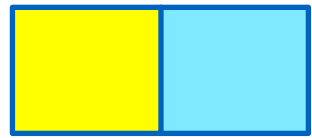




SCOTTISHPOWER
RENEWABLES



East Anglia ONE North and East Anglia TWO Offshore Windfarms

Applicants' Position Statement on Noise

Applicant: East Anglia ONE North Limited and East Anglia TWO Limited
Document Reference: ExA.AS-14.D8.V1
SPR Reference: EA1N_EA2-DWF-ENV-REP-IBR-001025

Date: 25th March 2021
Revision: Version 01
Author: Royal HaskoningDHV

Applicable to **East Anglia ONE North** and **East Anglia TWO**



Revision Summary				
Rev	Date	Prepared by	Checked by	Approved by
01	25/03/2021	Paolo Pizzolla	Lesley Jamieson / Ian Mackay	Rich Morris

Description of Revisions			
Rev	Page	Section	Description
01	n/a	n/a	Final position statement submitted to the Examining Authority at Deadline 8



Table of Contents

1	Introduction	1
1.1	Purpose of this document	1
2	Position on the Assessment Methodology	2
2.1	Background Sound Level	2
2.2	Technical Position on the Assessment Method	3
2.3	Background Sound Levels at SSR9	7
3	Position on Tonality in Operational Noise	10
3.1	Correction for Tonal Characteristics	10
3.2	Correction for Other Acoustic Characteristics	11
4	Construction noise	12
5	Summary	14
	Appendix 1: Graphical Plot of Night Time L_{A90} Analysis	15



Glossary of Acronyms

BS	British Standard
dB	Decibel
CoCP	Code of Construction Practice
DCO	Development Consent Order
EH	Environmental Health
ES	Environmental Statement
ESC	East Suffolk Council
Hz	Hertz
ISH	Issue Specific Hearing
LOAEL	Lowest Observed Adverse Effect Level
SASES	Substation Action Save East Suffolk
SOAEL	Significant Observed Adverse Effect Level
SoCG	Statement of Common Ground
WHO	World Health Organisation



Glossary of Terminology

Applicant	East Anglia TWO Limited / East Anglia ONE North Limited
East Anglia ONE North project	The proposed project consisting of up to 67 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
East Anglia ONE North windfarm site	The offshore area within which wind turbines and offshore platforms will be located.
East Anglia TWO project	The proposed project consisting of up to 75 wind turbines, up to four offshore electrical platforms, up to one construction, operation and maintenance platform, inter-array cables, platform link cables, up to one operational meteorological mast, up to two offshore export cables, fibre optic cables, landfall infrastructure, onshore cables and ducts, onshore substation, and National Grid infrastructure.
East Anglia TWO windfarm site	The offshore area within which wind turbines and offshore platforms will be located.
National Grid substation	The substation (including all of the electrical equipment within it) necessary to connect the electricity generated by the proposed East Anglia TWO project to the national electricity grid which will be owned by National Grid but is being consented as part of the proposed East Anglia TWO project Development Consent Order.
Onshore substation	The East Anglia TWO / East Anglia ONE North substation and all of the electrical equipment within the onshore substation and connecting to the National Grid infrastructure.
Onshore substation location	The proposed location of the onshore substation for the proposed East Anglia TWO project.



1 Introduction

1. This document is applicable to both the East Anglia TWO and East Anglia ONE North DCO Applications (the Applications), and therefore is endorsed with the yellow and blue icon used to identify materially identical documentation in accordance with the Examining Authority's procedural decisions on document management of 23rd December 2019 (PD-004). Whilst this document has been submitted to both Examinations, if it is read for one project submission there is no need to read it for the other project submission.

1.1 Purpose of this document

2. During Issue Specific Hearing 12 (ISH12) into Noise on Thursday 11th March 2021, the Examining Authority requested position statements from the Interested Parties making oral submissions on the key matters of outstanding disagreement in relation to noise. This document sets out the Applicants position in relation to the specific noise matters for which there is considered to remain differences in professional opinion between the Applicants and other Interested Parties (namely East Suffolk Council (ESC) and Substation Action Save East Suffolk (SASES)).
3. The statements have had regard to the Hearing Action Points published by the Examining Authority following ISH12.



2 Position on the Assessment Methodology

2.1 Background Sound Level

2.1.1 Statement 1:

4. The background sound level derived for the onshore substation locations is adequate.

2.1.1.1 Rationale:

5. The Applicants' position is that they have derived the background sound levels for the onshore substation locations in a robust and repeatable way, following the relevant industry-accepted guidance which is BS4142:2014 +A1:2019.
6. The monitoring data at each of the monitoring locations was analysed individually and the derivation of the background sound level was based on the particular circumstances and situation at each receptor and was led by the data gathered at each location.
7. An example is the derivation of background at SSR2 (please refer to the graphical plot of night time L_{A90} analysis in **Appendix 1**). The approach taken by the Applicants was to examine the cumulative distribution of the data at each individual monitoring location such as that shown for SSR2.
8. For this location, the arithmetic average of the data was used which represents a point at which 50% of the total samples were above and 50% below that point and this value was taken as a representative background.
9. The Applicants' approach therefore considers the whole dataset and arrives at a fair and representative background sound level.
10. This data led approach, looking at the individual circumstances, situation and data at each location, was adopted across all the monitoring locations.
11. ESC has presented its own analysis of the as-measured baseline noise data collected by the Applicants. They suggest that the truly representative background sound levels for the night period would be:
 - 27dB at SSR2;
 - 24dB at SSR3; and
 - 29dB at SSR5(NEW).



12. The approach adopted by ESC is not invalid, but the approach used by the Applicants should be preferred because they have considered all the data whereas ESC have, in effect, based their analysis on a much smaller sub-set of the data and ignores other valid data sets.
13. For example, if one considers the distribution plots for noise monitoring location SSR2 it can be seen that, whilst there is a modal peak in the distribution at approximately 27dB, this does not tell the full story of the distribution of the background noise levels at night. There are also a significant number of samples that fall within the 33dB to 38dB range. The Applicants view is that setting the representative background at 27dB (as suggested by ESC) ignores this significant number of samples.
14. If the background sound levels recommended by ESC were applied at face value it would indicate a potential adverse impact at night at SSR2 and SSR3. But when the absolute level of sound is considered it can be concluded that no impacts will occur at these locations. As a consequence, ESC's representations on the background sound levels do not have any material implications on the outcome of the BS4142:2014 +A1:2019 assessment and the resulting conclusion is that there will be no impact when the differences between the rating level and the background sound levels are considered in context.

2.2 Technical Position on the Assessment Method

2.2.1 Statement 2:

15. Describe the technical position on the assessment method and the reasons for the apparent differences of view and evidence in the technical literature upon which each view is based.

2.2.1.1 Rationale:

16. The Applicants **Expert Report on Noise** submitted at Deadline 7 (REP7-041) explains how the absolute level of sound should be considered as part of the assessment of the impacts in accordance with Section 11 of BS4142:2014 +A1:2019.
17. The Applicants' position is that they have applied this part of BS4142:2014 +A1:2019 correctly and that other Interested Parties fail to apply this part of the standard as it is intended to be applied or if at all. In light of applying Section 11 of the standard correctly, the evidence is that no adverse impacts whatsoever will occur at a rating level of 35dB or lower.



18. At ISH12, Substation Action Save East Suffolk (SASES) made an assertion that the guidance issued by the World Health Organisation (WHO) cannot and should not be used to consider the impact of industrial noise. They also explained that the absolute criteria contained in British Standard 8233 (BS8233) was derived from the WHO Community Noise Guidelines 1999 and so, by extension, cannot be applied to assess industrial noise.
19. SASES assertions on this point are incompatible with the BS4142:2014 +A1:2019 itself and the views of the EH/1/3 Committee. The standard provides numerous examples which aim to assist practitioners on how the standard should be applied. It contains a number of examples where BS8233 is used to inform considerations of the absolute sound level. Example 6 in Annex A (informative) of the standard states:
20. *“The context is a new item of plant at a commercial premises with other plant elsewhere in a residual acoustic environment that, whilst relatively steady, includes regular events of a significantly higher level than that from the plant. At these times the noise-sensitive location is indoors with open windows where residual sound within the dwelling will further mask sound from the plant. Logarithmically subtracting residual level of 28 dBA from ambient of 36 dBA indicates source produces 35 dBA. **BS8233 indicates that 35 dBA sound level from the plant, equating to an internal level of around 25dBA or lower, with no significant acoustically distinguishing characteristics is suitable for a bedroom.**”*
21. Other examples are given in the standard demonstrating how BS8233 can be applied. The advice is clear that BS8233 can be used to consider the absolute level of sound insofar as the standard is used having proper regard to the guidance in full context. The examples given in the standard are also consistent with articles that have been written by core members of EH/1/3 which explain that WHO 1999 and 2009 guidelines and the criteria set out in BS8233 can be used to consider the absolute sound level¹. Both articles explicitly state that the BS8233 and WHO guidelines for community noise can be used to assess the importance of the absolute level of noise in a noise assessment.
22. The Applicants have consistently used WHO guidelines and BS8233 standard to inform consideration of the absolute level of sound. It must be recognised however that the rating level of 35dB recommended within the **Expert Report on**

¹ D Waddington; C Cobbing; S Turner; J Grant; professor K Attenborough; R Collman; and P Dunbavin. Comment on 'Application of noise guidance to the assessment of industrial noise with character on residential dwellings in the UK', D. Baker 93 (2015) 88-96. Applied Acoustics (2016) Sound judgements by P Dunbavin who is the chair of EH/1/3 on behalf of the committee. Environmental Health News. February 2016.



Noise submitted at Deadline 7 (REP7-041) is significantly lower than the WHO guideline values and the BS8233 noise criteria and is highly precautionary for the following reasons:

- The sound emitted from the substations will be benign compared to other sources of environmental sound (e.g. transportation noise with discreet events with fast rise and fall times);
 - The rating level accounts for tonal and other features so that the resulting level can be compared to that for an anonymous source of sound; and
 - A rating level of 35dB is significantly lower than the WHO 1999, 2009 and the BS8233 criteria. For example, the WHO 2009 guidelines recommend an external Lowest Observed Adverse Effect Level (LOAEL) value of 40dB.
23. The Applicants' position is that by revising the maximum operational noise rating level to 31dB at a free-field location at SSR3 and 32dB at a free-field location at SSR2 and SSR5(NEW) (down from 34dB), provides further confidence that no adverse effects will occur whatsoever.
24. Interested Parties have been invited to explain the reasons for the apparent differences of view. ESC considers that adverse impacts can only be avoided if the operational noise rating level does not exceed their 'truly representative' background sound levels even though the standard states:
- a rating level 5dB above provides an indication of adverse impact and that a rating level equal to the background sound level provides an indication of a low impact; and
 - the absolute sound level should be considered.
25. The Applicants consider that the position adopted by ESC is incompatible with BS4142:2014 +A1:2019.
26. ESC's position at ISH12 focussed solely on background measurements to the exclusion of the absolute sound levels. This effectively failed to have proper regard to relevant parts of Section 11 of the BS4142:2014 +A1:2019. The Applicants consider this approach was not appropriate and had been a key sticking point in reaching agreement on matters relating to operational noise. That said, ESC has now confirmed that they are not seeking to further minimise the noise rating levels below the proposed maximum operational noise rating levels specified within the **draft DCO** (document reference 3.1) regardless of the cost implications. At ISH12, ESC suggested that some form of pre-commencement requirement could be considered as a means of reconciling the ongoing differences. This has afforded the Applicants to propose further controls and



compromises in the interests of reaching agreement on operational noise controls.

27. At Deadline 8, the Applicants have updated the wording of Requirement 12 of the **draft DCO** (document reference 3.1) and further updated the **Substations Design Principles Statement** (document reference ExA.AS-4.D8.V2) following discussions with ESC during the Statement of Common Ground (SoCG) meeting on 22 March 2021. As a result of the updates to these documents at Deadline 8, the Applicants note that matters relating to control and mitigation of operational noise have been substantially agreed (see SoCG with ESC and Suffolk County Council (SCC) submitted at Deadline 8 (document reference ExA.SoCG-2.D8.V4)). Although some differences on technical matters remain, it is agreed that the secured operational noise controls overcome any residual concerns.
28. The Applicants do not fully understand SASES' position on operational noise. At ISH12 SASES referred to the Salford method and suggested it should be used to formulate an operational noise limit on sound from the substations in the 100Hz third-octave band. SASES then went on to explain that the Salford method specifies an internal criterion at 100Hz of 38dB (linear or unweighted sound pressure level). This equates to a 19dB(A) internal criterion at 100Hz (i.e. -19.1 for A weighting). Allowing 11dB to correct from an internal level to an external level then leads on to a limit at 100Hz externally of 30dB(A) or a "physical level" of 24dB(A). It is understood that a +6dB penalty is applied to derive a "physical level" of 24dB(A). The Applicants sought clarification on this matter.
29. SASES are seeking to rely on the criterion curve contained in NANR45 for low frequency noise even though the document clearly states that:
- "The procedure is intended to assist in the evaluation of existing problems. It is not intended as a means of predicting when disturbance might occur, for example in a planning situation, and would not be reliable to use as such."* (The Applicants' emphasis).
30. The reason for this is that the NANR45 provides a method for investigating complaints of low frequency noise and that the internal noise criterion should only be used alongside the interview method. It applies to cases of low frequency noise which may not be plainly audible and are difficult to identify and assess. This is the reason why the interview method asks for a general description of the noise and explains that common descriptions of noise include variations of the following:
- "Like a diesel engine idling in the distance"
 - "A low throbbing, beating, rumbling ..."
 - "Pressure on the ears"



31. Not only is SASES seeking to apply a method that should not be applied to this situation, they then propose further adaptations to the method to account for tonality. The justification for making such a correction to the NANR45 method is unclear but the Applicants' view is that such an extrapolation from an already inappropriate method is unsound.
32. BS4142:2014 +A1:2019 Section 1 states that "*The standard is not applicable to the assessment of low frequency noise.*" A footnote to this statement further explains that "*Information on the assessment of low frequency noise is given in NANR45*". It is clear that low frequency sound is outside the scope of the BS4142:2014 +A1:2019 but this does not mean that BS4142:2014 +A1:2019 is not the appropriate standard to assess audible tones at 100Hz. On the contrary, all previous versions of the standard and the current BS4142:2014 +A1:2019 has been used extensively to assess audible tones at 100Hz (hums) since its inception and continues to do so. The examples given in Annex A of the standard explicitly refers to hums. The methods set out in BS4142:2014 +A1:2019 for identifying and making corrections to account for audible tones are well equipped for dealing with tones at 100Hz (hums). There is only one safe conclusion to draw and that is that BS4142:2014 +A1:2019 is the appropriate method, and it is not necessary or reliable to use other methods such as that set out in NANR45 and certainly not hybrid versions of the method.
33. The predicted noise levels are within the 1/3 octave band limit at 100Hz and can be practically achieved. It is considered however that the imposition of such a limit will be unnecessary and unreasonable. The updates to the wording of Requirement 12 of the **draft DCO** (document reference 3.1) and the **Substations Design Principles Statement** (document reference ExA.AS-4.D8.V2) at Deadline 8 represent a far more appropriate means of ensuring that the effects of tonal noise at 100Hz and other acoustic features at the receptors are designed out during the detailed design.

2.3 Background Sound Levels at SSR9

2.3.1 Statement 3:

34. Discounting the background sound levels measured for SSR9 within the analysis of background noise is appropriate.

2.3.1.1 Rationale:

35. Access to the property at SSR9 to conduct baseline survey measurements was not granted and an alternative location, to the northwest of the property, was chosen for the installation of the monitoring equipment. Following the completion



of the survey, it was concluded that the measurement position was not representative of the soundscape at the residential dwelling(s) at SSR9 intended as the noise sensitive receptor. The following points were considered to justify this conclusion:

- The survey measurement location is approximately 350m further north than the most exposed façade of the residential receptor at SSR9 to the proposed onshore substation infrastructure and considerably further from the residential receptor(s) at SSR9 than was the monitoring location at SSR3;
- The survey equipment was installed on the opposite side of the residential receptor at SSR9 to the proposed onshore substation infrastructure; therefore, the amenity space and most exposed façade at SSR9 is located on the opposite side of the building to the measurement position; and
- The survey location does not take into account the total effect from any at receptor background noise emanating from the existing overhead lines.

36. Therefore, a review of the other noise survey measurement locations was undertaken which established that:

- SSR3 and SSR12 were considered to be a suitable proxy location for SSR9;
- The vegetation surrounding SSR3 is similar in density and type as found at the amenity space and building to the left-hand side at SSR9;
- The vegetation surrounding SSR12 is similar in density and type as found at the amenity space and building to the right-hand side at SSR9;
- All locations are surrounded by agricultural land use;
- SSR3 and SSR12 are accessed by low use tracks similar to SSR9; and
- SSR3 is a similar set back distance from the existing overhead lines to SSR9.

37. The background (L_{90}), measured at SSR12 was deemed appropriate to use as a proxy location for SSR9 and this was used in the operational phase noise assessment provided in **Appendix 25.5** and **Chapter 25 Noise and Vibration**. The use of such a proxy location is consistent with BS4142:2014 +A1:2019 and represents a perfectly appropriate approach.

38. SSR9 is not a “limiting property” in that proposed noise limits within Requirement 27 of the **draft DCO** do not apply at SSR9. The limits apply at SSR2, SSR3 and SSR5NEW which are closer to the proposed infrastructure and therefore represent a tighter constraint on noise.



39. Notwithstanding, if the background sound levels measured at SSR9 were applied at face value it would indicate a potential adverse impact at night but not an indication of a significant adverse impact. But when the absolute level of sound is considered it can be safely concluded that no impacts will occur. As a consequence, SASES representations on the background sound levels do not have any material implications on the outcome of the BS4142:2014 +A1:2019 assessment when the differences between the rating level and background sound level are considered in context.



3 Position on Tonality in Operational Noise

3.1 Correction for Tonal Characteristics

3.1.1 Statement 4:

40. Not applying a correction for tonal characteristics of the predicted operational noise is appropriate.

3.1.1.1 Rationale:

41. Those who have heard noise from older transformers may recognise the type of hum that is being referred to by SASES and ESC. The sound that will be emitted from the proposed substations should not however be compared to older substations which have been designed to completely different standards. Each main source of sound at the proposed East Anglia ONE North and East Anglia TWO onshore substations, which are capable of generating tones, can be fully enclosed where regard is given to other environmental impacts (e.g. landscape and visual effects). Certain equipment will be fully enclosed for operational and engineering reasons and, as such, means that a high degree of noise control can be applied to equipment such as the transformers and the shunt reactors. If necessary, the harmonic filters can be enclosed too. Noise enclosures can be used to control noise from noise generating equipment, compared to the case if the same equipment was installed in the open. The final design of the onshore substation will reflect the further noise mitigation measures which are economical and efficient, and which ensure compliance with (if not improve upon) the prescribed noise limits.
42. The Applicants have consistently maintained that the sound from the substations will not contain any perceptible tones when perceived at any of the receiver locations surrounding the substations. At Deadline 5, the Applicants submitted the **East Anglia ONE Onshore Substation Operational Noise Assessment** (REP5-022). It reports that there were no perceptible tones or other acoustic features at listening positions around the operational substation, even when the practitioners conducted observations on the bridleway in the middle of the night at its closest point to the East Anglia ONE substation (approximately 100m from the southern boundary of the East Anglia ONE substation). These observations are consistent with those of Mr Cobbing when he walked around the perimeter of the East Anglia ONE substation, when no noise from the substation was audible at the majority of positions around the perimeter. Tonal noise was perceptible at



about 10 metres from the shunt reactors and the transformers, but this sound was inaudible at greater distances of about 50 metres.

43. ESC has suggested that noise from East Anglia ONE could have been masked by noise from the National Grid substation when it was observed from the bridleway. This was not the case and the author of the **East Anglia ONE Onshore Substation Operational Noise Assessment** (REP5-022) (Mr Alasdair Baxter), who made the observations, has dismissed this as a possibility.
44. It has been explained that some or all of the equipment capable of generating hums will be enclosed, and this lends itself to a high degree of noise control. This means that the Projects' onshore substations can be designed so as to meet the limits specified in Requirement 27 of the **draft DCO** (document reference 3.1). The fact that the noise rating level will be controlled to such low levels will reduce the likelihood of any tones being audible. In addition, the updates to the wording of Requirement 12 of the **draft DCO** (document reference 3.1) and the **Substations Design Principles Statement** (document reference ExA.AS-4.D8.V2) at Deadline 8 include further provisions to design the Projects' onshore substations so that no tones or other features will be perceptible at the operational noise assessment locations.
45. The **Substations Design Principles Statement** (document reference ExA.AS-4.D8.V2) states that the Applicants will
- “seek to minimise the operational noise rating level below the limits set out in Requirement 27 of the DCO and avoid any perceptible tones² and other acoustic features at any residential receptor that would attract a correction in accordance with BS4142:2014+A1:2019, insofar as these mitigation measures do not add unreasonable costs or delays to the Projects or otherwise result in adverse impacts on other aspects of the environment (e.g. landscape and visual impacts).”*
46. This provides additional assurances that no tones or other acoustic features will be perceptible at the nearest residential receptors.

3.2 Correction for Other Acoustic Characteristics

3.2.1 Statement 5:

47. Not applying a correction of other acoustic characteristics of the predicted operational noise is appropriate.

² Whilst the Applicants do not consider that perceptible tones will be audible at the noise sensitive locations specified within the DCO arising from the operation of Work No. 30 or Work No. 31, this provision has been made to provide additional reassurance to the relevant planning authority.



3.2.1.1 Rationale:

48. SASES have raised made representations about constructive interference from standing waves from the two proposed substations. The Applicants **Expert Report on Noise** submitted at Deadline 7 (REP7-041) explains that such effects cannot be dismissed as a possibility but are highly improbable and that this is a matter that can be adequately addressed during the detailed design of the substations.
49. If constructive interference was a conceivable issue, then it should already be apparent because substations typically involve pairs of equipment that will emit the same sound at the same frequencies. For example, East Anglia ONE has two identical transformers and two identical shunt reactors located in close proximity. No interference patterns have been observed at the East Anglia ONE substation and this issue has, to our knowledge, not been identified at any other operational substation.
50. The fact that the equipment to be installed at East Anglia ONE North and East Anglia TWO will be located further apart than other operational substations make it even less likely that acoustic features of this nature will occur.
51. The updates to the wording of Requirement 12 of the **draft DCO** (document reference 3.1) and the **Substations Design Principles Statement** (document reference ExA.AS-4.D8.V2) at Deadline 8 include further provisions to design the substations so that no acoustic features arising from interference patterns will be audible at the operational noise assessment locations.

4 Construction noise

4.1.1 Statement 6:

52. The construction hours and mechanisms which enforce these are appropriate in terms of controlling construction noise.

4.1.1.1 Rationale:

53. The Applicants note that the wording within the **Outline Code of Construction Practice** (Outline CoCP) (document reference 8.1) has been updated at Deadline 8 to reflect the general agreement that was reached at the ISH12 and the associated Hearing Action Points (EV-124a), notably:
 - Changes to the Section 61 process that now requires the relevant contractor(s) to apply for Section 61 approval under the Control of Pollution Act 1974 (COPA);



- Clarification on the materiality of works to be covered by Section 61 consent;
 - Introduction of a policy section on LOAELs and Significant Observed Adverse Effect Levels (SOAELs), which secures Table 5 of the Applicant's **Expert Report on Noise** submitted at Deadline 7 (REP7-041);
 - Provisions for managing the hours within which construction traffic movement will be permitted;
 - Community liaison and consultation;
 - Specific commitments to minimise adverse noise effects at St Mary the Virgin Church (Friston), Wardens Trust, and other sensitive receptors;
 - Increasing the current noise sensitive buffer in which additional measures will be implemented from 75m to 100m; and
 - Noise monitoring arrangements.
54. The **Outline CoCP** (document reference 8.1) has not been specifically changed to address final revisions to the baseline data in respect of ambient noise levels. It is considered that the provisions relating to the Section 61 process and the monitoring arrangements will be sufficient. Monitoring will be carried out as part of the Section 61 process and the results of this monitoring can be used to check the baseline levels and update them if necessary.
55. Further changes have been made to the provisions relating to construction working hours in response to feedback received by SASES. The core working hours have been amended as a consequence and additional provisions introduced to deal with consenting works outside the core working hours. These provisions have been adapted from the High Speed Rail (London-West Midlands) Environmental Minimum Requirements Annex 1: Code of Construction Practice and are therefore considered to represent best practice.
56. The Applicants have engaged further with ESC and SASES. The Applicants note that the majority of matters relating to construction noise are now agreed with ESC and this agreement is captured the SoCG with ESC and Suffolk County Council (SCC) submitted at Deadline 8 (document reference ExA.SoCG-2.D8.V4)).
57. The Applicants believe that all matters are substantially agreed with SASES. It is hoped that all matters will be agreed subject to final checks and confirmation.



5 Summary

58. The Applicants maintain that their approach in relation to background noise derivation considers the whole set of data and arrives at a balanced and representative background.
59. The Applicants have provided considerable justification for the exclusion of data collected at SSR9 and maintains that this justification is sufficient and appropriate. The Applicants have further considered that inclusion of the data collected at SSR9 would not result in adverse impacts as the absolute level of the rating limits within Requirement 27 provides appropriate protection for all sensitive receptors within the Friston area.
60. The Applicants maintain that an appropriate methodology has been followed throughout the assessment of noise, that appropriate guidance (in the form of BS4142) has been followed and correctly applied. When BS4142:2014 +A1:2019 is applied correctly it demonstrates that there will be no adverse impacts from operational noise.
61. The Applicants consider that both ESC and SASSES continue to apply BS4142:2014 +A1:2019 incorrectly. ESC effectively continues to ignore the requirement in Section 11 of the standard to consider the absolute sound level as though it does not exist. SASSES has recommended an alternative approach which is inappropriate.
62. The Applicants have appropriately considered tonality and has provided justification that no tones or other acoustic features will be perceptible at the nearest residential receptors.
63. Further updates to the wording of Requirement 12 of the **draft DCO** (document reference 3.1) and the **Substations Design Principles Statement** (document reference ExA.AS-4.D8.V2) at Deadline 8 follow discussions between the Applicants and ESC during the latest SoCG meeting. As a result of these changes, it is understood that matters relating to the control and mitigation operational noise are now substantially agreed with ESC.

Amendments have been made to the **Outline CoCP** (document reference 8.1) to reflect the general agreement that was reached at ISH12 and the associated Hearing Action Points (EV-124a) and to address points raised through further engagement. Agreement has now been reached on the majority of matters relating to construction noise with ESC and it is believed that substantive agreement has been reached with SASSES on matters relating to the **Outline CoCP** (document reference 8.1).

Appendix 1: Graphical Plot of Night Time L_{A90} Analysis

Location SSR2 Night time L90 Analysis - 5 minute period

