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

CONSTRUCTION OF SUBSTATIONS

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

Date: 29 October 2020 **Issue:** 6

Summary

The proposal to construct the onshore works for both EA1N and EA2 next to a peaceful and historic village should be rejected for the reasons set out in the written representations which accompany this written representation. If the DCOs are granted notwithstanding the serious objections raised, then greater efforts than usual will be required to mitigate the associated construction works. By having the right to construct the projects consecutively and with further construction works required in the future to enable other offshore energy projects to connect at Friston, the Applicant seems to be intent on maximising construction impacts rather mitigating them.

1. The noise, vibration, light pollution, the creation of dust, contamination and impact on the air quality, traffic, flooding, and general disruption, the loss of historic footpaths, the use of heavy plant & machinery and construction traffic on small rural roads will be a significant disruption to people's lives. The inappropriate location selected by the Applicant has magnified these impacts.

2. The village Church is seriously affected both visually and as a focus for community life by the proposed construction works. The Church of St Mary the Virgin is 100's of years old, it's an historic building in a prime location in the village, within a short walk to the substation – the church is used for local quiet prayers, weddings and funerals - it's central to village life and those who visit including tourists alike. The village green and village hall are used for local fund-raising events such as Open Gardens, afternoon teas, Classics on the Green, the Christmas Fayre, local charity events and other local community gatherings. The noise and disruption from the long construction period over many years will create stress and anguish for residents, affecting their health and well-being, it will reduce the number of tourists and visitors who come to the area for its tranquil setting and history, to listen to music, enjoy the views and walk the local footpaths that will be destroyed if this development is allowed to proceed – see further Written Representation - Cultural Heritage

3. If the Planning Inspectorate recommends that the projects proceed various headings explaining the construction issues and impacts are discussed below including working hours, noise, air quality emissions, dust, traffic and onsite management of plant and equipment, light pollution and flooding. A number of serious concerns have been identified that need to be resolved. These concerns should be ratified in an amended version of the Outline Code of Construction Practice (OCoCP) to be stipulated as part of any award of a construction contract to be incorporated into the Code of Construction Practice when formally agreed and issued.

4. The working hours proposed are unacceptable due to the proximity to local people and the community of Friston, as well as four rural villages along the cable corridor. The working hours proposed should not allow any weekend working. The working day should not be longer than the standard working day based on best practice in the construction industry i.e. 8am- 4pm and no noisy work before 10am or after 3pm.

5. The construction related noise levels need to be validated. Additional receptor sites should be established as set out in the noise section below and monitoring needs to be for 12 months and times to be agreed and established when readings will be taken. This should all be reflected in the OCoCP.

6. The proposals to construct the onshore works consecutively rather than concurrently with an extended construction period is unjustifiable given the serious impact of the construction works.

7. The possibility of extended construction works is exacerbated even further by the fact that additional National Grid related construction works will be required to connect the six other offshore energy projects which either will or probably will connect to the National Grid at Friston. The Applicant has made no attempt to assess the cumulative impact of these works – see Written Representation – Cumulative Impact.

8. Noise and lack of mitigation, movement of vehicles, safety on local roads is of serious concern. The OCOCP needs to be amended to take into account the rural setting, impact on local people over so many years – please also refer to Written Representation – Noise impact and the detailed summary contained in this Written Representation in relation to noise. Please also refer to ExQs1 1.0.8 Response v1 which explains some of the omissions that need to be addressed in the OCoCP. Consequently, is it necessary that matters which are essential for inclusion in the final CoCP should be foreseen in the OCoCP.

9. Air quality, emissions and dust particulates is of serious concern. Monitoring levels of $N0_2$ need to be considered in more detail in the OCoCP as it is believed that due to the cumulative impact of other projects the air quality could be compromised could potentially exceed the legal maximum allowable levels.

Construction Works

1. The impact assessment presented in the ES considers the proposed EA1N and EA2 projects under two construction scenarios:
    - Scenario 1 - the proposed EA1N and EA2 projects are built simultaneously; and
    - Scenario 2 - the proposed EA1N and EA2 project are built sequentially.

2. If the proposed EA1N and EA2 projects are constructed simultaneously (Scenario 1), depending upon how contracts are awarded, there could be a different contractor for each project, or one contractor for both projects. In addition, the National Grid infrastructure works would be completed separately by contractors appointed by National Grid.

3. The Planning Inspectorate is being asked to recommend approve a two phase programme, each to commence within 7 years from consent. If both projects are consented, a worst scenario would be that the second project commences up to 7 years after first. This would mean up to 10 years of the lives of residents would be blighted by construction noise, traffic, dust, light pollution. This is unacceptable to human health and to the onshore environment, doubling the destruction of landscape and woodland.

4. The construction and use of five new access points and three crossing points on quiet rural roads will result in an increase in driver delay, noise, pollution and an increase in the potential for road collisions as a result of the number of turning movements in and out of

the access points, including the potential for sharp braking as unfamiliar drivers are less likely to expect these conditions – see Written Representations – Traffic & Transport.

5. The Applicant has provided data for the quantities of materials required, although the sources of such materials have not been defined. A worst-case scenario has been assessed with 100% of HGV traffic traveling either north or 100% south of the A12/A1094 junction (26.6.1.3). The assessment indicates across the entire 36-month period (which represents the most contracted build period) for a single project:

    - a peak of 210 HGV movements
    - approximately 40,000 HGV movements in total
    - a peak workforce of approximately 490 employees
    - approximately 362 peak workforce vehicle movements
    - a total of approximately 180,000 workforce vehicle movements

6. The Planning Inspectorate will understand that if consent is granted for both projects the works could be carried out simultaneously (or as two separate projects spanning different years starting at times to be confirmed) implying that construction works could be running over a 7-10 year period, excluding the National Grid substation.

7. The programme does not take into account the cumulative impact of the six other offshore energy projects which either will or probably will connect to the National Grid at Friston. The construction impact of these projects on the villages, roads, local people and communities will be devastating.

8. The appointed Principal Contractor should register under the Considerate Contractor Scheme rather than being encouraged to register as suggested by the Applicant and set out in the OCoCP.

Working Hours

9. The Applicant is proposing to work six days per week 7am – 7pm Monday to Friday and 7am to 1pm Saturday. This is an unacceptable proposal due to the proximity of local people and houses within minutes of the site and the village therefore the Outline Construction Code of Practice and draft DCO should be amended to state working hours should be no longer than 8am – 4pm Monday to Friday which is in line with a standard construction working week. There should be no weekend working due to the close proximity to the village of Friston. This would also apply to works within the cable corridors which pass close to four villages. Noisy work should be after 10am and before 3pm weekdays. In addition, vehicles transporting goods and materials should not be allowed to enter the site or the cable corridors before 8am due to the rural nature of the working environment and close proximity to villages and local residents. This needs to be confirmed in the OCoCP as an important and significant amendment and reflected in the draft DCO.

10. The Applicant should review its proposals to minimise noise and vibration and its impact on the communities taking into account the considerable noise that will be experienced, the fact the land is relatively flat with no sound barriers to deflect noise – there is no mitigation possible other than reducing the working hours proposed.

11. Church services include weddings and funerals, local events are held in the village hall during the week and at weekends as well as local fund-raising events such as Friston Open Gardens, Classics on the Green, the Christmas Fayre Local people and visitors use the church for quiet prayer. All these activities, the fabric of village life will be detrimentally impacted by the construction works.

12. The Applicant is passing down many responsibilities to the Principal Contractor, and the Applicant needs to retain responsibility by making sure the tender documents as drafted stipulate the working hours as set out above which will become part of the Employers Requirements and therefore contractual obligations. The working hours need to be agreed before the contactor is appointed before considering risk assessments and method statements i.e. well in advance of compiling the programme and the Construction Phase Plan. The OCoCP needs to reflect these important and significant amendments and to reflect how the contractor will deliver the works.

13. The Planning Inspectorate should be aware that even a standard working day will not mitigate disruption but by taking account of when works can be undertaken it may allow local people an element of quality time at either end of the day particularly in the summer months, taking into account most people in the village will be resident all day during the working week, many trying to quietly enjoy their retirement with their families, friends and visitors.

Cultural Heritage Impact

14. The construction works will have a serious impact on cultural heritage – see Written Representation – Cultural Heritage.

Landscape and Visual Impact

15. The construction works will have a serious impact on the landscape – see Written Representation - Landscape and Visual Impact.

Air Quality Emissions and Dust Particulate Pollution

16. The very nature of the loamy and fragile soil conditions in Suffolk and surrounding locality, the flat landscape means dust and particles from construction works will be spread around the local communities. It has been seen how much dust and soil particles spreads from the local farms and how far dust particles are moved by the winds in the local area before any major construction works are contemplated located on the edge of Friston village.

17. The main impacts on air quality are those associated with the construction phase and specifically dispersion of materials from the works areas into neighbouring communities and those associated with the emissions from construction vehicles, particularly heavy goods vehicles (HGVs).

18. Dust pollution is something that that the Applicant needs to address and not leave it to the Principal Contractor as part of its Construction Phase Plan. Any constructed open areas will need to be damped down and misted in dry and windy conditions and this should be included in any risk assessment and method statements. This clearly needs to be set up as a requirement at tender stage, and not to be left to chance of the Principal Contractor – it needs to be stated as a specific requirement and confirmed in an amended version of the OCoCP to regularly mist and dampen soil at appropriate intervals to prevent contamination, dust storms and danger to the health of people living in the village and local communities The particles will eventually become mud on roads and to prevent potential skidding on the local roads when weather conditions change, the roads need to be regularly cleaned by the contractor under the direction of the Applicant.

19. There are road alterations proposed at the A12/A1094 junction, A1094/B1069 junction and Marlesford Bridge. Whilst some explanation has been provided for screening these out

from assessment for dust nuisance, it does not fully justify screening out an assessment of re-routed traffic during the construction phase. This is important as the duration of works is greater than six months and could have a material impact upon local air quality. The impact of rerouted traffic and its duration has not been assessed.

20. The main guidance document for construction dust nuisance assessment is the Local Air Quality Management Technical Guidance 2016 (IAQM) on the assessment of dust from demolition and construction. This guidance is acceptable for most construction projects, but as this is a nationally significant infrastructure project where the quantity of earthworks involved is substantially greater than this guidance is intended for. There are serious concerns that the standard mitigation measures within the guidance document would not be applicable for the construction of the sub stations.

21. The air quality assessment mentions that traffic data has been taken from Chapter 26, Traffic and Transport. However, the peak construction phase annual average daily traffic flows presented within table 26.23 of chapter 26 are higher than those presented within table 19.10 of Chapter 19. The reasonable worst-case traffic flows should be used from the transport assessment, as it appears that the project construction phase generates a smaller volume of vehicles than has been used. Using a different scenario for traffic data to identify roads for assessment could alter the study area.

22. "Large impacts" within the guidance are defined as those with an earthworks area > 10,000 m^2, but table 19.20 of Chapter 19 suggests the project exceeds the greater than IAQM's "large" threshold. It is suggested that construction dust nuisance impacts can be directly mitigated. The construction of this project will need to go beyond standard mitigation measures within the guidance. This is an important point given the high coastal winds and concerns regarding wind whipping, identified from previous consultations within paragraph 127 of Chapter 19.

23. The Applicant has assessed the construction dust nuisance impact, but there is conflicting information on how soil stockpiles will be dealt with. The Code of Construction Practice (CoCP), for this chapter, establishes the construction management practices adopted to minimise impacts upon air quality concentrations and dust nuisance. Within chapter 8.1 OCoCP it is mentioned that soil stockpiles will be covered, seeded or fenced. Paragraph 127 of Chapter 19 only references seeding stockpiles. Seeding in isolation is not enough. These stockpiles should be turfed, fenced or covered. If seeding is required, stockpiles should be fenced to prevent wind whipping during germination of seed.

Cumulative Impact of Emissions

24. It is unclear if the cumulative impact assessment of EA1N and EA2 of scenario "one" (simultaneous construction) includes both projects peak construction traffic contribution within the assessment. In paragraph 175, it is stated that *'it is not anticipated that additional traffic associated with Sizewell C would result in exceeding the air quality objectives*. Estimated concentrations within table A19.6 of appendix 19.2 at R1 (within Stratford St Andrew) is 39.4 µg/m^3, only 1.1 µg/m^3 below an exceedance of the annual mean NO_2 air quality objective. This is not sufficient headroom to accommodate **cumulative schemes** such as Sizewell B relocated facilities and Sizewell C contribution to NO_2, if these applications are successful (Planning consent for Sizewell B to relocate facilities was granted on 13 November 2019 East Suffolk Council reference: DC/19/1637FUL). Whilst

EA1N and EA2 are not exclusively responsible for the risk in achieving air quality objectives, the contribution of EA1N/EA2 to the cumulative effect of Sizewell B and Sizewell Construction traffic is a significant aspect of the risk.

25. It is proposed that EA1N and EA2's contribution to NO_2 from construction vehicles will be reduced with the requirement that **all vehicles will be Euro VI standard compliant**. There are concerns that these Euro standard ambitions will not be realised. The Oxford Brookes' study into Euro standards found that only 47% of HGVs achieved the target Euro standard (Impacts Assessment Unit, Oxford Brookes,2019). Consequently, Euro VI standard for vehicles should be secured through a DCO requirement with sufficient contractual obligations put in place by Applicant to enforce this standard across all tiers of its supply chain. This should be reflected in the OCoCP.

26. Reference is made in document 8.9 that a traffic management plan will be produced after consent. Based on the significant volume of vehicles along with the increased levels of pollution will impact on the heath of all those living and visiting the area we must ask that this is actioned before approval to proceed.

Noise including Vibration Plant & Equipment

27. Construction noise will have a significant impact on the nearby village of Friston particularly as construction works and the associated National Grid substation construction could run between 7 – 10 years notwithstanding the impact of other proposed interconnectors – see Written Representations – Noise. Please also refer to SASES ExQs1 1.0.8 Response v1 which covers questions raised at the Open Floor Hearings held between 7-9 October 2020.

28. There are serious concerns that construction noise has not been properly assessed and has not been modelled to confirm the levels that will be emitted and taking into account the number and type of vehicles on site whether the resultant levels will be within acceptable legal limits.

29. Due to the layout of the site the nearest receptors are not necessarily the worst affected Sound propagation is also dependent on other factors listed below which therefore needs to be modelled to make sure differing environmental conditions allow for predicted noise levels to be within acceptable allowable legal limits.
    - Wind direction & Wind shear
    - Atmospheric Thermal Gradient including temperature inversion effects
    - Humidity
    - Seasonal Ground Reflection Characteristics
    - Height difference
    - There is no indication of the number of movements by ancillary vehicles which will impact on the cumulative noise levels. As can be seen from the points below the cumulative impact of so many vehicles on site at the same time will have a devastating impact upon the quality of life and health of local residents.

30. Appendix 25.4 indicates that construction plant will be required for Onshore Substation works [Table A25.4.8 refers]. Vehicle numbers are as follows:
    - Month 1-6 22
    - Month 7-10 31 (including pile driver)
    - Month11&12 40
    - Month 13-15 37
    - Month 16-17 45
    - Month 18-20 52
    - Month 21-24 17

31. No information is supplied regarding the number or activity of site delivery or support vehicles, i.e. HGV tipper trucks, LGVs, employee transport or welfare vehicles.

32. Regarding the plant required for the National Grid Infrastructure: [Table A25.4.9 refers]
    - Month1-6 22 (including pile driver)
    - Month 7-10 33

33. The Applicant has decided that the limiting level at the designated receptors should be 65 dBA. No rational explanation has been provided as to why this level has been adopted other than citing BS 5228 Categories.

34. The Applicant fails to point out that this is an LAeq figure over a specific time duration. The effect upon those living in close proximity is that this approach allows periods of greater noise to be offset by periods of lesser noise. Periods of >75 dBA would not be unexpected, and might be acceptable, but not every day over a 3 year period for each project if approved as two separate projects to run consecutively.

35. The Applicant has noted that the prevailing daytime noise is in the region of 35-45 dBA. A 65 dBA level it is therefore a considerable increase on what is the normal rural background experienced at nearby residential properties. 65 dBA is generally accepted as the level where unwanted background is annoying.

36. Noise at 65 dBA is the same level as having a 5 tonne, 30 kW diesel engine excavator (see BS5228-1:2009 -Table C.4 Ref No 68) or a diesel-powered lighting generator (Ref C.4 86 & 87 *ibidem*) running all day in the garden. BS 5228 suggests 55 dBA as a more appropriate level when earth moving activities are likely exceed 6 months duration, which is the case here.

37. The Applicant alludes to mitigation provided by artificial or natural screening, however in the case of the substation(s) construction site several properties are elevated and have clear line of sight to the construction area. No explanation is provided to show that proposed mitigation is realistic.

38. The Applicant has listed the plant type and number but given no indication of their physical disposition. The relevant acoustic signatures for the items of plant may be obtained from BS5228, but It is not possible to independently verify the suggested noise levels that would be experienced at the listed receptors without this information.

39. The Applicant refers to BS 5228 as providing the methodology to estimate likely noise level at specific receptors, and it appears has made use SoundPLAN software. There has however been no disclosure regarding the workings and limitations of this software.

40. There should be full disclosure of the method and calculations used by the Applicant to support assertion that the effect upon nearby residents is “Negligible”

Noise - The Haul Road and Construction & Consolidation Compounds (CCCs)

41. Similar concerns to those expressed above exist for receptor sites close to the haul road and the Construction & Consolidation Compounds.

Construction Noise Conclusions

42. The following changes should be made to the Outline Code of Construction Practice (OCoCP) with further design and due diligence by the Applicant prior to approval

43. The Applicant has failed to disclose sufficient information relating to construction noise that would enable independent scrutiny of the predicted noise levels to be carried out.

44. The draft OCoCP is seriously deficient. The construction noise assessment in the Environmental Statement (ES) contains errors and misstatements. Further modelling and research are required to determine noise levels accurately.

45. There is no adequate means of achieving mitigation of the effects of construction noise on local people.

46. The OCoCP is of great importance since Requirement 22 states that the full CoCP for which approval must be obtained from the local authority must be in accordance with the OCoCP. Consequently, is it necessary that matters which are essential for inclusion in the final CoCP should be foreseen in the OCoCP.

47. The Applicant should state that that any piling works should adopt auger driven piles rather than steel sheet driven piling to reduce noise, vibration and environmental impact.

48. Noisy works will impact weddings, funerals or local village events so working arrangements should be agreed in advance (timings and dates) by the Applicant and its contractor with the County Council or their representatives to minimise disruption to sensitive events of this nature. This should be a condition confirmed in an amended version of the OCoCP.

49. The Applicant has stated that the main objectives of the CoCP regarding managing construction noise is to “Minimise noise and vibration impacts on nearby residents and other sensitive receptors to acceptable levels; and comply with relevant legislation, requirements, standards and best practice relating to construction noise”. This needs to be addressed in the OCoCP.

50. There is no commitment in the CoCP to employ the best practicable means (BPM) to minimise noise and no commitment to apply for consents under the provision of Section 61 of the Control of Pollution Act 1974 (CoPA). Because of the effective disapplication of Section 82(1) of the Environmental Protection Act 1990(c) (summary proceedings by person aggrieved by statutory nuisance) by 3(7) of each DCO, a person affected by construction noise, in the absence of the use of S60 of CoPA by the local authority, or action by the LA for breach of a CoCP approved pursuant to a requirement of the DCO, has no recourse other than action in Common Law in the High Court.

51. As part of the consultation phase, concerns were raised about the possibility of weekend working and the effect of construction noise and vibration on home life. Weekend working is not acceptable due to the close proximity of local housing and must not be allowed if the application is approved. This amendment needs to be reflected in the OCoCP.

52. Setting maximum limits of noise as 65 dB(A) daytime and 45 dB(A) night time is arbitrary. 30 dBA is the generally accepted background night time level in quiet rural settings such as Friston, Aldringham, Thorpeness, Sizewell and Knodishall. This must be addressed and mitigated if the application is allowed to proceed. Expert modelling and analysis are required prior to the approval of the application.

53. The Applicant seems to have concluded that 65 dB(A) is an acceptable limit for daytime construction noise but does not point out that this is the generally accepted level at which continuous background noise transitions from ‘acceptable” to ‘annoying’. In choosing a daytime noise threshold of 65 dBA (55 dBA at the weekend), the Applicant is asserting that noise impact at 31 sensitive receptors sites bordering the construction corridor or in the proximity of the substations would have either negligible or minor impact on residents.

This is unacceptable and demonstrates a lack of understanding of the nature of sound propagation in the countryside. The Applicant has not taken into account the much lower levels of background noise in this tranquil rural area of the countryside.

Traffic and Transport - Construction Traffic Management Plan

54. Construction Traffic is discussed in detail under the relevant Written Representation – refer to Transport and Traffic.

55. There is evidence from other research when viewing the documents that the Applicant has not fully considered the impact of construction traffic in the area.

Light Pollution - Temporary Works

56. Temporary construction lighting and its impact on the local community and environment is covered under a separate heading – please refer to the Written Representation – Light Pollution

57. All temporary lighting planned should recognise the rural nature of the site so there is minimal intrusion from lighting pollution. Artificial light mitigation plans should be developed before any approval to proceed to minimise the local impact. All lighting emissions should be motion sensitive and have minimal time delay before the light is extinguished. This should be clearly set out in the OCoCP.

Flooding

58. There are serious flood risk issues at Friston - see Written Representation – Flood Risk. The OCOCP must be amended to address the issues identified in the report prepared by GWP Consultants which forms part of that written representation.

Conclusion

59. Given the proximity to the village construction must be very tightly controlled. The construction impacts of these projects are exacerbated by the fact the applicant may wish to construct them consecutively and also that the National Grid elements of these projects may well be under the control of a different contractor. Accordingly, construction hours, noise, air pollution, light pollution, flood risk require strong mitigating steps which must be included in the OCoCP which will follow into the CoCP rather than awaiting later agreement post consent.

Note: The construction related written representations have been prepared by Paul Carlaw BSc(Hons) MRICS is a member of the Royal Institution of Chartered Surveyors with over 40 years' experience in the construction industry with professional expertise in various sectors including retail, banking, telecommunications and private practice consultancy with significant expertise in project management, construction procurement and property management. Paul Carlaw is a director of PAC Consultancy UK Ltd.