The Planning Act 2008

East Anglia One North (EA1N) and East Anglia Two (EA2) Offshore Wind Farms

Planning Inspectorate Reference: EA1N – EN010077, EA2 – EN010078

Secretary of States Questions – 30 January 2022

Comments of Suffolk County Council as Lead Local Flood Authority

8. Flood Risk

The Secretary of State has identified the following issues in relation to flood risk on which he invites comment:

i. **Suffolk County Council** and **Interested Parties** are asked to comment on the Applicant's response to the Secretary of State's questions in the 2 November 2021 consultation letter regarding surface water and drainage management during construction. Parties are asked to comment on the updated construction surface water drainage proposals and the proposed amendment to requirement 22 (Code of Construction Practice) in Part 3 of Schedule 1 to the Development Consent Order which was submitted by the Applicant.

SCC response to Section 2

Paragraph 8 of the Applicants response to the Secretary of States Questions of 2nd November 2021 (dated 30th November 2021, document ref:ExA.AS-2.SoSQ.V1) states, "*Furthermore, the National Grid substation location was selected in full cognisance of the presence of a shallow surface water flow route (comprising approximately 4cm of water depth during a 1 in 100 year storm event), noting that such features can be diverted and their continued conveyance ensured using well established and proven techniques*". This statement is reiterated in paragraph 26.

Paragraph 11 of the Applicants response states "*analysis of the technical data that support the Friston Surface Water Study (see section 3.6.1 of the OODMP (REP13-020)) confirms that there is no flood risk hazard to the onshore substation and National Grid infrastructure locations.* This statement is reiterated in Paragraph 23. SCC believe the Applicant is referring to their assessment in REP13-020 across Table 3.3, Table 3.4 and Plate 3.2 which identifies existing surface water flows would represent a 'vey low hazard' as per DEFRAs Hazard to People Classification. On this basis, SCC would suggest it is not accurate to state there is *'no flood risk hazard'.*

SCC also wish to draw particular attention to the reference made to section 3.6.1 of the OODMP (REP13-020). In particular, Table 3.3 – Maximum Water Depths (m) for Baseline Rainfall Events (6 Hour Storm Duration). This table, read in conjunction with Plate 3.1 gives depths of rainfall along the identified surface water flow path, taken directly from the Friston Surface Water Study (Friston Surface Water Management Plan). Nodes 1 – 10 of Plate 3.1 are of relevance as these interact with the National Grid infrastructure. Using Table 3.1 and the '1 in 100-year rainfall event with the upper climate change allowance' column, it can be seen that maximum water depths vary from a minimum of 14mm to a maximum of 205mm across these 10 nodes. This is much greater than the maximum '4cm', or 40mm flow path stated in the Applicants response.

It is worth noting that nodes 1, 3, 5, 7, 9 & 10 appear to be located directly south of an existing ordinary watercourse, with nodes 2, 4, 6 & 8 located directly north of said watercourse. This watercourse runs east to west. The Applicant will need to divert this watercourse as part of their works, but this does not form part of development consent

and will be subject to a separate application under the Land Drainage Act 1991. Piping the watercourse beneath the development will not be an acceptable solution. It is unclear what the Applicants proposals for diversion of the ordinary watercourse are, or what impact these proposals would have on this existing surface water flow path. SCC acknowledge the Applicants commitment referenced in Paragraph 8 of their response, but no details on how this would be delivered are available at this stage. A photo of this watercourse, taken at approximately at Node 6, looking west along the watercourse, is included in Appendix A.

Diverting the existing ordinary watercourse and the existing surface water flow paths that are identified to flow across the land which is proposed for the National Grid Infrastructure should not be viewed as a simple or nominal task. This work will require detailed hydraulic modelling and may require additional mitigation measures to prevent an increase in downstream surface water flood risk either through an increase in flows due to reduced interception, or through an increase in velocity due to any channel realignment. Any such additional mitigation measures and their deliverability within the Order Limits remain unknown. Only once detailed hydraulic modelling is completed and any mitigation measures are identified, would SCC be able to comment on any residual surface water flood risk to the proposed development, in particular the National Grid Infrastructure. Until such time, SCC suggests that the only prudent course is to work from the evidence before us, in the form of the Friston Surface Water Management Plan which shows the surface water flow path across the land proposed for the National Grid Infrastructure.

SCC do not agree with the Applicants statement in Paragraph 14 that 'proposals for the Projects in fact surpass the design standards required…'. Instead, SCC maintain that the proposals are simply compliant.

Paragraph 18 states *"flooding within Friston primarily results from surface water flow from a number of sources unrelated to the onshore substation and National Grid infrastructure locations"*. This is accompanied by paragraph 11 which quotes the agreed item from the Statement of Common Ground on this topic – *"flood events in the Friston area, resulting from overland flow, that occurred during late 2019 - early 2020 was a result of multiple flow paths and not a direct result of surface water runoff from land associated with the proposed site of the onshore substation or the National Grid infrastructure".* SCC would highlight that the land associated with the proposed development played an indirect role in minor carriageway flooding along Low Road, which was the result of a combination of flow paths from across the catchment, including the area of proposed development. In a greater return period, it is reasonable to determine that the combination of flow paths could result in an increased risk of surface water flooding to property. This is particularly true of the construction phase, to which paragraph 18 relates, due to the difference in rainfall event for which the surface water system is designed (1 in 30 for construction compared to 1 in 100 for operation) and the impact any sediment runoff from the site could have on downstream culverts.

SCC response to Section 6 (Applicants response to Part 3iv)

In response to Section 6.1, SCC maintain our position outlined at Deadline 12 (REP12-098), Section 3.3, in response to paragraph 186 of Outline Code of Construction Practice, Version 07 (REP11-015). SCC cannot support the principle of residents of Suffolk being subjected to an increase in surface water flood risk during construction, compared to both pre-construction (where greenfield conditions apply) and post-construction (where surface water drainage is designed to 1 in 100 + 40%).

There is not enough detail relating to construction drainage for the onshore cable route for SCC to make any further comment.

In response to Section 6.2, SCC welcome the Applicants proposal to increase the return period of their construction drainage design from 1 in 15 to a 1 in 30-year storm event. But, as above, SCC cannot support the principle of residents of Suffolk being subjected to an increase in surface water flood risk during construction, compared to both pre- and post-construction. SCC maintain that surface water flood risk should be mitigated up to and including the 1 in 100-year storm event during construction. This could be implemented within the Order Limits through an increase in plan area and depth of attenuation structures alongside relocation of other temporary site uses, for example, soil storage could be relocated offsite through a Town and Country Planning Act application to free up further space on site for surface water attenuation. Whilst such an application (probably for no more than a temporary change of use of suitable nearby agricultural land) would be a matter for East Suffolk Council as the relevant local planning authority, SCC does not consider that it would be unlikely to be possible to find a suitable site (or sites) for soil storage, given the nature of the surrounding area and the relatively short-term nature of the use.

Proposed amendment to Requirement 22

The proposed amendment to Requirement 22 seeks to accommodate surface water drainage for a 1 in 30-year storm event for the listed works numbers, which generally consists of the proposed substation sites, although works 32 and 43 should be added.

As per SCC's response to Section 6 (above) we cannot support the principle of residents of Suffolk being subjected to an increase in surface water flood risk during construction, compared to both pre- and post-construction. SCC maintain the position stated at Deadline 12 (REP12-098) that construction impacts associated with the 1 in 100-year rainfall event must be mitigated by the Applicant. Question 8 iii of Secretary of States Questions dated 20th December 2021 seeks SCC's view on additional mitigation measures which is set out later in this response. Below is a summary of the two options that could be acceptable to SCC:
Option 1 (preferred by SCC) - Provide mitigation during construction for 1 in 100-year rainfall event within the order limits
Option 2 - Provide mitigation during construction for 1 in 100-year rainfall event. Provision up to and including the 1 in 30-year rainfall event would be accommodated

onsite and additional mitigation up to and including the 1 in 100-year rainfall event would be accommodated outside of the order limits. The exact mitigation would need to be determined through detailed modelling and options assessment. Some potential mitigation options are listed in this response to question 8 iii. Any mitigation would need to be agreed with SCC LLFA and would need to sit beside a comprehensive CoCP which details maintenance and monitoring of additional mitigation during construction.

A solution following the principles of either of the above two options (with refined wording) would be acceptable to SCC in terms of the onshore substation. SCC would suggest that a simple substitution of the expression “1 in 100” in place “1 in 30” in the Applicant’s suggested reformulation of Requirement 22 would be sufficient for this purpose, whichever option is ultimately pursued. This would set the parameter to be achieved but leave it to the detail of the flood management plan as to precisely what measure should be included within it to meet that parameter. SCC would stress that Option 1 is strongly preferred.

This approach does not address the potential increase in surface water flood risk during construction for the onshore cable corridor.

ii. **The Applicant** is requested to provide further details of how the 1 in 30-year storm event return period for the onshore substation and National Grid infrastructure locations could be accommodated within the Order Limits.

Question not directed at SCC, but comments on this aspect made in response to Questions 8 i and 8 iii of Secretary of States Questions dated 20 December 2021.

iii. **The Applicant and Suffolk Country Council** are requested to provide details of any alternative mitigation measures, aside from those already within the construction surface water drainage proposal, which could be implemented to alleviate the risk to local residents if a flood event were to occur.

In responding to this question, SCC acknowledge Question 8 ii from the Secretary of States letter dated 20 December 2021, which seeks further details as to how mitigation for a 1 in 30 storm event could be accommodated during construction. At this stage, SCC do not know the land take required for this approach. SCC maintain the position communicated throughout examination that a return period of 1 in 100 should be used for mitigating the impacts of construction. Residents of Suffolk should not be subjected to an increased risk of surface water flooding during construction, compared to pre- and post-construction.

SCC’s first resort is the provision of sufficient mitigation for 1 in 100 within the Order Limits during construction. Whilst it would be a compromise and not compliant with the standard LLFA approach, the below alternative mitigation measures could be considered if the Secretary of State were to determine that on site mitigation for 1 in 30 is the best the applicant can facilitate.

Even if the below alternative mitigation options were to be considered, fundamentally, an agreed return period would need to be allocated (SCC suggest 1 in 100) for the design of any alternative mitigation options. Any such options would need to be subject to detailed hydraulic modelling post consent, and agreement between SCC and the Applicant. Determining the potential consequences through hydraulic modelling would be critical before determining any specific appropriate mitigation measures.

The below mitigation options are therefore written on the assumption that these options could be designed to mitigate any potential offsite impacts beyond the 1 in 30 and up to and including the 1 in 100-year rainfall events during construction;

- Works to the upstream extent of Friston Main River, from Church Road to B1121;
- Works to the culvert upstand at B1121 Grove Road junction to allow surface water to enter the culvert quicker;
- Works to the culvert under B1121 and along Low Road;
- Works to the Friston Main River along Low Road;
- Works to the Friston Main River beyond Low Road;
- Explore and deliver property level resilience measures to properties identified as being at increased risk of surface water flooding during construction, as identified by hydraulic modelling as part of detailed design;
- Ongoing monitoring and maintenance of Friston Main River, which has already been agreed post-construction, but also during construction; and
- Interception of flow paths east of Grove Road, which may also interact with the cable corridor and haul road. Attenuation of these flows and release at a low rate (potentially manually once flood flows have subsided) or dispose of through other means (infiltration or water re-use, for example).

*This is not an exhaustive list and other mitigation options may be identified as part of detailed hydraulic modelling once the impacts are identified.

SCC would like to highlight that any additional mitigation to mitigate the impacts of a 1 in 100 rainfall event during construction, identified through hydraulic modelling, would need to be implemented by the Applicant, and not through a S111 fund, or any other form of funding mechanism that could see SCC responsible for delivering the required mitigation on behalf of the Applicant for what are ultimately impacts relating to the proposed development.

Whilst SCC acknowledges that the approach set out above will leave some elements of the mitigation open at the present time, with the specific arrangements to be determined post-consent (and potentially subject to a need for planning permission if the scope of works falls outside of any applicable permitted development rights), SCC does not see this as a reason for not requiring the Applicant to secure such mitigation. SCC has consistently raised this issue throughout the Examination process and it has been the Applicant's choice not to address it in the proposals as currently formulated. Whilst it would be preferable for the DCO process to resolve all relevant matters, SCC acknowledges the stage that the process has now reached and the procedural difficulties in introducing changes to the applications at this time. In the circumstances,

SCC therefore considers it would be reasonable to expect the Applicant to resolve the issue post-consent, dealing with any regulatory approvals that may be required for the mitigation works (once detailed design work has been undertaken) as a separate matter.

iv. **Suffolk County Council** is invited to comment on the Applicant's response to the 2 November 2021 consultation letter question regarding the updates to the National Planning Policy Framework at paragraph 159 onwards in relation to flood risk assessment.

SCC maintain the position outlined in our response to the Secretary of States Questions dated 02 November 2021.

Previous versions of the NPPF and the current version of NPS EN-1 can be read and interpreted in different ways. For example, NPS EN-1 paragraph 5.7.3 states *'The aims of planning policy on development and flood risk are to ensure that flood risk from all sources of flooding is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk'.* However, further paragraphs under the 'Applicant's Assessment' and 'IPC Decision Making' headings, which offer more detail, do not reference all sources of flood risk, with paragraph 5.7.13 only referencing Flood Zones for fluvial/tidal flood risk in relation to the Sequential Test. The previous version of the NPPF had a similar approach, which has been clarified by the revised NPPF in paragraphs 161, 162, and 167, with the draft NPS EN-1 proposing similar clarification in paragraph 5.8.5.

As stated in SCC's response to Secretary of State Questions dated 02 November 2021 and in the Applicants response to the same (paragraph 22 of their response), the NPPG has not been updated to provide guidance on how to implement the Sequential Test for all sources of flood risk.

Whether or not a Sequential Test is required is ultimately a decision for the Decision Maker (usually the LPA, in this case the Secretary of State) to determine.

Appendix A

Photo of ordinary watercourse associated with existing overland surface water flow path. Photo was taken at approximately Node 6 (Plate 3.1, REP13-020), looking along the ordinary watercourse in a generally westerly direction.