



## SPR EA1N and EA2 PROJECTS

### DEADLINE 11 – POST ISH16 SUBMISSION – DESIGN MATTERS & FLOOD RISK AND DRAINAGE

Interested Party: SASES      PINS Refs: 20024106 & 20024110

Date: 7 June 2021

Issue:

#### Proposed sub-station site

#### Design matters (Agenda Item 2)

1. SASES noted the link between the design issues at the substation, and the unresolved issues relating to flood risk and drainage (see below).

(i) *Uncertainty in respect of design*

2. The particular issues which appear to be unresolved in terms of the design of the substation site include:

- a. **Cable sealing end compounds.** The north-west compound contains functionality that does not relate to the needs of the EA1N and EA2 projects, namely a circuit breaker on the existing grid network. National Grid (and the Applicants) have failed to make a case for the inclusion of this infrastructure in the applications, and the compound in question is in a particularly harmful location in terms of landscape impacts. The number of connections (i.e. to four separate circuits) causes both the need for three CSECs in addition to the direct connection from the National Grid substation, and the displacement of the pylon lines to accommodate the compound which lies between them. The case for such a large number of connections has not been made, and it has not been shown that the proposal is limited to connection infrastructure for the proposed windfarms. It is unclear why the number and size of CSECs is unaffected by removing one of the project substations entirely;

- b. **AIS vs GIS.** The impacts of the variability in this respect have been considered at length in earlier submissions. It appears from National Grid's submissions to the examination that GIS is not favoured because of the need for SF<sub>6</sub> to insulate switchgear (at CAH2, NG explained that "GIS technology contains Sulphur Hexafluoride (SF<sub>6</sub>) which has the equivalent impact of ten times the carbon equivalent of AIS technology"). The use of SF<sub>6</sub> has not been assessed as part of the ESs and, in particular, no consideration has been given as to the extent to which the climate change benefits of the scheme would be reduced by the use of SF<sub>6</sub> in GIS. It appears that the use of GIS is inherently incompatible with all climate change targets, and its use can be avoided through only authorising the use of AIS. Whilst the landtake is far greater, this would have the benefit of:

- i. Reduced height;
- ii. Increased certainty.

(ii) *New arrangement plans*

3. The plans recently produced by the Applicants still lack detail. In SASES's view, they confirm the need for comprehensive master planning and redesign in the event that only one project comes forward.
4. More significantly, the drawings confirm that the National Grid infrastructure will not be reduced in scale or appearance in the event that only one project comes forward. Indeed, the magnitude of effects from only one project appears broadly similar. It follows that in assessing the planning balance, ExA should be looking at the adverse impacts from a single project, against the benefits of a single project. Given the applicants have indicated that they might accept that each project will have a minimum capacity of 600 MW, the impact of a single Scottish Power substation and all the National Grid infrastructure should be viewed against the benefits of delivering 600 MW of renewable energy provided that the final draft DCOs submitted at Deadline 12 are amended to set out that the electrical capacity will be over 600 MW rather than 100 MW as currently stated.

(iii) *Parameters*

5. It appears that little progress has been made by the Applicants in defining and reducing the parameters of the substation developments. Unless the projects are properly parametrised in this location then there is a risk that any further design consideration will be no more than "window dressing". In particular, SASES emphasises:
  - a. The lack of any external scrutiny of the proposed parameters. SASES have challenged these parameters in written submissions but the points made have not been adequately addressed by the Applicants;
  - b. The need for controls over both height from finished ground level and AOD, to avoid changes in levels or the disposition of equipment across the site from changing the assessed impacts and/or causing further adverse effects. At present, the dDCOs do not provide AOD figures in requirements, and this should be addressed;
  - c. The size of pylons has not been addressed, in particular in terms of footprint.
6. Further submissions on these issues were made at ISH17.

(iv) *Design principles/oversight*

7. SASES fundamentally disagrees with the Applicants' approach to the control of design after any DCO is made. The SDPS fails to secure any proper design review of the infrastructure as opposed to the mitigation measures. In their oral submissions, the Applicants sought to argue that the design of the infrastructure would be fixed through a procurement process which would precede any submission for approval of details. In other words, the Applicants do not consider that there is any scope for alteration through engagement with the local planning authority or with local residents at detailed design stage.

8. This is an unacceptable approach, and it is contrary to the clear policy imperative to secure good design, and to Government policy on design review.
9. SASES consider that it is imperative that there is proper design review of the proposed infrastructure, to ensure that it has been designed in a way which minimises its impacts. The use of a “design champion”, who is proposed to be a person who is responsible for the delivery of the project, does not answer the need for design review, not least as unclear whether the proposed design champion has the necessary expertise and whether he has the authority to act as the design champion for the National Grid infrastructure. The need for such review is supported by:
  - a. HMT National Infrastructure Strategy (referred to in SDPS);
  - b. National Infrastructure Commission Design Principles;
  - c. The use of design review panels in other projects, e.g. the HS2 Design Review panel, which includes (specifically) engineering expertise.
10. It follows that there is no practical reason why the Applicants cannot agree to proper design review, including engineering expertise, at detailed design stage. Such review can inform the submissions made for the approval of details.
11. In the absence of a commitment to proper design review in the SDPS, SASES proposes that this matter is secured by requirements. See the submission in respect of ISH17.

(v) *SDPS and noise*

12. Paragraph 71 of the SDPS states that

“71. Further discussion will be undertaken during the detailed design process to where the Applicant will seek to further minimise the operational noise rating level below the limits set out in Requirement 27 of the DCO and avoid any perceptible tones and other acoustic features insofar as these mitigation measures do not add unreasonable costs or delays to the Project or otherwise result in adverse impacts on other aspects of the environment (e.g. landscape and visual impacts). It is at this detailed design stage that determination of the final mitigation measures will be established.”

13. The caveat that measures “do not add unreasonable costs or delays” is inconsistent with the Noise Policy Statement for England which seeks to *avoid* adverse noise effects on health or quality of life, and thereafter to minimise. There should be a clear commitment to avoiding perceptible tones. See further SASES’s submissions on noise matters.

(vi) *Good design and radial connection*

14. The need for good design extends to the overall design of the grid connection. The need for substations at Friston, the landfall at Thorpeness and the connecting cables with the adverse impacts they bring, arise from the historic practice of radial connections with each windfarm having its own onshore infrastructure. This is now recognised to be an unsustainable approach. This is a point that is clearly recognised

by the Secretary of State (and indeed by the Prime Minister). It should be considered as part of whether these projects have secured “good design”, which they have not.

### Flood risk and drainage (Agenda Item 3)

15. Clive Carpenter (GWP Consultants) addressed the ExAs on these agenda items. A further expert report prepared by GWP in response to the Applicants’ latest position is attached at Appendix 1.

16. In respect of the sequential test, the Applicants indicated that a sequential test had been carried out at site selection stage. However, SASES continue to emphasise that the sequential testing did not include any assessment of non-fluvial flood risk, and confined itself to EA fluvial flood zones. The Applicants’ appear to consider that the sequential test does not require consideration of flood risk from other sources (see e.g. Applicants’ Comments on SASES’ Deadline 9 Submissions, p 69). This is a significant point, and a crucial misunderstanding on the part of the Applicants.

17. The NPPF states:

“The sequential approach should be used in areas known to be at risk now or in the future **from any form of flooding**.”

18. Similarly Planning Practice Guidance makes clear that:

“Within each flood zone, surface water and other sources of flooding also need to be taken into account in applying the sequential approach to the location of development.”

*Paragraph: 019 Reference ID: 7-019-20140306*

“Any development proposal should take into account the likelihood of flooding from other sources, as well as from rivers and the sea. **The sequential approach to locating development in areas at lower flood risk should be applied to all sources of flooding**, including development in an area which has critical drainage problems, as notified to the local planning authority by the Environment Agency, and where the proposed location of the development would increase flood risk elsewhere.”

*Paragraph: 033 Reference ID: 7-033-20140306*

19. The document referred to by the Applicants’ in that submission (“Flood risk assessment: the sequential test for applicants”<sup>1</sup>) is not planning policy or guidance, but generic Environment Agency guidance which has no specific status in the planning system. The PPG is clearly the more authoritative source of guidance for the application of the sequential test to planning decisions.

20. SASES maintain that:

- a. A sequential approach to site selection has not been properly carried out and there are sequentially preferable sites with lower flood risk that are available for the development;

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<sup>1</sup> [Flood risk assessment: the sequential test for applicants - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

- b. The Applicants have failed to demonstrate that the flood risks are capable of being addressed through the drainage design;
  - c. There has been no proper assessment of construction phase impacts;
  - d. It is not possible to conclude that the proposal would not increase the risk of flooding elsewhere, including a risk to residential receptors in Friston, during the construction and operation of the development.
21. These give rise to very clear reasons for refusal, both as an application of the EN-1 (see paragraph 5.7.9) and a determination in accordance with the NPS (s 104(3) Planning Act 2008) and applying the test in s 104(7), because the adverse impacts would outweigh the benefits of developing in this location.

## **APPENDIX 1**

**Report prepared by GWP Consultants dated 2 June 2021**