

ExQ2: 03 August 2021**Responses due by Deadline 7: 03 September 2021**

| ExQ2 | Question to: | Question: |
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| NV.2 Noise and Vibration | | |
| | The Applicant | <p>Construction Noise Thresholds</p> <p>(i) In light of the ongoing difference of view between you and ESC as to the appropriate standard that should be applied please explain what the justification is for having lower standards than BS 5228 Annex E5 recommends for the 19:00-23:00 time period.</p> <p>(ii) What justification do you consider there to be for the current approach and is this supported by previous precedents for projects with similar length construction programmes?</p> |
| | SZC Co. Response at Deadline 7 | <p>(i) SZC Co. is unclear as to ESC's current position on the appropriate threshold for the evening period.</p> <p>ESC made a point relating to evening noise thresholds in the first entry in Table 18.1 in their Deadline 5 submission 'Comments on any additional information/submissions received by D3 and D4' [REP5-138], where they stated:</p> <p>"The construction noise thresholds set out in the Code of Construction Practice (CoCP) [REP2-056] are more onerous than the standard BS5228-1 ABC thresholds during the day (07.00 to 19.00), aligned with the ABC thresholds at night, but less onerous in the evening period (19.00 till 23:00)."</p> <p>ESC subsequently stated at ISH8 that the minerals extraction guidance quoted in Annex E.5 of BS5228-1: 2009+A1: 2014¹ should apply to the evening period, and therefore the threshold should be no more than 10dB above the background sound level. On the basis of the measured evening background (L_{A90}) sound levels shown in Volume 2, Appendix 11A of the ES [APP-203], the construction noise thresholds could be as low as the mid-30s to mid-40s.</p> |

¹ British Standard BS5228-1: 2009+A1: 2014 Code of Practice for noise and vibration control at open construction sites – Noise

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| | | <p>Accordingly, SZC Co. is not clear whether ESC is seeking to apply for the evening period:</p> <ol style="list-style-type: none">1. the 55dB $L_{Aeq,4hr}$ threshold from the ABC method (from Annex E.3 of BS5228-1: 2009+A1: 2014) for the quietest locations, as highlighted in their Deadline 5 submission; or2. a much lower limit based on the minerals extraction guidance quoted in Annex E.5 of BS5228-1: 2009+A1: 2014, as stated at ISH8. <p>In respect of option 2, it is important to note that there is no guidance in Annex E.5 BS5228-1: 2009+A1: 2014 in respect of the evening period; that section of the standard recommends a threshold for construction sites that "involve large scale and long term earth moving activities", which are "more akin to surface mineral extraction than to conventional construction activity" and suggests adoption of a 55dB $L_{Aeq,1hr}$ threshold for the daytime period. There is no recommendation for the evening or night-time periods, beyond the general advice to take account of the guidance.</p> <p>SZC Co. is proposing a construction noise threshold of 60dB $L_{Aeq,16hrs}$, (i.e. for the 16hr daytime and evening period 7am – 11pm), with the additional requirement that the contractor and SZC Co. must agree and have approved by ESC the construction methods and mitigation where the daytime construction noise levels, including the evening period, exceed 55dB $L_{Aeq,16hrs}$. In particular:</p> <ol style="list-style-type: none">(a) The 60dB $L_{Aeq,16hrs}$ threshold is included in Table 3.2 in Part B of the Code of Construction Practice [REP5-078] and in Table 4.1 of the initial draft Noise Monitoring and Management Plan for the main development site [REP6-029] as the levels that the contractor must use best endeavours and best practicable means to achieve.(b) A revised draft of the Noise Monitoring and Management Plan for the main development site (Doc Ref 9.68(A)) includes the requirement for the contractor and SZC Co. to agree the construction methods and mitigation where the daytime construction noise levels, including the evening period, exceed 55dB $L_{Aeq,16hrs}$. This |

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| | | <p>agreement will be documented in a 'Bespoke Mitigation Plan', and without agreement with ESC, the works cannot proceed.</p> <p>SZC Co. considers that the need to agree working methods and mitigation at a threshold of 55dB, which is equivalent to the lowest value for the evening period in the ABC method, represents an appropriate balance between providing ESC with the control mechanisms they seek, and balancing the need to deliver the project to programme.</p> <p>SZC Co.'s position is that applying an evening threshold based on the minerals extraction guidance (i.e. ESC's second option set out above) would effectively prevent evening working, thereby precluding the two shift working pattern required to deliver the project on-time. For this reason it is inappropriate. It is also inappropriate because it is not what Annex E.5 recommends, as set out above. Finally, it is inappropriate because Annex E.5 applies to "long-term substantial earth moving ... more akin to surface mineral extraction than to conventional construction activity". That does not represent the nature of proposed construction works, which are not akin to minerals extraction in scale.</p> <p>(ii) The thresholds for the main development site were developed in recognition of the length and complexity of the works, in consultation with ESC; although the criteria were not formally agreed, there was no material difference between parties at that time.</p> <p>As noted at NV.2.0(i), ESC suggested at ISH8 that SZC Co. adopt the minerals extraction criteria quoted in Annex E of BS5228-1: 2009+A1: 2014 for the main development site works, having previously compared the adopted 60dB $L_{Aeq,16hrs}$ threshold to the ABC method. SZC Co. is not clear on exactly what approach ESC is seeking, particularly in the evening period.</p> <p>The Bespoke Mitigation Plan process in the draft Noise Monitoring and Management Plan for the main development site [REP6-029], provides ESC with the mechanism to control, and ultimately veto, construction work at a noise level of 55dB $L_{Aeq,16hrs}$, which is equivalent to the most stringent criterion in the ABC method for any of the daytime or</p> |

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| | | <p>evening periods. It is also equivalent to the daytime threshold set out in Annex E.5 of BS5228-1: 2009+A1: 2014 that ESC say they prefer.</p> <p>SZC Co. considers that this approach provides certainty that the works will be managed and mitigated to an appropriate level, in partnership with ESC.</p> <p>There are few precedents for projects of a similar length that had construction controls as low as those proposed by SZC Co. at Sizewell. The construction thresholds for Hinkley Point C are 65dB for the daytime and 60dB for the evening (above which threshold the local authority's agreement has to be sought)², while the recent 2019 DCO for Tilbury 2 required a Section 61 agreement³ to control construction noise levels, and limits equal to SZC Co's SOAEL were adopted (these being 10 to 15dB higher than the thresholds sought by SZC Co., i.e. up to 75dB L_{Aeq} during the daytime).</p> <p>Therefore in response to the ExA's question as to the existence of any relevant precedents, SZC Co. considers that these projects indicate that SZC Co.'s proposed approach at Sizewell is robust.</p> |
| NV.2.1 | The Applicant | <p>Saturday Afternoon working at the Associated Development Sites</p> <p>It would appear from the assessments undertaken that there is a risk that the SOAELs could be exceeded during Saturday afternoons. The ES indicates that in most cases this could be managed and delivered through the CoCP to avoid exceedances of the SOAEL, but where this would not be the case the Noise Mitigation Scheme (NMS) would safeguard the sensitive receptors.</p> <p>This does not appear to actually be the case.</p> |

² See Requirement MS9 of The Hinkley Point C (Nuclear Generating Station) Order 2013 SI 2013 No. 648 (appended to SZC Co.'s Written Submissions Arising from ISH8 (Doc Ref 9.83))

³ See Section 61 agreement for Aggregates Deliveries at Tilbury 2, included as Appendix 5A to this document.

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| | | <p>(i) The NMS would only be triggered and be applicable under certain scenarios which may well mean that those adversely affected by construction during these times would not qualify for the NMS and therefore the mitigation would not be there. In these circumstances how could either the working pattern or the NMS be said to meet both the NPSE and NPS EN1 expectations of avoiding the SOAEL.</p> <p>(ii) If the understanding above is correct, can the working in the Saturday afternoons be justified?</p> <p>(iii) What would the implications be for the delivery of each of the associated development sites delivery programmes if Saturday afternoon working was not accepted?</p> |
| | SZC Co. Response at Deadline 7 | <p>(i) SZC Co. anticipates that the question relates to the wording in the earlier version of the Noise Mitigation Scheme [REP2-034], where the construction noise or vibration thresholds must be exceeded "on 10 or more days of working in any 15 consecutive days or on a total number of days exceeding 40 in any 6 consecutive months." Using this approach, it would not be possible for a property to be eligible on the basis of the noise thresholds being exceeded on Saturday afternoons only.</p> <p>That wording was taken directly and verbatim from British Standard 5228: 2009+A1: 2014⁴ and is widely used in exactly the way applied by SZC Co., not least by HS2.</p> <p>However, SZC Co. recognises that where construction works extend beyond construction weekday and Saturday morning working hours, the application of the criteria to periods that occur once a week would preclude eligibility under the Noise Mitigation Scheme [REP6-015] since the tests can never be met.</p> <p>To overcome this, the version of the Noise Mitigation Scheme [REP6-015] submitted at Deadline 6 has been amended to the following wording:</p> <p>"(2) an exceedance of (1) where:</p> |

⁴ British Standard BS5228-1: 2009+A1: 2014 Code of Practice for noise and vibration control at open construction sites – Noise

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| | | <p>(a) the exceedance is predicted to occur on 10 or more days of working in any 15 consecutive days or on a total number of days exceeding 40 in any 6 consecutive months; or</p> <p>(b) where the exceedance occurs only on a Saturday or Sunday, it is predicted to occur on 2 weekends, or part thereof, in any 15 consecutive days or on 6 weekends, or part thereof, in any 6 consecutive months.”</p> <p>SZC Co. considers that this revised wording overcomes the issue raised in the NV.2.1(i).</p> <p>(ii) Now that the wording in the Noise Mitigation Scheme [REP6-015] has been amended, the question no longer arises. Appropriate protection has been provided for Saturday afternoon working through the Noise Mitigation Scheme.</p> <p>(iii) The programme for delivery of the Associated Development sites is based on construction works on Monday to Friday, and Saturday mornings. However, it is possible that in dry weather, primarily during the summer, Saturday afternoons will be used for earthworks to seek to accelerate the delivery of the Associated Development sites, so that their wider benefit in terms of removing SZC Co.’s freight vehicles and worker cars from the current road network are delivered earlier than might otherwise be the case.</p> <p>Further, paragraph 1.1.6 in Part C of the CoCP [REP5-078] indicates that where possible, noisy activities will be avoided on Saturday afternoons, and this is means that Saturday afternoons would generally be limited to maintenance activities.</p> <p>SZC Co. considers that this is the appropriate balance to strike between minimising impacts during the Saturday afternoon period and expediting construction of the Associated Development sites which significantly mitigate the environmental impacts (including in respect of noise, air quality and traffic and transport) of the construction of Sizewell C.</p> |
| NV.2.2 | Applicant, SCC, ESC | <p>Quiet Road Surfacing</p> <p>(i) What additional acoustic benefit might be expected if this surface were to be used for the Sizewell Link Road and the Two Village Bypass?</p> |

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| | | <p>(ii) Would a different maintenance regime from a standard road be required in the event this surface were to be adopted to maintain the acoustic benefits it may bring?</p> <p>(iii) Is this now being factored into the discussions?</p> <p>(iv) In the event that quiet road surfacing were to be offered how would this be secured?</p> |
| | SZC Co. Response at Deadline 7 | <p>(i) Depending on the exact specification of the quiet road surface, a reduction of approximately 2.5dB is typically achievable, relative to a hot rolled asphalt surface (which is a standard road surface) at traffic speeds of 75km/h (approximately 46mph) or more. At slower speeds, the reduction from a quiet surface decreases since the tyre/road interface becomes less dominant and engine/exhaust noise becomes more prominent. The advice in Annex A of DMRB LA111 is to only apply the additional effect of the quiet road surface at speeds above 75km/h, however in reality there will be a tailing off of the effect of a quiet road surface at speeds below 75km/h.</p> <p>A reduction of 2.5dB may not be achievable at every receptor, since traffic noise levels at a given receptor will be due to a number of different roads, not just the road with the quiet surfacing. The overall benefit for some receptors may be less than 2.5dB.</p> <p>However, recent work undertaken in consultation with FERN, Mollett's Farm and the occupants of Oakfield House suggest that for those locations where the new roads have the potential to cause a significant increase in road traffic noise, the reduction due to a quiet road surface may be close to its theoretical maximum value of 2.5dB.</p> <p>(ii) SZC Co. is reviewing the feasibility of using a quiet road surface; the surfacing is likely to cost two to three times as much as a standard hot rolled asphalt surface, and would last 8-12 years compared with 15-18 years for a hot rolled asphalt surface.</p> <p>(iii) SCC has indicated a preference for the use of a quiet road surface, as set out in their Deadline 3 response to the Examining Authority's First Written Questions (ExQ1) Question NV.1.49 [REP3-084], and subject to the outcome of the review of the feasibility of using a quiet road surface, it will remain an option. SZC Co. anticipates being</p> |

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| | | <p>able to bring certainty to this issue as part of its detailed discussions with SCC over matters relating to transport mitigation.</p> <p>(iv) If agreed, the principles of a road surface would be secured in an update to the Associated Development Design Principles document [REP2-041].</p> |
| NV.2.3 | Applicant, Network Rail | <p>Rail Noise Mitigation Scheme</p> <p>(i) Please advise the latest position regards to the likely deliverability of this scheme in light of it being identified as primary mitigation.</p> <p>(ii) If it is not all delivered, what is the back-up position to safeguard receptors that might consequently be subject to adverse noise conditions, particularly for those receptors which would be subject to noise above SOAEL?</p> <p>(iii) Are there any elements which have not been agreed?</p> <p>(iv) It would appear that all of the noise mitigations identified in the rail noise assessment should be secured through the requirements in the DCO. If this is not agreed please explain your position.</p> |
| | SZC Co. Response at Deadline 7 | <p>(i) Requirement 25 prevents night time train activity unless and until a Rail Noise Mitigation Strategy (RNMS) has been submitted to and approved by ESC. The absolute nature of that draft requirement reflects SZC Co.'s confidence that a RNMS in a comparable form to that set out in draft [AS-258] can be agreed and delivered. That confidence is enhanced through the close joint working being undertaken with Network Rail. The Statements of Common Ground with Network Rail [REP2-074] and [REP5-095] confirm that neither party is aware of any reason why the various agreements, works and deliverables (which includes the RNMS) may not be delivered on time. This remains the latest position.</p> <p>Discussions are continuing with ESC who have expressed an aspiration for the RNMS to include the East Suffolk Line track enhancement and the potential for the location of acoustic barriers adjacent to the track in appropriate locations. Neither of those elements are included in the draft RNMS [AS-258] – partly because (whilst they may be desirable) neither are considered necessary to the grant of DCO consent and partly because it is not yet known whether they are deliverable. SZC Co. continues to engage Network Rail closely on these issues, although SZC Co. doubts the appropriateness of acoustic barriers in planning terms for the reasons set out in the note on acoustic fencing contained in</p> |

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| | | <p>Appendix I of SZC Co.'s Comments at Deadline 6 on Submission from Earlier Submissions and Subsequent Written Submissions to ISH1-ISH6 [REP6-024], other than at Whitearch Park.</p> <p>While Network Rail has recently stated to SZC Co., ESC and SCC in clear terms that it will not agree to noise barriers on Network Rail land, SZC Co. continues to explore options for installing noise barriers outside of Network Rail land, for example at Whitearch Park.</p> <p>SZC Co.'s response to Question NV.2.9 provides an update on the position in relation to Whitearch Park.</p> <p>(ii) SZC Co. is working on the basis that the RNMS would be delivered in its entirety – no fall back is being prepared.</p> <p>(iii) There are no elements of the draft RNMS which are unagreed between SZC Co. and Network Rail; all elements are subject to appropriate joint work in progress. It is for others to advise whether they agree the terms of the draft, although SZC Co. has not received any detailed criticism of the draft. The discussions with ESC are described above.</p> <p>(iv) All of the physical and operational noise mitigation relied upon in the operational rail noise and vibration assessments is included in the draft Rail Noise Mitigation Strategy [AS-258], which is secured through the DCO (Requirement 25), or is contained in the Noise Mitigation Scheme, the latest version of which is submitted at Deadline 7 (Doc Ref. 6.3 11H(C)), which is secured by the Deed of Obligation (Schedule 12). For construction of the rail elements, Requirement 2 secures the CoCP and, through it, the Noise Monitoring and Mitigation Plans. Additionally, as explained in response to the ExQ1 Question NV.1.11 [REP2-100], a number of operating principles would also necessarily be secured contractually with Network Rail.</p> |

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| NV.2.4 | Applicant | <p>Rail Noise</p> <p>(i) Requirement 25 of the draft DCO would appear to apply to works No. 4 only. Is this understanding correct?</p> <p>(ii) If so, how is the noise mitigation being offered in respect of the main line to be secured?</p> |
| | SZC Co. Response at Deadline 7 | <p>Please see SZC Co's response to Question NV.2.3. Requirement 25 prevents all Sizewell C trains from operating at night until a Rail Noise Mitigation Strategy is agreed with ESC. That effectively applies to trains operating on the main line as well as the Saxmundham to Leiston branch line, as SZC Co. has no other purpose for running trains if they cannot access the branch line.</p> |
| NV.2.5 | Applicant, ESC | <p>Operational Noise</p> <p>(i) The Main Development Site (MDS) night-time noise threshold is not yet agreed with ESC. Should the ExA consider the Council view more appropriate as a safeguard for the future noise levels, would there be implications for the operation of the station at the MDS?</p> <p>(ii) Would there be alternative or different mitigations available which may be able to be applied which could safeguard the night-time noise environment in the event the noise threshold is not agreed? Are there implications for the operation of the plant?</p> |
| | SZC Co. Response at Deadline 7 | <p>(i) SZC Co.'s position is that a noise limit is not required for Sizewell C. The power station is designed to generate the lowest achievable noise levels and setting a limit is not necessary in this regard. A limit would serve no purpose as it is not realistically possible to significantly reduce the noise levels, as set out in more detail below. Redesign is not feasible given it is a complex and highly regulated assemblage of parts, with exacting tolerances. A requirement with no purpose cannot satisfy the tests for the imposition of requirements in NPS EN-1 paragraph 4.1.7.</p> <p>However, should a limit be required for the normal operation of the power station, SZC Co. considers that a level of 40dB L_{night} represents a threshold below which there is no prospect of an adverse effect, based on available evidence. This value is taken from the</p> |

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| | | <p>World Health Organisation's 'Night Noise Guidelines'⁵, which suggests that a free-field value of 40dB L_{night} is suitable as a LOAEL. This was set out in paragraphs 2.3.16 to 2.3.26 in Appendix 11A to the initial Statement of Common Ground with ESC/SCC [REP3-031].</p> <p>SZC Co. accepts that setting a limit based on L_{night} would, strictly speaking, require a year of monitoring to test compliance, and would be unreasonable.</p> <p>The Secretary of State imposed a Requirement⁶ on the Hinkley Point C development, requiring the power station to achieve a night-time noise limit of 45dB L_{Aeq,1hr} at the façade of any dwelling.</p> <p>HPC and Sizewell C are located in similarly rural, coastal settings, close to existing power generation infrastructure, with scattered dwellings and dispersed settlements. The design incorporates elements of noise attenuation, and further wholesale attenuation is limited by, inter alia, the structural loading capacity of the building.</p> <p>The limit that HPC must achieve is considered to be a low limit, and SZC Co. considers it to be equivalent to LOAEL and the limit suggested for Sizewell C where a limit must be applied.</p> <p>It is understood that this value was derived from the recommended 45dB L_{Aeq,8hrs} criterion in the World Health Organisation's 'Guidelines for Community Noise'⁷, which have not been superseded by any of the subsequent WHO guidance, including the Night Noise Guidelines, and therefore remain valid. The WHO's 'Guidelines for Community Noise' do include consideration of industrial noise, so can be considered relevant to Sizewell C.</p> |

⁵ World Health Organisation 'Night Noise Guidelines' (2009)

⁶ Requirement MS12 The Hinkley Point C (Nuclear Generating Station) Order 2013. SI 2013 No. 648 (appended to SZC Co.'s Written Submissions Arising from ISH8 (Doc Ref 9.83))

⁷ World Health Organisation 'Guidelines for Community Noise' (1999)

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| | | <p>SZC Co. considers the free-field 40dB L_{night} and the façade 45dB $L_{\text{Aeq,8hrs}}$ values to be broadly equivalent, once they are adjusted so that both are either free-field or façade values. In both instances, they are considered to represent the LOAEL, below which there is little prospect of an adverse effect.</p> <p>Accordingly, without prejudice to SZC Co.'s position that a noise limit is not appropriate, if a limit were imposed on the scheme, then SZC Co's position is that it should be a façade noise limit of 45dB $L_{\text{Aeq,8hrs}}$.</p> <p>ESC prefer a night-time noise threshold of 35dB as a rating level ($L_{\text{Ar,T}}$), as the Council explained at ISH8 and in written submissions.</p> <p>A threshold specified as a rating level includes a notional correction for any acoustic characteristics that are likely to attract attention at the receptor location, such as tonality, impulsiveness or intermittency. The magnitude of this correction is to be judged at the receptor, not at the source, and because the acoustic climate varies at different locations and at different times, the magnitude of the character correction may also vary.</p> <p>SZC Co. considers noise limits based on rating levels to be imprecise, and by extension unreasonable, for large, complex, and highly regulated items of nationally significant infrastructure. The magnitude of the acoustic character correction cannot be objectively quantified until after the item of plant is operational, and it may also vary at different locations according to the acoustic conditions at any given time. A rating level limit is therefore not a precise value that has consistent effect.</p> <p>For small items of plant, such as building services plant, the risk of a significant issue arising is low, and even if it does arise, there are practical options to address the issue. For example, enclosures or attenuators can be installed, or an alternative item of plant could be substituted.</p> |

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| | | <p>The assessment of operational noise presented Volume 2, Chapter 11 of the ES [APP-202] considered a correction of +4dB to be appropriate, as stated in paragraph 11.6.126. If a correction of +4dB were to be appropriate once the power station was complete and operational, the actual noise limit, as might be measured using a sound level meter, would actually be 31dB $L_{Aeq,T}$, i.e. the 35dB $L_{Ar,T}$ limit, minus the 4dB correction. This is a 14dB reduction over the threshold that SZC Co. say is appropriate and achievable.</p> <p>The assessment set out in Volume 2, Chapter 11 of the ES [APP-202], which is based on high quality source information that has already been tested through the Hinkley Point C DCO, demonstrated that the outcomes are acceptable. Tables 11.27 and 11.28 of Volume 2, Chapter 11 of the ES [APP-202] demonstrate that a limit of 35dB $L_{Ar,T}$ cannot be achieved.</p> <p>The scope for incorporating further large-scale noise mitigation into the design of the power station is limited as a result of both the structural loading limits of the building structure, and the restrictions that flow from regulations on nuclear safety systems.</p> <p>To meet the 45dB $L_{Aeq,1hr}$ façade noise limit set out in the Hinkley Point C DCO, attenuators have been specified for exhaust fan vents on the sides of the turbine building, which brought about a small reduction in noise in one particular direction, so as to result in compliance with the noise limit of 45dB.</p> <p>Such detailed design adjustments should also be possible at Sizewell C, but at HPC these were needed to achieve compliance with the noise limit of 45dB. They do not create the potential for a significant reduction below that level, and certainly do not create the scope for a reduction in the order of 14dB which ESC's proposed limit would necessitate.</p> <p>(ii) The overall predicted noise levels for the operational power station set out in Table 11.27 (daytime) and Table 11.28 (night-time) in Volume 2, Chapter 11 of the ES [APP-202] suggest that ESC's preferred night-time noise threshold of 35dB as a rating level ($L_{Ar,T}$) cannot be achieved.</p> |

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| | | <p>Aspects of the power station design already include noise attenuation, such as the use of safe-change type HEPA filters in classified HVAC system exhausts; these provide some noise attenuation, which is included in the noise calculations in the submitted assessment.</p> <p>The feasibility of incorporating further noise mitigation into the design of the power station is understood to be limited. For example, fitting attenuators to the turbine hall exhaust fans, which are likely to be one of the more prominent noise sources, will themselves add mass to the building, and could trigger the need for larger, heavier fans to overcome the additional pressure caused by the mitigation, thereby exacerbating the loading issue.</p> <p>The turbine hall exhaust fans are an example of where additional mitigation is difficult, and similar issues occur across the power station systems. The regulations that control both nuclear safety or non-nuclear safety classified systems add to the complexity.</p> <p>In summary on this question NV.2.5:</p> <ol style="list-style-type: none">1. SZC Co. does not consider a requirement to be justified.2. If a requirement is imposed, it must be achievable.3. A level that would be achievable and would be appropriate is a façade noise limit of 45dB $L_{Aeq,8hrs}$. This is comparable to the level that was imposed at Hinkley Point C, with the only difference being the time base. The limit was a 1 hour limit at Hinkley Point C.4. Any lower level is unlikely to be achievable. It should not be imposed for that reason, and also because amenity is very well protected at this level of 45dB $L_{Aeq,8hrs}$. |
| NV.2.6 | Applicant, ESC | <p>Noise Mitigation Scheme (NMS)</p> <p>As things currently stand the NMS is a draft with further assessments to be undertaken and to be agreed with ESC, potentially to be undertaken in phases.</p> <p>There are then a series of additional stages to be gone through.</p> |

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| | | <p>Stage 3 gives the owner 28 days to respond.</p> <p>(i) Stage 4 gives no commitment or time period for the Applicant to organise the survey and to provide the specification to the owner. Why should there not be an obligation on the Applicant to respond in a timely manner?</p> <p>(ii) What happens in the event the property is not found to be suitable for adaption?</p> <p>(iii) Should the property be suitable and the property owner progresses to receive two quotes, what happens if they are not received within 28 days?</p> <p>(iv) At stage 5 the Applicant makes a formal offer, but there is no obvious commitment to honour either of the quotes received, is this specified somewhere?</p> <p>(v) If a formal offer is made to the owner at this point, this appears to trigger a three month embargo on the works that have been identified as triggering the need for the insulation/mitigation scheme. Is this correct?</p> <p>(vi) It is understood that at stage 6 following works being undertaken, that this would need to be verified as being carried out prior to any payment being made. What time frame would this be undertaken within and what timeframe would be in place to make the payment?</p> <p>(vii) Please provide an update to the NMS to provide clarity on the above points.</p> |
| | SZC Co. Response at Deadline 7 | <p>(i) SZC Co. has sought to define time periods within which actions must happen so that third parties acting unreasonably cannot introduce delay into the process, which might affect the construction programme. The timeliness of SZC Co.'s responses is ensured by the obligation to not commence the works that give rise to the eligibility for a period of three months after the offer is confirmed to the property owner. If SZC Co. does not respond in a timely fashion, the construction programme is placed at risk.</p> <p>The updated Noise Mitigation Scheme submitted at Deadline 7 (Doc Ref 6.3 11H(C)) includes provision for the timing of any surveys to be agreed with the respective homeowners. A fixed time period cannot be included at this stage since the number of properties to be surveyed at any one time will determine the amount of time required. However, the onus is on SZC Co. to undertake these tasks in a short timeframe to progress the implementation of the scheme.</p> |

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| | | <p>(ii) The Noise Mitigation Scheme [REP6-015] was designed to replicate the standard of insulation set out in the Noise Insulation Regulations⁸ and the same risks apply to the statutory provision as to SZC Co's scheme. The regulations do not cover the situation where the property is unsuitable.</p> <p>The purpose of using professional surveyors to survey the properties, together with a flexible approach where no particular solution is mandated, should reduce the risk of properties being unsuitable for any modification at all.</p> <p>(iii) A further updated draft of the Noise Mitigation Scheme has been discussed with ESC and will be submitted at Deadline 7 (Doc Ref 6.3 11H(C)). Properties that fail to meet the stipulated timescales will not be disqualified from the scheme, but the obligations on SZC Co. to not commence the work for a period of three months following the issue of an offer will fall away. This change is necessary in these terms so that where property owners do not meet the timescales, they are not disadvantaged, but the overall construction programme is not put at risk.</p> <p>(iv) A commitment to honour the supplied quote is not specified in clear terms in the current draft of the Noise Mitigation Scheme, but will be amended at Deadline 7 in a revised version of the Noise Mitigation Scheme (Doc Ref 6.3 11H(C)).</p> <p>SZC Co. will meet the costs of the insulation works that are specified in the Proposed Specification set out in accordance with the scheme; insofar as the quotes cover the Proposed Specification, these quotes will be honoured. SZC Co. will not meet the costs of additional works, remedial works to address structural defects, or enhancements that may be desirable but not required in terms of delivering the required level of insulation; insofar as the quotes cover these additional works, SZC Co. will not meet the costs of the additional works.</p> |

⁸ Noise Insulation Regulations 1975 (as amended 1988) (SI 1988 No. 2000) and Noise Insulation (Railways and Other Guided Transport Systems) Regulations 1996 (SI 1996 No. 428)

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| ExQ2 | Question to: | Question: |
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| | | <p>(v) The updated version of the Noise Mitigation Scheme to be submitted at Deadline 7 (Doc Ref 6.3 11H(C)) will specify specific circumstances where the embargo will fall away, but otherwise, yes that is correct.</p> <p>(vi) The updated version of the Noise Mitigation Scheme to be submitted at Deadline 7 (Doc Ref 6.3 11H(C)) has amended the payment process, so that the risk of the homeowner being placed in a position of having to settle installation costs in advance of SZC Co. making a payment is now removed.</p> <p>The installation works will still be commissioned by the homeowner, so that all warranties for the work reside with the homeowner, and not with SZC Co., but either the homeowner will be provided with evidence of secured funds being available through a suitable third party account system (for example an escrow account), or SZC Co. will arrange payment direct with the installer. The exact mechanism has not been settled at this time, as the engagement with the supply chain has not reached the point where contractual terms are fixed and agreed. However, the important point is that there will be no risk of the homeowner having to settle invoices in advance of receiving monies from SZC Co.</p> <p>(vii) An updated version of the Noise Mitigation Scheme will be submitted at Deadline 7 (Doc Ref 6.3 11H(C)).</p> |
| NV.2.7 | Applicant, ESC | Noise Mitigation Scheme <p>(i) Please provide an indication of over what time frame you consider a receptor who qualified for noise mitigation under the scheme could reasonably expect to undertake the necessary works and receive payment for them from the beginning to the end of the process.</p> <p>(ii) How does this fit with the latest implementation plan which indicates works on the rail line would commence in Q2 2023? [REP2-044]</p> |
| | SZC Co. Response at Deadline 7 | <p>(i) SZC Co.'s intention is to commence the refreshed noise assessments for the first phase properties, relating to the earliest construction works, in 2021 in advance of a decision on the DCO.</p> |

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| ExQ2 | Question to: | Question: |
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| | | <p>It is expected that the installation works could commence at the first properties within four months of identifying and agreeing with ESC the receptors that qualify for noise insulation under the Noise Mitigation Scheme (Doc Ref 6.3 11H(C)). This four month period allows for the necessary surveys to determine what measures are appropriate, to obtain quotations for the materials and installation, and to provide the owner with details of the offer.</p> <p>For some properties, such as those fronting the B1122 where SZC Co. has offered to install the insulation without the need for a refreshed noise assessment, the four month period for surveys and quotations can start in advance of the completion and approval of the refreshed assessments.</p> <p>SZC Co. anticipates that it may be necessary to commence the property surveys (Stage 3 of the process) in advance of securing DCO consent.</p> <p>SZC Co. expect to make offers to all eligible properties within ten months from completion of property referencing (Stage 2) for the first phase of properties.</p> <p>A three month embargo on the construction works that give rise to eligibility is provided in the Noise Mitigation Scheme (Doc Ref 6.3 11H(C)) so there is sufficient time to install all insulation in advance of the works. On the basis of the current Implementation Plan [REP2-044], SZC Co. expects the final offer to be made by October 2022, and the three month embargo period will effectively start then. The three month embargo period will then end by January 2023.</p> <p>As stated in response to Question NV.2.6(vi), the updated Noise Mitigation Scheme (Doc Ref 6.3 11H(C)) has been amended so that it is clear that the homeowner is at no risk of having to settle an invoice for the works without receiving payment from SZC Co. Proof of secured funds will be provided at the point where an installer is instructed, and</p> |

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| ExQ2 | Question to: | Question: |
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| | | <p>either the homeowner will be provided with the funds via a third party account (for example an escrow account), or SZC Co. will settle the invoice direct.</p> <p>The current timings within the Noise Mitigation Scheme (Doc Ref 6.3 11H(C)) have been informed by experiences at Hinkley Point C, taking account of the time required to specify, procure, and install insulation of an appropriate standard to achieve the aims of the scheme.</p> <p>SZC Co. has undertaken comprehensive engagement with the extensive local supply chain, and it has been confirmed that there is sufficient availability of resource, capability and capacity, to meet the timescales outlined in the Noise Mitigation Scheme (Doc Ref 6.3 11H(C)) . This due diligence work suggests that the scheme aims are not only achievable, but can be delivered with an excellent level of service and to a good standard.</p> <p>SZC Co. has partnered with a firm of building surveyors who employ one of the largest and most accomplished teams of chartered surveyors in the property sector, offering a wealth of experience, expertise and local knowledge. Their expertise will be key to the delivery of the Noise Mitigation Scheme (Doc Ref 6.3 11H(C)), in terms of specifying the insulation works, and seeking appropriate solutions where challenging conditions are encountered.</p> <p>For the purposes of assessing delivery and implementation timeframes, the worst-case numbers of potential eligible properties has been assumed.</p> <p>The grouping of properties in phases according to the timing of the works that give rise to the eligibility will allow the process to operate at its optimum capacity throughout.</p> <p>Listed buildings will be prioritised in the first phase of assessments, so that additional time is built-in to the process to obtain any necessary permissions to undertake the insulation mitigation works.</p> |

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| ExQ2 | Question to: | Question: |
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| | | (ii) The intention is to include the properties along the railway line in the first phase of refreshed assessments, commencing in 2021 so that the installation of insulation can be completed well in advance of the commencement of train services associated with Sizewell C project. |
| NV.2.8 | Applicant, Network Rail | Rail Noise Mitigation Paragraph 5.11.13 of NPS EN-1 states that improved sound insulation may be appropriate, but only "in certain situations, and only when all other forms of noise mitigation have been exhausted". (i) Have all other forms of mitigation been exhausted? (ii) What progress has been made in the consideration of barriers as an alternative to insulation of people's homes? |
| | SZC Co. Response at Deadline 7 | (i) SZC Co. has considered a range of mitigation measures, covering the physical track infrastructure, the choice of rolling stock, the speed and operation of the trains, and improvements to the rail infrastructure at Saxmundham to avoid the need for stopping (and starting) of trains. Barriers have also been considered and remain under investigation in specific locations. SZC Co. is also working with Network Rail to seek to deliver the renewal of the track where that may be beneficial on the East Suffolk Line. The physical and operational measures, other than insulation at the receptors, that are considered deliverable are documented in the draft Rail Noise Mitigation Strategy [AS-258]. They comprise: <ul style="list-style-type: none">• Change arrangements at Saxmundham: a crossover north of Saxmundham station and an upgrade to the line signalling system• Upgrade to the Saxmundham to Leiston branch line track with refurbished trackbed, concrete or steel sleepers and new welded rails.• Further upgrade to the branch line track bed to include an under-ballast mat, where the branch line passes within 15 metres of a residential property• The new track of the rail-extension route comprising concrete or steel sleepers and welded rails.• Speed limits at Woodbridge / Melton, Campsea Ashe and Saxmundham. |

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| ExQ2 | Question to: | Question: |
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| | | <ul style="list-style-type: none">• Use of Class 66 locomotives• Night-time Leiston restrictions <p>SZC Co. consider that all other forms of mitigation have been thoroughly explored and exhausted, as set out above. Insulation is appropriate in these circumstances, as part of the mitigation package.</p> <p>(ii) As noted in response to Questions NV.2.8(i) and NV.2.3, SZC Co. continues to engage Network Rail closely on these issues, and they have recently confirmed that they will not permit any lineside acoustic barriers on their land.</p> <p>SZC Co. doubts the appropriateness of acoustic barriers in planning terms for the reasons set out in the note on acoustic fencing contained in Appendix I of SZC Co.'s Comments at Deadline 6 on Submission from Earlier Submissions and Subsequent Written Submissions to ISH1-ISH6 [REP6-024], with the possible exception of Whitearch Park. A view from ESC's Planning Department is expected shortly.</p> <p>SZC Co. remains willing to engage with Interested Parties who wish acoustic barriers to be considered on their land, or on land within SZC Co.'s control, however, there are likely to be few locations where acoustics barriers are practical or deliverable on land outside Network Rail's control because:</p> <ul style="list-style-type: none">(a) barriers further from the track are likely to be less effective, and(b) SZC Co.'s note on acoustic fencing as referenced above shows the general unsuitability in planning terms of the barriers required. |
| NV.2.9 | Applicant, Network Rail, ESC | Rail Noise Mitigation <p>Additional assessments of rail noise were undertaken in Woodbridge and Saxmundham to consider the implications of the rail strategy in respect of house boats and park homes.</p> <p>(i) Please provide an update on what the noise mitigation proposed is to be and how this would be secured.</p> |

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| ExQ2 | Question to: | Question: |
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| | | <p>(ii) In the event screening in these locations would facilitate an improved noise environment for these receptors, has a similar option been considered for other receptors along the line?</p> <p>(iii) Could this be secured in the event it was considered appropriate?</p> |
| | SZC Co. Response at Deadline 7 | <p>(i) The additional assessment of railway noise for the houseboats in Woodbridge and Melton did not identify any locations where the eligibility criteria in the Noise Mitigation Scheme [REP6-015] would be triggered. However, surveys as part of the refreshed assessments under the Noise Mitigation Scheme will identify any boats whose superstructure offers a sound reduction of less than 25dB, and mitigation may be offered on the basis of reduced criteria. The Noise Mitigation Scheme [REP6-015] submitted at Deadline 6 allows the eligibility criteria to be altered, and the updated Noise Mitigation Scheme to be submitted at Deadline 7 (Doc Ref 6.3 11H(C)) will clarify that this discretion can only be used to make the scheme more generous.</p> <p>SZC Co.'s Deadline 6 submission on the potential planning constraints relating to the installation of acoustic barriers [REP6-024] suggested that barriers in the Woodbridge or Melton areas would not be possible. SZC Co. understands that ESC's Planning Department is reviewing the position in light of its Environmental Health Department's view that more weight should be placed on the acoustic benefits than the other considerations.</p> <p>Network Rail has clarified to SZC Co, ESC and SCC that they will not permit any barriers on land within their ownership, which means that any barrier proposals will need to be located on land outside their ownership.</p> <p>It is not SZC Co.'s intention to install railside acoustic barriers in the Woodbridge or Melton areas. They are not considered necessary to meet the planning policy tests, and the twin constraints posed by Network Rail's position and the planning impediments set out in [REP6-024] mean that their potential use for the SZC project has been exhausted.</p> <p>An update to the Whitearch Park consultation was issued to the residents and owners of Whitearch Park and submitted to the ExA at Deadline 6 [REP6-030]. The note set out a</p> |

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| | | <p>corrected set of noise contours, and revised the potential barrier location to the top of the railway embankment.</p> <p>Network Rail's subsequent clarification that they will not permit any barriers on land within their ownership precludes the installation of an effective acoustic where the railway is on an embankment, which is the case at the southern end of the Whitearch Park site.</p> <p>It remains the case that an acoustic barrier would provide some benefit at the northern part of the Whitearch Park site, from approximately the mid-point of the site northwards. Discussions are proposed to continue with the owners of Whitearch Park to explore the potential to erect an acoustic barrier on land within their ownership, which would remain subject to the necessary permissions.</p> <p>Should a barrier at Whitearch Park be taken forward, it will be secured through the Rail Noise Mitigation Strategy and the submission of a planning application to ESC.</p> <p>(ii) As noted in response to Questions NV.2.8 and NV.2.3, SZC Co. continues to engage Network Rail closely on these issues, and they have recently confirmed that they will not permit any lineside acoustic barriers on their land.</p> <p>SZC Co. doubts the appropriateness of acoustic barriers in planning terms for the reasons set out in the note on acoustic fencing contained in Appendix I of SZC Co.'s Comments at Deadline 6 on Submission from Earlier Submissions and Subsequent Written Submissions to ISH1-ISH6 [REP6-024]; a view from ESC's Planning Department is expected.</p> <p>SZC Co. remains willing to engage with Interested Parties who wish acoustic barriers to be considered on their land, or on land within SZC Co.'s control, however, there are likely to be few locations where acoustics barriers are practical or deliverable on land outside Network Rail's control for the reasons set out above.</p> |

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| ExQ2 | Question to: | Question: |
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| NV.2.10 | Applicant, Network Rail, ESC | <p>Noise and Vibration from Rail Freight</p> <p>ESC have sought additional clarification in respect of the uncertainties of the predictions of noise and ground borne vibration from rail activities.</p> <p>Can the ExA be updated on the current position regarding this updated information and whether the parties are agreed now as to the suitability of its forecasting, and the consequential assessments of noise and vibration and the consequential suitability of any mitigation.</p> |
| | SZC Co. Response at Deadline 7 | <p>SZC Co. has prepared a second set of responses to questions raised by ESC, which was issued to them in draft on 12th August 2021, and is submitted to the ExA at Deadline 7 as Appendix 11B to the Statement of Common Ground with ESC/SCC (Doc Ref 9.10.12 B). Once ESC has confirmed its position on these matters, SZC Co. will seek to update the ExA as requested.</p> |
| NV.2.11 | ESC, Applicant (ii only) | <p>Operational Noise at Leiston Leisure Centre</p> <p>(i) Please confirm that page 63 section 165 20j of the Deadline 5 Response to Deadline 3 and 4 submissions from the Applicant the noise level should be 55 dB $L_{Aeq}(T)$.</p> <p>(ii) Please explain how the installation of the noise barrier at the necessary point in the programme is secured through the DCO or other legal mechanism?</p> |
| | SZC Co. Response at Deadline 7 | <p>(i) No response required from SZC Co.</p> <p>(ii) Requirement 12A of the draft DCO (Doc Ref. 3.1(G)) secures the installation of the noise barrier at the necessary point in the programme. As observed by ESC in its Deadline 6 Comments on Deadline 5 Submissions [REP6-032], "ESC notes that requirement 12A of the draft DCO (Doc Ref. 3.1) requires approval of the detailed designs before construction begins at the sports facility, which will provide an opportunity to make sure that the necessary noise barrier is included in the design."</p> |