads etc), not just the substation site specifically, should have also been considered.

Missing Criteria

15. The following considerations were not included in the RAG criteria and should have been:

    - The overall amount of land required (or development footprint). This is significantly greater for sites in the west of the study area (e.g. Options 7/7A) compared to those in the east due to the land required for the cable route.
    - Relationship to settlements. This is a significant omission particularly in the case of the Friston options.
    - Local landscape character. It is not appropriate to focus only on LCAs which was the case for Option 7/7A.
    - Highways access was considered but not in terms of the length of access road required and its impact on the landscape resource. As such options 7, 7A and NG7 scored Green for highway access even though they require an excessively long access road, 1,700m.
    - The impact on important views and landmarks such as views towards Friston Church were not considered and this is another significant omission.

Comments on Methodology

16. We note the following concerns regarding the RAG methodology more generally.

- The RAG Methodology states that '*RAG is a standard assessment tool used in the pre-EIA process* ***to assess the potential risks to proposed development options'***[8] (emphasis added). Whilst it is entirely correct that SPR/ NG need to 'assess the potential risks to proposed development options' it is not the same exercise as assessing the **potential environmental impacts** of development options, which ought to be a separate exercise. If considered at the same time as the consideration of potential environmental impacts, it has the potential to contaminate the process and the results.
- No RAG assessment considered the impacts of all three substations in one location as the RAG assessments were undertaken separately for the SPR and NG substations. ES Appendix 4.2 explains that there was no RAG assessment which considered the impact of co-locating three substations on one site:

> *'This report does not provide a recommendation for preferred co-location of SPR substations and a NG substation as the issue of cumulative impact and capacity of the landscape to accommodate three substation sites of the size proposed is not considered in the RAG assessment – the relative merits of each site is assessed individually, to inform which areas to explore further as part of the site search.* ***The RAG assessment does not consider the combined effect / suitability of co-locating three substation sites for EA1N, EA2 and NG AIS together in one location. This would require a different scoring/RAG assessment'.***[9] (Emphasis added)

Reference is made to a 'landscape capacity study' looking at the cumulative impact of locating three substations together undertaken after the site selection stage. We have not yet reviewed the capacity study in detail but will do as part of our ongoing review work.

[8] East Anglia ONE North Offshore Windfarm, Environmental Statement Volume 3, Appendix 4.2, Paragraph 26
[9] East Anglia ONE North Offshore Windfarm, Environmental Statement Volume 3, Appendix 4.2, Paragraph 53

- A number of criteria could not score Red (only Amber or Green). Therefore, the conclusion in the RAG methodology that all criteria (considerations) were treated equally is incorrect.[10] Of particular relevance to Friston is the fact that a Red score was omitted from the scoring used to assess impacts on PRoW. The Friston site is one of only two that would actually sever a PRoW; an impact which we consider should have warranted a Red score.
- The original RAG assessment was based on an assessment of broad development zones or areas of search. It is not clear when the assessment changed to an assessment of the substation options shown in ES Appendix 4.2 Figure 3.2 which are for specific substation sites.
- ES Appendix 4.2 Figure 4.1. shows that the assessment of NG substation option at Friston was for a different location to that which is now proposed. It is shown further north and west from its proposed location and Friston village.

Conclusion

17. The RAG assessment is flawed because it:

    - Failed to include key criteria such as local landscape character and the relationship to settlement.
    - Inconsistently applied criteria.
    - Contains double counting.
    - Weighted certain criteria differently without explanation (e.g. no Red score for PRoWs)
    - Did not consider all three substations together.
    - Was an exercise focused on assessing '*the **potential risks to** proposed development options*' rather than the **potential impacts of** proposed development options.

18. The findings of the RAG assessment are therefore considered to be unsound and should not have been relied upon to inform the next stage of the substations site selection process.

[10] East Anglia ONE North Offshore Windfarm, Environmental Statement Volume 1, Chapter 04, Paragraph 126

Appendix 1: Considerations and Criteria used in RAG Assessment

The following table provides the 'considerations' and 'criteria' used within each RAG assessment as stated in ES Appendix 4.2 Appendix B. Also provided are the reasons for the inclusion ('*why this criteria?*') of the specified landscape considerations and the RAG assessment scores for each consideration as stated in Appendix C Table C.1 (SPR substations) and Appendix D Table D.1 (NG substation).

Consideration (SPR/NG)	Reason for Inclusion (SPR/NG)	Criteria (SPR/NG)	RAG Scores for Friston Substation Options (SPR/NG)
Landscape			
Potential to affect the special qualities of the AONB	Special qualities of the AONB are the qualities against which landscape effects of development would be measured.	Red = Higher potential identified Amber = Moderate Green = Lower	SPR 7 = Green SPR 7a = Green NG 7 = Green
Proximity to Special Landscape Areas (SLA)	SLA designation is identified in SCDC LDP and is an indicator of potential local landscape (scenic) value.	Amber = If present within the sector, local authority level policy applies Green = Absent	SPR 7 = Green SPR 7a = Green NG 7 = Green
Landscape character and sensitivity to development	Identification of the LCA in which development is located and an initial judgement about the sensitivity of the site in this LCA (in terms of its overall character, its quality and condition) and any individual landscape elements that are sensitive to development.	Red = Higher identified sensitivity Amber = Moderate Green = Lower	SPR 7 = Green SPR 7a = Green NG 7 = Amber
Opportunity to utilise existing	Scope for mitigating potential visual impacts	Amber = Reduced	SPR 7 = Green

Consideration (SPR/NG)	Reason for Inclusion (SPR/NG)	Criteria (SPR/NG)	RAG Scores for Friston Substation Options (SPR/NG)
features for screening and modify/mitigate visual impacts	and likelihood that changes could be mitigated, for example through utilising existing woodland features to screen development, potential to plant trees to screen development, or create appropriate landscape design proposals that integrate the development with the landscape.	identified opportunity Green = Assessment identified opportunity	SPR 7a = Green NG 7 = Amber
Visual sensitivity to development	Judgement of the visual sensitivity of each site, in terms of its general visibility and potential scope to mitigate the visual effects of any change that might take place. Visibility will be a function particularly of the landform and of the presence of potentially screening land cover, especially trees and woodland. It will also be a reflection of the numbers of people/sensitivity of receptors who are likely to perceive the landscape and any changes that occur in it,	Red = Higher identified sensitivity Amber = Moderate Green = Lower	SPR 7 = Green SPR 7a = Green NG 7 = Amber

Consideration (SPR/NG)	Reason for Inclusion (SPR/NG)	Criteria (SPR/NG)	RAG Scores for Friston Substation Options (SPR/NG)
	whether they are residents, road users, walkers or visitors.		
Ecology			
Proximity to mature woodland	No explanation.	Red = Higher potential identified Amber = Moderate Green = Lower	SPR 7 = Red SPR 7a = Red NG 7 = Red
Community			
PRoW / National trails (NT)	No explanation.	Amber = PRoW / NT within close proximity of (<100m), or crossing site Green = No trails within 100m of site	SPR 7 = Green SPR 7a = Amber NG 7 = Amber

Appendix 2: Definitions of Landscape Sensitivity

19. Landscape sensitivity as defined by GLVIA3 is is derived from: 'combining judgements about **susceptibility** [of the landscape] to the type of change or development proposed and the **value** attached to the landscape'.[11]

    - **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*'.[12]
    - **Landscape Value** '*the relative value that is attached to different landscapes by society, bearing in mind that a landscape may be valued by different stakeholders for a variety of reasons...A review of existing landscape designations is usually the starting point in understanding landscape value but the value attached to undesignated landscapes also needs to be carefully considered*'.[13]

[11] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 88, Paragraph 5.39
[12] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 88, Paragraph 5.40
[13] Guidelines for Landscape and Visual Impact Assessment, 2013, Page 80, Paragraph 5.19