APPLICATION BY EAST ANGLIA TWO LIMITED FOR AN ORDER GRANTING DEVELOPMENT CONSENT TO CONSTRUCT AND OPERATED THE PROPOSED EAST ANGLIA TWO OFF-SHORE WINDFARM

EXAMINING AUTHORITY'S FIRST WRITTEN QUESTIONS (ExQ1)

Please find below the Environment Agency's responses to the ExQ1.

1.7 Flood risk, water quality & resources

1.7.1 Flood Risk Assessment (FRA)

Can you confirm that you are satisfied with the Applicant's general approach to the Flood Risk Assessment (FRA); in your response, please address the following matters:

a) confirm that you are satisfied that the Applicant has applied appropriate climate change allowances to their assessment of flood risk;

The Flood Risk Assessment (FRA) assessed the fluvial climate change impacts using the upper end allowance of 35% which is appropriate for development classified as 'essential infrastructure' with a lifetime of up to 2069. The proposed development has a stated lifetime of 25 years and an intended start date of 2023, resulting in a development lifetime until 2048. As such, we are satisfied that the fluvial climate change allowances are sufficient.

The majority of the development, including the proposed onshore substation and National Grid infrastructure lie within Flood Zone 1. This is for both the present day scenario and with the addition of climate change allowances. The temporary works to cross the Hundred River watercourse will take place in Flood Zones 2 and 3, however the resulting permanent cable works will be underground, under the river, and therefore no longer at risk of flooding. Therefore there are no relevant climate change allowances to apply in this situation.

b) comment on SCC and ESC's view that "unless there is clear commitment to remove all impermeable areas of the proposed development by 2069 then a climate change allowance of 40% should have been factored into the assessment instead of 20%" (see Section 42 Consultation Response dated 27 March 2019 of Appendix 20.1 [APP-494]);

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The stated lifetime of the proposed development is 25 years, with an anticipated start date of 2023, and an expected lifetime until 2048. The climate change allowances presently used will be appropriate until 2069, which is 21 years beyond the stated lifetime. This provides an element of precaution should the development remain for longer than anticipated. However, it may be beneficial to assess the surface water flood risk and drainage scheme using the 40% allowance, to see what the resulting impacts would be. This would show whether the proposals would still be satisfactory, or whether the scheme would require alterations to ensure it did not increase flood risk elsewhere in this scenario.

c) comment on the appropriateness of the methods proposed for works on and/or near to Main Rivers located with the study area, including the Thorpeness Hundred River and Friston Watercourse; and

The works proposed for the Thorpeness Hundred River include the crossing of the river using an open cut method. This will include temporary damming of the watercourse and either over-pumping of the water or temporary re-routing, to ensure that the original flow volumes and rates are maintained so as to ensure flood risk is not increased. The channel will then be reinstated to pre-commencement depths to maintain the capacity of the watercourse. This is considered appropriate, subject to the submission of further detailed plans and method statement. These will be required through the Flood Risk Activity Environmental Permitting process, and as part of the watercourse crossing method statement. The watercourse crossing method statement is to be submitted as part of the Code of Construction Practice (CoCP) under Requirement 22. The draft Statement of Common Ground (SoCG) (June 2020; Document Reference: ExA.SoCG-3.D0.V1) between the Applicant and the Environment Agency confirms that the Environment Agency are to be consulted on the preparation of the watercourse crossing method statement, and this will be noted in an updated Outline CoCP.

The applicant has also agreed in the draft SoCG, to include in the final CoCP a commitment to not store materials: “within Flood Zone 2 or Flood Zone 3 along the length of the onshore cable route, and to store spoil outside of the Hundred River flood plain”, which should ensure no increase in flood risk elsewhere as a result of the works.

There are no development works currently proposed within the fluvial Flood Zones of Friston Watercourse. Any works within 8m of the watercourse to provide for a surface water discharge point from the substation site will require an Environmental Permit from the Environment Agency.

A ‘Flood Management Plan’ is to be prepared as part of the CoCP. Section 20.3.3 of the Environmental Statement (document reference 6.1.20) states that this will be developed in consultation with the Environment Agency and LLFA. The draft SoCG confirms that this will be noted in an updated Outline CoCP.

d) comment on the adequacy and feasibility of the Applicant’s proposed ‘embedded’ and residual mitigation measures detailed throughout the FRA [APP-496].

The installation of cabling under the Main River watercourse using an open-cut trenching method is discussed, and considered appropriate, as outlined above. If non-main rivers (Ordinary Watercourses) are to be crossed with use of a temporary

dam then a permit will be required from the Lead Local Flood Authority Suffolk County Council.

A Flood Warning and Evacuation Plan will be produced for the temporary works at the Hundred River, to ensure that appropriate actions can be taken on receipt of a Flood Alert or Flood Warning. This should serve to ensure the safety of the personnel, the protection of the works, and that the river will be able to function correctly without an increase in flood risk.

1.7.6 Offsite Highway Improvements

Do you consider that the omission of the offsite highway works and temporary laydown areas for structural works at Marlesford Bridge from the FRA meets the tests set out in NPS?

While we agree that ideally the FRA should have included an assessment of the impacts of the temporary laydown area on offsite flood risk, we understand that there is uncertainty over whether the site will be needed and the nature of the site requirements, which would make it difficult to undertake a detailed assessment within the FRA.

In our Relevant Representation, we stated that there should be no land raising or built development on site, due to the potential for such works to increase flood risk elsewhere, and uncertainty as to whether any increase in risk could be appropriately managed. We have subsequently further considered the specific characteristics of the flood zones at this location, and the potential to adequately manage flood risk. There are relatively large flood zones upstream of the proposed site, with no properties at risk; so in our opinion it is likely that any reduction in flood storage as a result of the temporary works would have a minimal impact on flood depths and extents upstream, and would be capable of being managed through temporary or permanent compensatory flood storage or landowner agreement.

A Flood Risk Activity Permit (FRAP) will be required prior to the commencement of any significant works within 8 metres of the Main River Ore at this location. Therefore we consider that the flood risk implications of the laydown area can be considered as part of the FRAP application once details are known.

The draft Statement of Common Ground (June 2020; Document Reference: ExA.SoCG-3.D0.V1) between the Applicant and the Environment Agency confirms that: “The Applicants and Environment Agency agree that to resolve this matter the Applicants will undertake a Flood Risk Assessment of works required within Work No. 37 as part of any future Environmental Permit application.”

The structural works to Marlesford Bridge will be assessed through the FRAP process, as is usual for bridge works, as the proposed works are not known in detail at present.

These comments will also be useful in respect of question 1.7.7.

1.7.14 Water Framework Directive (WFD)

Can the Environment Agency confirm whether or not it agrees that the Water Framework Directive information provided in the application appropriately demonstrates the Proposed Development’s compliance with the requirements of the

Water Framework Directive? Please comment on the Applicant's comments in Table A20.42 [APP-036]. Do any other matters relevant to Water Framework Directive need to be taken into account?

We can confirm our agreement that the Water Framework Directive information provided in the application was sufficient. As highlighted below, further assessment will be required to inform the detailed design and implementation of the proposed scheme.

1.7.15 WFD

The Applicant has confirmed that an assessment of migratory fish and river connectivity was not undertaken. The Applicant has now said that it will commit to pre-construction surveys on fish and eels within an updated OLEMs. Are you satisfied that this is sufficient to allay your concerns raised in relation to the Water Framework Directive compliance assessment and Table A20.42?

We can confirm that we are satisfied with the commitment by the Applicant to undertake pre-construction eel and fish baseline surveys. As agreed as part of the draft SoCG (June 2020; Document Reference: ExA.SoCG-3.D0.V1) between the Applicant and the Environment Agency, an updated OLEMS will specify that the Environment Agency are to be consulted on the scope of those studies.

1.7.17 Secondary Aquifers

In your RR [RR-039] you suggest that Table 20.12 of ES Chapter 20 could include reference to secondary aquifers supporting private supply. In the Applicant's response [AS-036] it is stated that that a reference to secondary aquifers supporting private supply could be included in Table 20.12 but that this would make no material difference to the impact assessment. Do you agree?

It remains our view that Table 20.12 could be misleading. The Applicant states in response to our Relevant Representation that the single 'groundwater' receptor is intended to cover all aquifer categories, but this wasn't immediately clear.

However, taking all references together (including Table 20.7 & 20.8), and especially with the recent progress on the draft SoCG in relation to groundwater receptors, we would agree that it does not matter whether or not secondary aquifers are specifically included within Table 20.12, if the impact assessment will be the same given the other clauses. This appears to be the case.

The commitments from the Applicant in the current draft SoCG (June 2020; Document Reference: ExA.SoCG-3.D0.V1), along with the further proposed text provided to us via email on 16/10/20 (please see 1.7.18 below), indicates that all groundwater abstractions will be afforded the relevant protection.

1.7.18 Groundwater dependant ecological sites

Please provide an update on outstanding matters still under discussion.

In our discussions with the Applicant, we asked that the Statement of Common Ground confirm that a hydrogeological risk assessment (HRA) would be required for any works within 500m of any Groundwater dependant ecological sites. This was not included in the draft SoCG (June 2020; Document Reference: ExA.SoCG-3.D0.V1).

However, following further correspondence on what the HRA requirements might mean in practice for any such sites, the applicant has proposed via email (16/10/20) the following text for inclusion in an updated Statement of Common Ground:

The Applicants agree that the OCoCP will be updated to include:

- A commitment to prepare a Method Statement for any crossings made by a trenchless technique within the onshore cable route (excluding landfall). This will provide details of the design parameters and any measures to minimise impacts upon groundwater;
- Mapping of all existing abstraction licences, all domestic abstractions and all protected rights; measures will ensure no derogation to these as a result of the Projects;
- A commitment to undertake a pre-construction water features survey (visual inspections) where required. This will be used to ensure that water features are identified and subject to hydrogeological risk assessments as necessary prior to works commencing.
- Clear identification of whether dewatering activities will require an environmental permit. It will be specified that any water removed from subsurface excavations is returned to ground and that any water removed from a watercourse will be returned to the same watercourse, unless otherwise agreed with the Environment Agency.
- A commitment to undertake a hydrogeological risk assessment for works that could cause changes to aquifer flow or affect aquifer quality within 500m of groundwater dependent ecological sites (i.e. international, European, national and county designations). A screening exercise will be undertaken (utilising desk-based information such as BGS borehole records, solid and superficial geological mapping and OS mapping, site citations, Natural England's Priority Habitats Inventory and Phase 1 habitat survey data where available) to determine whether or not identified ecological sites have features / habitats that are likely to be groundwater fed. Where features / habitats that are likely to be groundwater fed are within 500m of works that require excavations below 1m, a hydrogeological risk assessment will be undertaken.
- A commitment to undertake a hydrogeological risk assessments for works that require excavations below 1m within 250m of boreholes or springs.

We can confirm that the inclusion of the above text would be sufficient to satisfy our concerns on this, and other groundwater protection related issues.

1.7.19 Watercourse crossing method statement

In your RR [RR-039] you requested that a control measure to avoid coarse fish spawning season (March to June) should be included and addressed as part of the watercourse crossing method statement. Please comment on the Applicant's response that they will seek to avoid this season rather than avoid. Should this be secured in the dDCO?

It has been agreed as part of the draft SoCG (June 2020; Document Reference: ExA.SoCG-3.D0.V1) between the Applicant and the Environment Agency, that an updated Outline CoCP will state that the Environment Agency are to be consulted on the Watercourse Crossing Method Statement. The Hundred River crossing will also require a separate Flood Risk Activity Permit from the Environment Agency.

As part of that process it is expected that the applicant will provide relevant survey information in support of decisions regarding any mitigation procedures that will need to be added. This will include fish as well as other protected species. With regard to fish, it is possible that if the fish spawning season cannot be avoided there may be measures that can be included within the construction method so that the work can take place with reduced risk of impact. Survey results will help identify and inform this.

1.11 Marine and Coastal Physical Processes

1.11.9 Coastal erosion predictions

Do you agree with the conclusions on the extent of future coastal erosion set out in Appendix 4.6 [APP-447]?

We reviewed and were satisfied with the conclusions presented on the extent of future coastal erosion through our involvement in the Landfall and Coastal Processes Expert Topic Group. We are not aware of any significant changes on the shoreline that is likely to alter the conclusions reached. However, we strongly advise that East Suffolk Council continue to be consulted as they are the operating authority for this section of coast and will have the most up to date information on any issues that might have arisen