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Mr Alan Ridley
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Dear Mr Ridley

Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 SI 2263 (as amended) (the EIA Regulations) Proposed Bramford to Twinstead Tee 400kV connection (the project) Proposal by National Grid (the applicant) - Response to Scoping Report of Suffolk County Council

GENERAL MATTERS

1. Suffolk County Council (SCC) restricts its comments to those directly relevant to the scoping exercise. It should not be interpreted that we are satisfied with pre-application process to date (as described in the Report), nor that we are in agreement with the findings of any or all of the supporting documents that National Grid refers to in the Report¹.

Scope of the Project

2. Paragraph 3.1.3 states that all the substation sites should be considered to be within the red line boundary for the purposes of scoping. It is understood, however, that only the relevant parish councils for the overhead line/cable corridor have had the benefit of the full 28 days to respond to the Scoping Report – those affected by the substation proposals have only 12 days, which is regrettable. While the affected parishes lie in Essex, matters raised by those consultees may raise issues that would be relevant to the scheme as a whole, hence the interest of SCC to ensure appropriate consultation has been undertaken.
3. While, it is understood that any responses filed with PINS after this date will be relayed to National Grid, there is the possibility that new issues material to the Scoping Opinion may be raised, but in not being encompassed within the formal Scoping Opinion are deemed to have reduced weight. It would therefore be helpful if PINS could undertake to confirm that it has reviewed any 'late' responses from the affected Parish Councils and does not (or otherwise) consider that any new issues have arisen.
4. We also have some concerns that National Grid, at the same time as providing material for consultation on alternatives to a substation², is producing a Scoping Report which does not provide for the eventuality that consultation responses may influence its decision in this respect. This compromises, perceptually at least, National Grid's ability to respond to the requirements of Section 37 of the Planning Act – specifically to produce a Consultation Report that shows how it has had regard to any relevant responses.

Relevance of cost

5. With reference to paragraph 2.3.2, SCC has ongoing concerns that judgements on alternative options are being made with a significant emphasis on cost. While it is recognised that PINS should consider the

¹ For example, the Strategic Options Report, Connection Options Report and Needs Case.

² <http://www.bramford-twinstead.co.uk/substation-consultation.aspx>

“additional cost of any undergrounding” (EN-5, paragraph 2.8.9), the National Policy Statement does not identify this as an overriding argument to be afforded any particular weight, simply a factor to take into account.

6. Ofgem, who is responsible for evaluating the case for investment, may view the situation quite differently, but SCC’s paramount concern is that the scheme is acceptable in planning terms – so evidence must be presented to allow the Secretary of State to make a balanced judgement.
7. SCC would wish the EIA therefore to be absolutely clear on the relative environmental merits of different options, without making comment on National Grid’s statutory duties. This is the requirement of the EIA regulations³.

Selection of alternatives

8. For the reasons above, the specific alternative of 100% undergrounding (which National Grid has ruled out on cost⁴) should be properly evaluated with the comparative environmental impacts clearly presented.
9. While there is case law on the existence of alternative *sites*, there appears to be limited precedent directly related to this issue of an alternative *proposal which fulfils the same functional need*.
10. There are however parallels with Simon Brown J (as he then was) ruling in Trusthouse Forte Hotels Ltd v. Secretary of State for the Environment (1986) 53 P&CR 293 where he noted that, while the existence of a more acceptable alternative site would not justify refusal upon the application site, where there are clear planning objections to a particular site, it “may well be relevant and indeed necessary to consider whether there is a more appropriate alternative site elsewhere”.
11. He went on to state “that this is particularly so when the development is bound to have significant adverse effects and where the major argument advanced in support of the application is that the need for the development outweighs the planning disadvantages inherent in it” and that “[I]nstances of this type of case are developments, whether of national or regional importance...”
12. This judgement has been quoted positively in a number of subsequent cases and appears supportive of the need to consider less environmentally damaging alternatives in this instance particularly as the circumstances set out in paragraph 11 above apply.

Need Case

13. The Need Case for the project is in far more of a state of flux than is reported in paragraph 2.2.3 – the contracted dates are not realistically achievable, and do not reflect public statements made by the relevant generators. The EIA should consider the ‘do nothing’ alternative and in doing so have regard to the likely connection dates of those generators identified in the Need Case.

Project Description

14. The Environmental Statement should present a detailed construction programme so that the respective timing, nature and scale of activities occurring can be established.

Assessment of effects

15. As mentioned, National Grid places great emphasis on cost when choosing between alternative means of network reinforcement. It uses ‘judgement’ to determine whether the social, economic and environmental impacts, measured *qualitatively*, of overhead lines warrant the use of undergrounding technologies.
16. In SCC’s view, if the ‘benefit’ of using overhead lines is to be measured quantitatively (i.e. ‘X millions cheaper’), then every effort should be made to quantify the disbenefits. This analysis does not need to be exhaustive – it simply needs to be assessed quantitatively whether the disbenefits of the scheme exceed the additional cost of undergrounding.
17. Paragraph 2.8.9 of EN-5 sets out that the Secretary of State should consider whether the benefits of undergrounding outweigh the additional cost. SCC considers that this process would be facilitated, and be more transparent, if National Grid adopted best practice in measuring environmental and socio-economic detriment. This would also be consistent with the sentiments of the Government’s Natural

³ The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009, Schedule 4, Regulation 18

⁴ Review of Strategic Options Report, paragraphs 13.17 -13.18 <http://www.nationalgrid.com/NR/rdonlyres/F50A1521-D755-4116-A787-E623F77D196E/47714/BTReviewofStrategicOptionsReportJune2011.pdf>

Environment White Paper⁵ which recognises that the ongoing “erosion of our natural environment is losing us benefits and generating costs” highlighting “why we must properly value the economic and social benefits of a healthy natural environment”.

18. Consequently, SCC strongly recommends that National Grid make use of HM Treasury Guidance, the “Green Book” and specifically Annex 2 therein⁶. This document describes established techniques that should be used to assess the “net value of a project to society as a whole”. In doing so, impacts on health, wellbeing and visual amenity can be more readily measured against capital cost allowing a more rounded view of the costs of a project to be ascertained.
19. That the Green Book was produced for Government departments is not relevant, it is established best practice, and in any case, through its monopoly nature, National Grid’s projects impact “society as a whole”, therefore the guidance should be applied.
20. The relevance of the approaches described in the Green Book to National Grid are recognised by Ofgem, and indeed have been applied to the valuation of impacts of transmission infrastructure already⁷. While this research relates to existing lines, Ofgem has stated⁸;

2.85. We agree with third-party stakeholders that there is a potential role for consumer willingness to pay (WTP) studies, as well as other information on landscape quality and features of special interest, to inform NGET⁹ on the efficient level of different technologies when developing its proposals. However, it is ultimately for NGET to develop its proposals and the need for mitigation on a case by case basis by working with stakeholders during the planning process...

21. Stakeholders have been very clear to National Grid that WTP studies should be used in respect of this project. WTP allows consumers to express in monetary terms the perceived environmental and socio-economic disbenefits of overhead lines. Such information would therefore provide essential evidence to the Secretary of State (and indeed the regulator) in coming to a view on whether the additional cost of undergrounding can be justified.

Approach to the Environmental Impact Assessment

Clarity and consistency

22. Chapter 4 of the Scoping Report sets out the general approach to assessing the significance of environmental effects. Magnitude of Effect (paragraph 4.1.8) is described on the following scale: High; Moderate; Low; Negligible and the Sensitivity of Receptor (paragraph 4.11) as: Very High; High; Moderate; Low; Negligible. Significance of Effect is then described with reference to the interplay of Magnitude of Effect and Sensitivity of Receptor. This is set out in Table 4.1 as a template for the EIA.
23. This section is confusing in itself and this manifests itself in future chapters.
24. For example, Table 4.1 reverts to the use of “Medium” as opposed to “Moderate” to describe both magnitude and sensitivity. The subsequent text beneath Table 4.1 (paragraph 4.1.13) then makes reference to “high/large” or “medium/moderate” combinations being considered significant. “Large” does not appear in the matrix or any of the preceding text, and reference to a sensitivity of “Very High” is omitted.
25. In the subsequent chapters, there are presentational inconsistencies; particular interchangeability in the use of “moderate” and “medium”; varying categorisation of sensitivity (so that is not clear if there is not a receptor of a given sensitivity, or else that class is not being used) and different scales of magnitude being used. There is also discrepancy, without explanation, of why the significance of a Moderate (or Medium)/High (or Large) combination is “Major” in some circumstances but “Moderate” in others.
26. The Scoping Report (paragraph 4.1.6) states the assessment of significance of effects will be “broadly based on the...criteria from IEMA’s The State of Environmental Impact Assessments in the UK”. That document includes the following figure¹⁰;

⁵ <http://www.official-documents.gov.uk/document/cm80/8082/8082.pdf>

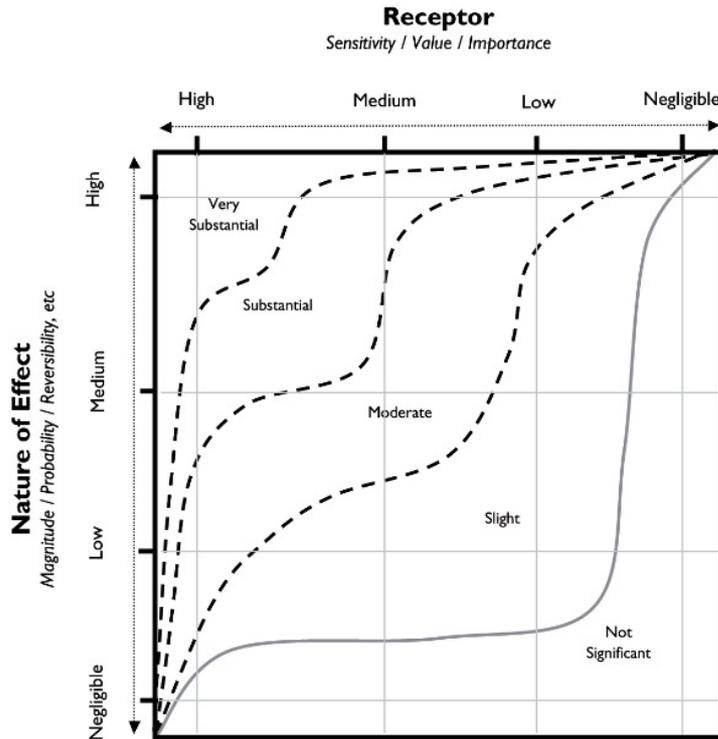
⁶ http://www.hm-treasury.gov.uk/d/green_book_annex2_250711.pdf

⁷ <http://www.nationalgrid.com/NR/rdonlyres/88431596-2009-4CDE-BE51-EC5E536FF2BC/55358/NationalGridWTPreport.pdf>

⁸ http://www.ofgem.gov.uk/Networks/Trans/PriceControls/RIIO-T1/ConRes/Documents1/2_RIIOT1_FP_OutputsIncentives_dec12.pdf

⁹ National Grid Electricity Transmission

¹⁰ <http://www.iema.net/state-environmental-impact-assessment-eia-practice-uk> Figure 6.3



27. It is strongly recommended that National Grid standardises its approach to assessment of effects across the EIA topics as far as is possible so that consistency and comprehensibility is achieved. Any inconsistency will make assessment of in-combination effects particularly difficult.

Analysis

28. To date, National Grid has presented its project with reference to six separate “study areas” (now referred to as “sections” – see paragraph 3.1.1) and reported impacts on a study area by study area basis.

29. The EIA will result in huge amounts of data for each topic area and while the Scoping Report describes how the significance of effect will be established for each receptor, it does not set out how all those individual results will be aggregated to come to a conclusion of overall significance of effect for each study area for each topic area. This then of course has implications for the proposed mitigation and level of residual impacts.

30. The Environmental Statement will need to be clear how the data has been combined in each topic area. It is recommended that National Grid discusses its approach to this issue with stakeholders during the EIA process, particularly with respect to findings of the Landscape and Visual Impact Assessment due to the extensive number of viewpoints proposed.

31. Furthermore, it will be important for the Environmental Statement to report the environmental effects of the proposal, particularly the residual impacts, for the scheme as a whole, not just by study area.

EIA Topics

Socio-economic

Economy and skills

32. Paragraph 13.3.2 identifies the potential socio-economic consequences of the project during construction and operation.

33. The Environmental Statement should consider the pressures the development may place on the local labour market. It should set out clearly the expected number and nature of employment opportunities during each phase of the development. It should relate this to the availability of labour in the area and identify how any mismatch between supply and demand will be addressed.

34. Similar analysis should be undertaken with regard to the supply chain – i.e. National Grid should assess its requirements and evaluate those against the services available locally. In order to maximise the extent of any benefits of the development it should seek to use local contractors and suppliers as much as possible and therefore look to undertake initiatives to develop opportunities for local companies to bid successfully in the procurement process.
35. Consideration needs to be given to the potential impact of any reliance on a mobile workforce for the availability of tourist accommodation. The spending patterns of a transitory labour force would be quite different to those of tourists, thus this might jeopardise trade for other related tourist businesses, such as restaurants and visitor attractions.
36. In all cases, the impact of this project must be considered alongside others in the region – particularly other Nationally Significant Infrastructure Projects. For example, East Anglia ONE’s onshore construction (which terminates at Bramford) is programmed for 2016 to 2018. It is acknowledged that the likely demands on the workforce and the supply chain are likely to be less than those of other infrastructure projects in the region, therefore the assessment should be proportionate to the scale of the anticipated impact.
37. In line with Section 5.12 of EN-1 the proposed mitigation for any impacts should be included within the application; a reliance on the agreement of mitigation strategies by Requirement post-consent will not be acceptable – information should be presented as part of the application.
38. In developing mitigation, National Grid should have regard to parallel initiatives being undertaken in association with other major infrastructure projects in the locality. It should therefore work closely with the Local Authorities and other key stakeholders, for example the Federation of Small Businesses and Chambers of Commerce.

Amenity Value

39. The approach to the assessment of amenity value is not clear (paragraph 13.5.5). It appears to be essentially an in-combination assessment of various EIA topics (not identified), but rather than using judgement to determine the significance of the impact on amenity, a rather mechanistic approach is suggested (Table 13.5).
40. The proposed approach recycles and combines assessments of significance¹¹ from different EIA topic areas to determine a new order of magnitude which is then re-evaluated against sensitivity of receptors to generate a new definition of significance. This appears tautological in that the assessment is reliant on assumptions already made and involves limited further analysis. This is also a particular issue due to the variability used across the EIA topics in describing (the scales of) sensitivity and magnitude of effect (see paragraphs 24-25 above).
41. Furthermore, SCC would disagree with the descriptions of magnitude in Table 13.5. It is not clear why, for example, a receptor experiencing one major and one moderate significant impact would be ascribed an overall impact of “Medium” magnitude. Using the approach set out here, the LVIA might ascertain that a given receptor will experience a significant adverse impact on visual amenity, but according to this methodology, that alone would be insufficient for that receptor to score an overall “large” magnitude of effect on amenity – it would also have to experience at least one further significant residual impact, related to noise for example, and then have that combined with a further assessment of receptor sensitivity to establish overall significance.
42. Consequently, it is suggested that amenity impacts might better be considered within the relevant topic areas – therefore regard can actually be had to the nature of the receptor and the sensitivity of it to disturbance. An in-combination assessment would still be required, but that should have the effect of increasing the overall magnitude of impact where different effects combine, rather than downgrading it through progressive diminution due to the multiplier effect described here.
43. In defining the sensitivity of receptors, National Grid should also clarify how, practically, it proposes to assess “the nature of users” – i.e. access information relating to the demography, health or ‘sensitivity’ of receptors (paragraph 13.5.8).

Tourism

44. SCC broadly agrees with the proposed approach to assess the impact of the development on tourism, with two caveats;

¹¹ Which of course derive from an assessment of magnitude of impact/receptor sensitivity

- The EIA needs to recognise that a large proportion of tourist trips are likely to be associated with the natural and historic beauty of the area as a whole – not whether there is a view of a pylon from a particular pub (see for example paragraph 13.2.25). It is more relevant to consider the extent to which the impact of pylons in the landscape detracts from the environmental quality for recreational activity more broadly, than it is to focus on the locations of ‘tourist-related business’ – the locations of which are likely to be incidental to the purpose of tourists’ visits in many cases and certainly not the determinant of whether they will visit the area or not.
- The baseline should be supplemented with evidence of visitor spend and then, making use of questionnaires¹² (proposed in paragraph 13.4.10), evidence should be presented on the potential economic impact of the scheme.

45. In describing the baseline, reference should be made to *The Monitor of Engagement with the Natural Environment*¹³ which is published by Natural England. This annual survey contains a great deal of information on how people use the natural environment, including numbers of visits made, destinations, purpose of visits and average spend. The links between environmental quality and health and local economic benefits is directly relevant to the potential impacts of overhead lines.

Health

46. SCC does not agree that health impacts should be scoped out from the operational effects of the development (paragraph 13.3.2, Table 13.2) as National Grid has not demonstrated that there will not be significant effects.
47. EN-1 (paragraph 4.2.2) identifies well-being and community cohesion as matters of interest to the Secretary of State and the examination of the project. Similarly, the EIA Directive and consequently the relevant EIA Regulations specifically refer to the effects on ‘human beings’ and ‘population’ distinctly from environmental issues, recognising that environmental or visual impact is not a comprehensive proxy measure for impact on people¹⁴.
48. Paragraph 4.13.4 of EN-1 notes that new energy infrastructure can affect access to public services, and that this includes use of open space for recreation and physical activity. The link between the quality of the natural environment and level of usage is well established (see for example the reference to *The Monitor of Engagement with the Natural Environment*, mentioned previously).

House prices

49. National Grid proposes to scope out the impact on house prices, citing the Rookery South Decision (paragraph 13.4.3) as a precedent. The examining panel concluded that the assertions were not evidenced, not that they were not material. Similarly, section 5.12 of EN-1 is not exhaustive in its requirements. The fact that house prices are not identified *specifically* in the EIA regulations is not surprising - it does not list tourism or creation of jobs either.
50. Nevertheless, SCC agrees that case law has confirmed that the impacts on individual house prices are generally not material in planning terms. However, studies¹⁵ undertaken to date have shown that there are interactions between the proximity of overhead lines and property prices.
51. This depreciation is effectively the price of disamenity and is an alternative/complementary mechanism to Willingness to Pay – the relevance of which was described earlier. Operating at such a scale, this depreciation of property prices (capitalisation of visual amenity) could be considered a “community impact” - which National Grid identifies as an issue that relates to five or more properties (paragraph 13.5.9).

Landscape and Visual Impact Assessment

Mitigation

¹² SCC would like to be involved in the formulation of these surveys

¹³ <http://publications.naturalengland.org.uk/publication/1712385>

¹⁴ EN -1 clarifies that the effect on ‘human beings’ includes the effects on health (see EN-1, p46 footnote 76). ‘Health’ means ‘health and wellbeing’ (EN-1 paragraph 4.13.1).

¹⁵ For example; Atkinson, G., Day, B., Mourato, S. & Palmer, C. (2004) ‘Amenity’ or ‘eyesore’? Negative willingness to pay for options to replace electricity transmission towers’, *Applied Economics Letters*, 11 (4), pp203-208; Navrud, S., Ready, R.C., Magnussen, K. & Bergland, O. (2008) Valuing the Social Benefits of Avoiding Landscape Degradation from Overhead Power Transmission Lines: Do Underground Cables Pass the Benefit–Cost Test? *Landscape Research*, 33 (3), pp281 – 296; Sims, S. & Dent, P. (2005). High-voltage Overhead Power Lines and Property Values: A Residential Study in the UK. *Urban Studies*, 42 (4), pp665–694.

52. EN-5 paragraph 2.8.10 describes undergrounding as a form of mitigation that should be considered to mitigate the landscape and visual effects of overhead lines. In describing the residual impacts of the scheme, the Environmental Statement will need to demonstrate clearly the mitigation options that have been considered and explanation of choice of mitigation, having regard to its ability to reduce the residual impacts.

Cumulative Impact

53. National Grid does not intend to include the existing lines within the cumulative assessment, arguing that they form part of the baseline against which the effect of the development will be assessed (Table 5.2, p63). In that scenario, an assessment of the impact of these structures should have been provided within the description of the existing environment in the Scoping Report, but this does not appear to be the case.
54. In any event, in light of the requirements of paragraph 4.2.5 of EN-1 (which clearly identifies projects already in existence) and the current Guidelines for Landscape and Visual Impact Assessment (to which National Grid refer), SCC believes, and has consistently argued, that such an approach would neither be appropriate or adequate.
55. The cumulative impact of an additional line will vary depending on the landscape and visual impact of the existing line which in turn will be a consequence of the sensitivity of the receiving landscape and its visual receptors.
56. While the Scoping Report generally recognises this process for the new line, it does not appear to do so for the existing line. Understanding the landscape and visual impact of the existing lines on the landscape and historic environment is critical to the process; particularly where the landscape is recognised as being inherently sensitive, or sensitive by reason of national/local designation, or cultural association, or because it is within the setting of heritage assets or designated landscapes.
57. Consequently SCC considers that the existing conductors and towers which will not be removed as part of the proposal should form part of a cumulative assessment of landscape and visual impacts. The cumulative impacts with the existing (and proposed to expand) Bramford substation should be assessed in a similar manner.

Sensitivity and capacity

58. SCC does not agree that AONBs should be categorised as less sensitive than National Parks (paragraphs 4.1.11/5.6.8). SCC has repeatedly advised National Grid that AONBs are of equal status to National Parks in relation to landscape and scenic beauty¹⁶. This is also quite clear in EN-1, paragraph 5.9.9.
59. Furthermore, SCC would reiterate to National Grid that the extent to which a landscape is valued is only one facet of the sensitivity of a landscape and its consequent capacity to accommodate change (this subtlety is not apparent in paragraph 5.6.8, where sensitivity and value are conflated). Capacity is also related to a landscape's inherent sensitivity to a particular proposal by virtue of its characteristics such as landform, scale, or the extent of woodland cover for example. It would therefore be incorrect to draw a direct correlation between landscape value and landscape capacity as National Grid has previously done – for example in the Connection Options Report.
60. Such an approach does not recognise the fact that historic designations would have been made in the absence of contemporary landscape character and visual assessments. Rather, boundaries were drawn to take advantage of obvious and convenient physical features, for example “suitable and convenient roads and field boundaries”¹⁷, as opposed to necessarily reflecting the character or views within and across a landscape and its setting.
61. Consequently, a designation-led approach would risk underestimating the sensitivity of locally designated landscapes and important contribution that such landscapes make to the setting of nationally designated landscapes. A more considered approach which clearly defines the sensitivity of the landscape and its capacity to accommodate further change (having regard to the baseline conditions including the presence of existing lines), needs to be presented.
62. While it is noted that the LVIA will deal with the impacts of the proposal on the setting of the AONB and the Stour Valley, it is essential that these effects are clearly and robustly demonstrated both in terms of

¹⁶ See paragraph 1; <http://archive.defra.gov.uk/rural/documents/protected/npaonb-duties-guide.pdf>

¹⁷ Proposed Extensions to Dedham Vale Area of Outstanding Natural Beauty Statement of Intent, Suffolk County Council 1977.

description and visualisation, as the proposed Sealing End Compounds are often very close the boundaries of these areas. Alternative locations for the Sealing End Compounds should be tested as part of the EIA.

63. Paragraph 5.2.46 refers to the Statement of significance of the AONB – though arguably misses some of the key elements relating to development intrusion and the subtle and intimate character of the landscape – SCC would therefore prefer that it is used in full¹⁸.
64. Finally, with reference to Table 5.6, tourists should be considered “High” sensitivity (but see comments on sensitivity scales in paragraphs 24-25).

Underground cables – description of development

65. The depth of soil that will remain above the buried cables and so available for agricultural operations is not clear (paragraph 3.5.11). Although it is stated that the trench depth will be 1.4m, it is important to understand the depth of soil that will be available for cultivation and if this will be sufficient to facilitate all normal arable operations such as sub-soiling. If the soil above the cables is not available for these deeper arable operations, this may impact on arable farming operations (including through land sterilisation), and consequently result in landscape change. The impacts of undergrounding on soil conditions (soil structure and field drainage) more generally should also be considered.
66. A clear description of the jointing pits (paragraph 3.5.2) and their respective impacts needs to be described and assessed. They should be sited to minimise permanent environmental and land use impacts.

Underground cables – impacts

67. The undergrounding of cables will necessitate the permanent removal of trees from the cable corridor, so there will likely be some residual impacts in the cabled sections (contrary to paragraph 5.3.5). The Environmental Statement should identify the extent and significance of these landscape, visual and potentially ecological effects (paragraph 5.3.14 of EN-1 recognises the biodiversity value of ‘veteran’ trees, for example). Proposals to mitigate/compensate for these impacts should be put forward in the Environmental Statement.
68. Hedgerows are Priority Habitats in both the UK Biodiversity Action Plan and the Suffolk Local Biodiversity Action Plan. The Environmental Statement should clearly map (and ideally document photographically) the hedgerows that will be affected and whether, and according to which criteria, they are ‘important’ according to the Hedgerows Regulations 1997.
69. The Environmental Statement, should not only assess, but also include proposals to minimise landscape and other impacts of the removal of important hedgerows (paragraph 5.5.9). The intention simply to narrow the working width at ancient hedgerows (paragraph 3.5.9) is unlikely to be acceptable – the loss of this resource is irreversible. Rerouting of the haul road to use existing farm entrances should be considered at these crossing points to minimise permanent impacts.
70. Mitigation should also include “mini HDD” or “micro-routeing” (approaches currently being proposed and developed by East Anglia One Ltd in relation to that project), on a more localised scale than those described in paragraph 3.5.3 in order to minimise residual impacts. Mitigation may also include coppicing, storage and replanting of mature hedgerow plants, the creation of temporary access ways over coppiced hedges or the use of instant hedging that could be pre-grown to order.
71. Any residual impacts relating to the loss of important hedgerows and hedgerow trees will need to be offset in line with paragraphs 5.3.4 and 5.3.7 of EN-1. Replacement of important hedgerows and veteran trees on a one for one basis is unlikely to be acceptable. Clearly veteran trees and important hedgerows (which by definition must be at least 30 years old) cannot readily be replaced.

Overhead line – impacts

72. The construction of a new 400KV line is likely to lead to significant tree and vegetation loss within the way leave. The extent and significance of these effects should be assessed within the EIA and proposals for mitigation and/or offset planting should be put forward.

Construction impacts

¹⁸ <http://www.dedhamvalestourvalley.org/assets/Publications/Management-Plan-Docs/DV-AONB7996ManagementStrategyPlan.pdf>
Section 1.6

73. Reference is also made to the possible need for highway widening and gaining access to construction compounds (paragraph 3.5.7). The extent and significance of these effects should be assessed within the EIA and proposals for mitigation should be put forward.

74. The LVIA should also consider the temporary impacts associated with operation of the construction compounds and any infrastructure located thereon.

Cultural associations

75. It is noted (paragraph 5.6.2) that National Grid has agreed that the potential effects on the cultural associations relating to the proposal will be considered as part of the LVIA. However, it is not clear what the range and scope of this work will be – further clarity and consultation is needed on the issues to be addressed in this section of the LVIA.

View points

76. Recently a brief consultation on proposed viewpoints and photomontage locations has taken place. However, given the number of locations and the size of the proposal in combination with the need to take photographs before trees are in leaf, the consultation period has not been sufficient. Therefore SCC reserves the right to ask for further viewpoints or photomontages at a later date if required.

Guidance

77. The LVIA should be carried out and assessed in accordance with GLVIA 3rd edition that will be published on the 3rd April 2013.

Landscape strategy

78. A draft landscape strategy should be provided as part of the application. It will need to be prepared and agreed with the Local Planning Authorities. It may be that measures contained therein will need to be secured via planning obligation, for example offsite planting and the removal of the 132kv line – particularly where it does not interfere with the proposed alignment of the new 400Kv line – for example south east of Hintlesham.

Biodiversity and Nature Conservation

79. There is particular crossover between the assessment of landscape, visual and ecological effects in the impacts of hedgerows and hedgerow trees, as alluded to above. From an ecological perspective it is particularly important that all veteran trees that may be affected are identified and that *all* hedgerows where bat passes are recorded are identified and recognised as important.

80. As mentioned, offsetting of residual impacts outside the red line boundary will need to be considered. Defra has produced some Guiding Principles¹⁹ and an accompanying technical paper²⁰ outlining the relevant metrics. National Grid should have regard to this.

81. In accordance with EN-1, paragraph 5.3.4 National Grid should seek to take advantage of opportunities to conserve and enhance biodiversity. The removal of the 132Kv line provides such an opportunity – particularly for the creation of appropriate Biodiversity Action Plan habitat.

82. Paragraph 6.2.2 states "no grasslands have been recorded as unimproved" - this seems to ignore several grassland County Wildlife Sites (CWS) (Valley Farm Meadow CWS and Layham Pit Woodland and Meadow CWS) which contain herb-rich or unimproved wet meadow.

83. The Environmental Statement needs to set out clearly the anticipated impacts on protected species both as a result of the main development, but also the ancillary temporary development. An assessment of the impacts on protected species is essential before the mitigation hierarchy can be applied.

84. Again cumulative impacts with the existing line should be considered – in ecological terms, this principally relates to displacement or collision risk of birds (paragraph 6.4.17/6.8.1).

85. SCC would request that all data collected is made available to the Suffolk Biological Records Centre.

Historic Environment

86. SCC is generally satisfied with the proposals for the investigation of Historic Environment (Chapter 7) as outlined in the Scoping Report.

¹⁹ <http://archive.defra.gov.uk/environment/biodiversity/offsetting/documents/110714offsetting-guiding-principles.pdf>

²⁰ <http://www.defra.gov.uk/publications/files/pb13745-bio-technical-paper.pdf>

87. In terms of the below-ground archaeology within the route corridor, the following work will be required along the underground section, within the footprint of pylon bases, within temporary site compounds/lay-down areas, and within Sealing End Compounds;
- Geophysical survey of selected sites, identified by the desk-based assessment.
 - Trial-trenched evaluation (systematic sample of the entire route), assessment and reporting.
 - Palaeo-environmental assessment and reporting where the route crosses the floodplains.
88. SCC would expect the Written Scheme for each stage of this work to be agreed in advance, and submitted in the Environmental Statement.
89. Decisions on the need for further archaeological investigation will be made on the basis of the evaluation results. It has been proposed that the field assessment for the route can be undertaken after permission has been granted for the scheme.
90. Although slightly contrary to the National Planning Policy Framework (paragraphs 126 and 127), this approach is considered justifiable in this particular case, given the relative flexibility of the scheme to ensure preservation *in situ* of any significant archaeological remains that might be encountered along the route during the evaluation. This commitment must be also clearly stated in the Environmental Statement.
91. Following the evaluation, archaeological investigation will be required prior to (or immediately before) development:
- strip, map and excavation of full working width (stripped easement), temporary compounds/lay-down areas where archaeological remains are defined in the evaluation.
 - strip, map and excavation of pipe trenches in areas where the evaluation has shown there to be a sufficient buffer (300mm minimum) between the base of the easement strip and the uppermost archaeological horizon enabling archaeological features to be preserved *in situ*.
92. A decision on the timetabling of any further work will be based on the density of archaeological remains defined by evaluation. In general, dense concentrations of archaeological remains (that cannot be preserved *in situ*) will need to be excavated suitably in advance of mainline construction works to avoid delays to the schedule.
93. In addition, continuous archaeological monitoring and recording (a watching brief) of the full working width might also be specified in certain areas. In these areas, opportunity must be given to the contracted archaeologist to hand excavate any discrete archaeological features which appear during earth moving operations, retrieve finds and make measured records as necessary.
94. Any archaeological work that is required prior to (or immediately before) development, i.e. full excavation and/or monitoring, will need to be the subject of a further Written Scheme.
95. The Environmental Statement should also contain proposals for the public benefit of the investigations, both during and after the fieldwork. Provision should be included for outreach activities, for example (and where appropriate), in the form of open days/guided tours for the general public, local schools, local councillors, local archaeological and historical societies and for local public lectures and/or activities within local schools.
96. Provision should be included for local press releases (newspapers/radio/TV). In addition, the Environmental Statement should contain proposals for the long term legacy of this project, e.g. in terms of museum displays, should material of sufficient interest and importance be defined.

Traffic and Transport

97. The Scoping Report sets out the intention to undertake a Transport Assessment, but little detail on this is provided, so SCC provides the following recommendations;
- It needs to include up to date traffic data and this may require additional surveys. Paragraph 10.4.4 refers to desk top study using available data – survey locations and types will need to be agreed with the highways authorities and also be informed by the proposed routing.
 - Traffic flows will need to be considered on the wider network.
 - Impacts on junctions should also be included within the assessment.

- The assessment will need to quantify the impact of the development in terms of all vehicles and HGVs, by site, and include a programme that identifies when vehicles will be accessing the sites. 24 hour access should not be presumed as acceptable due to impact on residents - however, it is accepted that there may be exceptional circumstances.
- The assessment should include proposed routeing for each site and set out how the haul road will be used.
- Information will be required for the Abnormal Indivisible Loads (AIL), both in number and proposed routing and this is likely to also impact the strategic network.
- It is agreed that cumulative impacts as a result of other developments need to be included for all proposed routes within Suffolk and Essex and these should be agreed with the highway authorities.
- The impact on the condition of the access routes needs to be included and take into account maintenance measures to minimise the impact of the developments. There should be no residual deterioration to the maintenance of the highway as a result of the proposed development. A route survey in conjunction with the highways authorities will be required.
- With reference to paragraph 10.5.1, it should be noted that the impact of the development on the highway network will need to be considered on a site specific basis and this may not comply with the guidance percentage impacts and magnitudes referred to therein. The DMRB is designed for the trunk road network and may be inappropriate and too coarse to use for the area affected by development. The magnitude and impact of the development needs to be considered therefore more appropriate assessment will need to be considered here.
- The Transport Assessment should set out mitigation, and residual impacts should be minimised. In addition to the physical mitigation measures, the Transport Assessment should demonstrate how it will manage mitigation through its travel plan to control routeing, timing of deliveries, movement of AILs and staff.

98. Additionally we note the following;

- With respect to the existing environment (paragraph 10.2); the A131 goes through Sudbury which is a declared Air Quality Management Area and is characterised by “pinch-points”. Reference should also be made to weight limits. The A134 passes through Sudbury town centre. The description of the existing environment implies a large number of B – roads, the study area is rather characterised by few A and B roads. Reference should also be made to links to the wider strategic network – for example access to the trunk road network via the A134.
- Effects on residential areas, on-street parking, deliveries to local businesses and building strike by HGVs are also possible and should be assessed (paragraph 10.3.3).
- It should be clarified whether the operational phase will include AIL movements – if so examples of typical events should be included to enable the impact to be assessed (paragraph 10.3.5).
- Highway conditions would have evolved significantly by the time decommissioning arises – criteria for assessing decommissioning would need to be agreed, with the understanding that highway issues that exist at the time will need to be included in any assessment and mitigation (paragraph 10.3.6).
- All references to the “Highways Agency” should read Highway Authorities, meaning the Highways Agency for the strategic network and SCC and Essex County Council for the rest of the highway network (paragraphs 10.4.4 and 10.8.1).
- Closures of the public highway (for example where the underground cables cross public highway) should be minimised. Any diversions would need to be discussed with the relevant highway authority. An assessment of the sensitivity of receptors affected by diverted traffic is likely to be necessary.
- Sustainable drainage should be considered as part of the permanent infrastructure.
- Clarification is needed with regard to protected lanes, if these relate to the highway it should be noted that the local highways authorities should be contacted not just the district authority (paragraph 10.2.1).

99. SCC is generally satisfied with regards to the proposals as they relate to the rights of way network. It is important that closures are properly managed, and supported with an effective communications strategy,

with parish, district and county councillors directly informed. As promoted footpaths may be affected, this should be widely publicised. Any signage needed should be appropriately placed, but should not become visually intrusive and should be removed in a timely fashion. The use of interpretation boards in conjunction the signage should be considered to inform the public about the project.

100. All the mitigation proposals should be set out in a Code of Construction Practice, a draft of which should be provided with the application. It should include details of traffic routeing, provisions for access and a travel plan. Details of a pre-construction condition survey for the highway (including public rights of way) network will need to be provided and provisions set out for the reinstatement of damage.

Flood Risk, Water Quality and Resources

101. With reference to Table 9.1, final row; SCC should also be consulted regarding consent for works in an ordinary watercourse. The baseline sources of information listed in paragraph 9.4.4 should also include SCC flood incidents maps.
102. It is proposed that Schedule 3 of the Flood and Water Management Act 2010 is commenced by April 2014. This will require National Grid to obtain drainage approval for any works affecting surface water and is in addition to planning permission. It will be an offence to construct without drainage approval. If, however development consent is granted before this time, then no drainage approval would be required.

Air Quality and Emissions

103. It not clear why there is a reference to ammonia with respect to road traffic in paragraph 11.3.2. This paragraph is not very clear as goes on to discuss eutrophication and it is not explained why construction activity would result in emissions that may impact on vegetation and ecosystems. The pollutants of concern would be NO_x, SO₂ and Ozone.

Noise and Vibration

104. Whilst the need for a noise and vibration assessment of noise on construction traffic routes has been agreed, reference is made to use of the BS5228 methodology (it is assumed that the reference in Table 12.1 to paragraph 13.4.5 is a typing error and refers to the following 12.4.5 under "Construction Assessment"). For haulage on public roads, it is suggested that the use of the Calculation of Road Traffic Noise methodology would be more relevant, together with the assessment criteria contained in DMRB Volume 11. It would also be helpful to know how many properties are likely to be affected along the routes and what the hours of HGV activity would be – for example whether haulage over night would be required.
105. With respect to vibration, it is important that the route network is well maintained to ensure a smooth running surface. As mentioned above, pre-construction works surveys will be required and should cater for this issue. Again, the methodology contained in DMRB Volume 11 would be relevant to the construction traffic routes.

I trust the above comments are helpful. If you require any clarification, please do not hesitate to contact me.

Yours sincerely

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Economy, Skills and Environment