



# The Sizewell C Project

## 9.69 Update on Noise Assessment at Whitearch Park

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Revision: 1.0  
Applicable Regulation: Regulation 5(2)(q)  
PINS Reference Number: EN010012

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August 2021

Planning Act 2008  
Infrastructure Planning (Applications: Prescribed  
Forms and Procedure) Regulations 2009





Ref:

The Office  
Another Address Reference  
Something Close  
City Address  
County  
KT2 OBS

05 August 2021

Dear Resident,

**The Sizewell C Project, PINS Reference Number EN010012  
Update on noise assessment at Whitearch Park**

On 27 May 2020, NNB Generation Company (SZC) Limited ('**SZC Co.**') made an application to the Planning Inspectorate under the Planning Act 2008 for a Development Consent Order for the Sizewell C Project ('**Application**'). The Application was accepted for examination by the Planning Inspectorate on 24 June 2020 (Application Reference: EN010012). An Examining Authority was appointed on 30 June 2020 to examine the Application. The examination commenced on 14 April 2021 and is due to be completed by 14 October 2021.

As part of the Application, an Environmental Statement (Examination Library refs. APP-159 to APP-582) was submitted to the Planning Inspectorate in May 2020, which included an assessment of rail noise arising from the transport of construction materials by train on the East Suffolk Line. An Environmental Statement Addendum (Examination Library refs. AS-179 to AS-260) was subsequently submitted in January 2021, which included an updated assessment of rail noise. These documents, together with all of the other Application documents, are available for inspection free of charge on the webpage relating to the Application on the Planning Inspectorate's website under the 'Documents' tab: <https://infrastructure.planninginspectorate.gov.uk/projects/eastern/the-sizewell-c-project/?ipcsection=docs>

Between 12 May and 11 June 2021, SZC Co. undertook a targeted consultation exercise to seek views from the residents and owners of Whitearch Park, located south of Saxmundham, and other interested parties, on the potential noise effects from the use of the East Suffolk line by SZC Co. as part of its freight management strategy to bring construction materials to the Sizewell C site. A copy of the targeted consultation materials, including a supplemental noise assessment (dated May 2021), a summary of the noise assessment, and covering letter, can be found at Volume 3, Appendix 21C of SZC Co's responses to the Examining Authority's first written questions (Examination Library ref. REP2-112). Consultee responses to the consultation were collated and SZC Co. provided its responses in the Consultation Report Second Addendum (Examination Library ref. REP2-112).



Ref:

SZC Co. has been considering further, including in light of consultation feedback, the potential acoustic benefit that a barrier would have in respect of mitigating rail noise at Whitearch Park. Enclosed with this letter is an update on the supplemental noise assessment. The update includes a correction to the assessment regarding the effect of a particular alignment of a barrier. The principle remains the same; that a fence or barrier on the eastern boundary would be an option to reduce the noise from trains, if it could be agreed with Network Rail and the local planning authority, but we have more accurate information now on its necessary likely height and location if it is to have best effect.

We are writing to you to offer you the opportunity to submit to SZC Co. any comments that you may have on this update to the supplemental noise assessment. Please label any responses as "Update on noise assessment at Whitearch Park" and ensure that they are submitted to SZC Co. by **31<sup>st</sup> August 2021** via one of the following methods:

- Email comments to [info@sizewellc.co.uk](mailto:info@sizewellc.co.uk)
- Post comments to FREEPOST SZC CONSULTATION (no stamp or further address required)
- If you are shielding and unable to use the above methods, call Freephone 0800 197 6102 (09:00 – 17:00 Monday to Friday) to arrange for your response to be collected

SZC Co. will have regard to any responses received, including those received from the consultation in May / June (so that there is no need to re-submit those comments). We will also provide any responses to the Examining Authority who are conducting the examination to inform their consideration of the Application. The Examining Authority may publish these responses at: <https://infrastructure.planninginspectorate.gov.uk/projects/eastern/the-sizewell-c-project/>

If you would like to know more about the development consent process, including the examination stage, a step by step guide has been produced by the Planning Inspectorate, entitled Advice Note Eight: Overview of the nationally significant infrastructure planning process for members of the public and others. This can be found at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

Details of how the Application will be examined and a copy of the examination timetable can be found in the Rule 8 letter published on 21 April 2021, which is available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010012/EN010012-003597-Rule%208%20Letter%20and%20Annexes.pdf>

Yours sincerely,

**Carly Vince**

Chief Planning Officer

**Enc.** Update on noise assessment at Whitearch Park



# The Sizewell C Project

**Consultation Document**

**Update on Noise Assessment at Whitearch Park**

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August 2021





SIZEWELL C PROJECT – UPDATE ON NOISE  
ASSESSMENT AT WHITEARCH PARK

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## 1 INTRODUCTION

### 1.1 Overview

- 1.1.1 NNB Generation Company (SZC) Limited ('SZC Co.')
- has made an application to the Planning Inspectorate under the Planning Act 2008 for a Development Consent Order (DCO) for the Sizewell C Project. The application is currently the subject of an examination by the Planning Inspectorate (application reference EN010012).
- 1.1.2 As part of the application, an Environmental Statement was submitted to the Planning Inspectorate in May 2020, which included an assessment of rail noise arising from the transportation of construction materials by train on the East Suffolk line. An Environmental Statement Addendum was subsequently submitted in January 2021, which included an updated assessment of rail noise.
- 1.1.3 A targeted consultation exercise was undertaken between 12<sup>th</sup> May 2021 and 11<sup>th</sup> June 2021 to seek views from the residents and owners of Whitearch Park, located south of Saxmundham, on the potential noise effects from the use of the East Suffolk line by SZC Co. as part of its freight management strategy to bring construction materials to the Sizewell C site.
- 1.1.4 A copy of the targeted consultation materials, including a supplemental noise assessment (dated May 2021), a summary of the noise assessment, and covering letter, can be found at **Volume 3, Appendix 21C** of SZC Co's responses to the Examining Authority's first written questions [REP2-112]<sup>1</sup>.
- 1.1.5 Responses to the consultation were collated and SZC Co. issued its responses in the **Consultation Report Second Addendum** [REP3-009].
- 1.1.6 This document provides an update on the supplemental noise assessment undertaken for the targeted consultation. It also includes a correction to the supplemental noise assessment. In particular, it provides more information on the necessary scale and location of a noise barrier if it is to achieve the best levels of noise reduction.

<sup>1</sup> Text in square brackets beginning with 'AS', 'APP', or 'REP' are reference numbers in the Examination library on the Planning Inspectorate's website (<https://infrastructure.planninginspectorate.gov.uk/projects/eastern/the-sizewell-c-project/?ipcsection=docs>). Text in square brackets beginning 'RR' are relevant representations made to the Planning Inspectorate by third parties, available on the Planning Inspectorate's website. Text in round brackets beginning with 'Doc Ref' are SZC Co.'s own document references. Text in square brackets beginning with 'Ref' are documents listed in the 'References' section at the rear of this document.

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- 1.2 Summary of Supplemental Noise Assessment undertaken in May 2021
- 1.2.1 To facilitate the construction of SZC, a combination of transportation modes is proposed to deliver construction materials to the site. The proposed transportation modes are road, rail and sea-based.
- 1.2.2 The supplemental noise assessment undertaken in May 2021 focused on the potential for airborne noise effects from rail movements.
- 1.2.3 The **Freight Management Strategy** (Doc Ref 8.18) [[AS-280](#)] for the project provides for up to four trains per day at the peak of construction once a new rail extension is constructed, called the ‘green rail route’, equating to eight train movements per day, seven of which will be at night. It is anticipated that the peak of construction where four trains per day are required will last from 2024 to 2028.
- 1.2.4 Prior to the completion of the green rail route, and following the refurbishment of the Saxmundham to Leiston branch line, there will be a maximum of two trains per day, equating to four train movements, three of which will be at night.
- 1.2.5 The trains are expected to be travelling at between 10 and 20mph as they pass Whitearch Park.
- 1.2.6 Night-time rail movements are necessary due to limited capacity on the East Suffolk line during the daytime.
- 1.2.7 SZC Co. submitted a suite of environmental assessments, considering the full range of potential effects that might arise from the SZC project.
- 1.2.8 The assessment of operational railway noise and vibration was originally set out in **Volume 9, Chapter 4** of the **ES** (Doc Ref 6.10) [[APP-545](#)], including its associated **Appendix 4B** (Doc Ref 6.10) [[APP-546](#)]. The derivations of the assessment methods and criteria were set out in **Volume 1, Appendix 6G** of the **ES** (Doc Ref 6.1) [[APP-171](#)].
- 1.2.9 Additional noise surveys and assessment work carried out over the summer and autumn of 2020 resulted in a modification to the way in which railway noise, and in particular vibration, were assessed. The updated assessment was presented in **Volume 1, Chapter 9** of the **ES Addendum** (Doc Ref 6.14) [[AS-188](#)] and its associated appendices in **Volume 3, Appendices 9.3.A to 9.3.E** in the **ES Addendum** (Doc Ref 6.14) [[AS-257](#) and [AS-258](#)].
- 1.2.10 A draft **Rail Noise Mitigation Strategy** [[AS-258](#)] set out specific operational and physical measures to control railway noise and vibration.

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- 1.2.11 Three of the key findings from the previous assessments informed the approach adopted in the supplemental noise assessment:
- the effect of the additional trains on the East Suffolk line during the daytime was found to be negligible;
  - at night, the increase in noise level over the whole of the night-time period along the East Suffolk line and the maximum levels arising from the peak of noise from individual passing trains would both result in a significant adverse effect for some receptors; and
  - for all receptors, the most significant effects were determined by the maximum noise levels, assessed using the  $L_{AFmax}$  parameter, not the overall noise levels across the whole of the night-time period.
- 1.2.12 In light of these findings, the supplemental noise assessment focused on the night-time period and considered the maximum noise levels only to consider the worst-case effects.
- 1.2.13 Train noise levels were predicted using the SoundPLAN 3D noise modelling software, and a noise contour plot was presented showing how the maximum sound levels from passing trains were likely to propagate away from the railway line at Whitearch Park. These contours are repeated here in Plate 1.1.



**Plate 1.1: Noise contours for residential park homes at Whitearch Park<sup>2</sup>**



- 1.2.14 It was concluded that the majority of the homes at Whitearch Park would be subject to night-time  $L_{AFmax}$  levels below 70dB (green and yellow shaded areas), which is considered to be a negligible or minor adverse effect, when the sensitivity of their residential use is taken into account. These would not be significant effects in an EIA context.
- 1.2.15 Two of the existing park homes were predicted to have noise levels of between 70dB and 77dB (red shaded area), with one park home predicted to be just over 77dB (blue shaded area). These are considered to be moderate adverse effects at the two park homes and a major adverse effect at the other; these are regarded as significant effects in an EIA context.
- 1.2.16 For all park homes except one, the outcomes would fall either below the LOAEL<sup>3</sup>, or between the LOAEL and SOAEL<sup>3</sup> where in planning policy

<sup>2</sup> Included as Plate 4.2 in May 2021 Supplemental Noise Assessment

<sup>3</sup> LOAEL is the 'lowest observed adverse effect level', and SOAEL is the 'significant observed adverse effect level'. See paragraphs 1.2.14 to 1.2.25 of Volume 1, Appendix 6G.1 of the ES [APP-171] for a full explanation.

terms the requirement is to mitigate and reduce noise of this level to a minimum. For the single park home predicted to be exposed to  $L_{AFmax}$  noise levels above 77dB, planning policy requires the effect to be avoided, which can be achieved through the **Noise Mitigation Scheme** [REP2-034].

- 1.2.17 It was concluded that the walls of the park homes at Whitearch Park were likely to provide a sound reduction of at least 35dB and the windows at least 25dB. It was therefore considered that the **Noise Mitigation Scheme** would be effective in improving the sound insulation of the park homes.
- 1.2.18 On this basis, the SOAEL will be avoided for the one park home that is predicted to be exposed to the highest noise level, and the internal sound levels within all three park homes will be mitigated and minimised as required more generally by policy.
- 1.2.19 Consideration was also given to mitigation in the form of an acoustic barrier between the site and the railway. A screening exercise was undertaken where three acoustic barrier alignments were tested, and a single alignment put forward in the supplemental noise assessment located along the eastern boundary of Whitearch Park at a height of 2.5m. The effect was presented as a noise contour plot, which is included here as Plate 1.2.

**Plate 1.2: Noise contours for Whitearch Park – with acoustic barrier on site boundary<sup>4</sup>**



- 1.2.20 The acoustic barrier was expected to reduce train  $L_{AFmax}$  noise levels to less than 70dB at all of the park homes, resulting in effects that would be no worse than minor adverse, which are not significant in an EIA context.
- 1.2.21 Notwithstanding the effect of the assessed barrier, the supplemental noise assessment acknowledged that any barrier would be subject to discussion with the relevant authorities, including Network Rail, East Suffolk Council and Benhall and Sternfield Parish Council, the owner and residents at Whitearch Park, and subject to the necessary permissions and further assessment of other potential environmental effects, prior to any decision whether or not to install any barriers.

<sup>4</sup> Included as Plate 4.3 in May 2021 Supplemental Noise Assessment

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## 2 SITE VISIT AND CONSULTATION RESPONSES

- 2.1.1 A site visit was undertaken on 7<sup>th</sup> June 2021 to discuss the targeted consultation and the supplemental noise assessment with the owners of Whitearch Park. SZC Co. was shown around the site, viewing both existing and proposed park home plots, and inspecting the relationship between the site and the adjacent railway line.
- 2.1.2 The owners of Whitearch Park commented on the proposals to use the East Suffolk line for night-time freight movements and indicated that they, and a number of their residents, would be submitting comments as part of the targeted consultation.
- 2.1.3 It was noted during the site visit that the height of the railway line falls relative to Whitearch Park from south to north, so that the railway is on an embankment at the southern end of the Whitearch Park, at grade approximately at the centre of the eastern site boundary, and in cutting at the northern end of the site.
- 2.1.4 The embankment and cutting are both approximately 5 metres high/deep at their highest/deepest.
- 2.1.5 It was noted that the effect of the 2.5m high acoustic barrier on the eastern site boundary of Whitearch Park included in the supplemental noise assessment, effectively at the base of the railway embankment at the southern end of Whitearch Park, was likely to be considerably more limited than the modelling showed.
- 2.1.6 The responses to the consultation were collated and SZC Co. issued its responses in the **Consultation Report Second Addendum** [[REP3-009](#)] in June 2021.
- 2.1.7 Notwithstanding a generally-expressed concern regarding the use of the East Suffolk line to move construction materials to the Sizewell C site by train at night, support was expressed for a noise barrier along the East Suffolk line to reduce noise from passing trains.
- 2.1.8 In light of the consultation responses and the observations set out above, SZC Co. has now revisited the potential acoustic benefit that such a structure might have.

## 3 ALTERNATIVE BARRIER ALIGNMENT

### *Correction to the May 2021 supplemental noise assessment*

- 3.1.1 The boundary between Whitearch Park and the railway, at the southern end of the site, is at the bottom of the embankment. At the northern end of the site, it is at the top of the cutting.
- 3.1.2 Plate 4.3 in the May 2021 supplemental noise assessment<sup>5</sup> purports to show the effects of a 2.5m barrier on the boundary between Whitearch Park and the railway. Due to the level changes of the railway, a boundary of that height in that location would not in fact have the acoustic effects indicated in Plate 4.3. Plate 4.3 overestimates the mitigating effect of such a barrier at the southern end of the site and underestimates it at the northern end of the site.
- 3.1.3 In light of the above, SZC Co has reconsidered the barrier alignment as follows.

### *Alternative barrier alignments*

- 3.1.4 Given the height of the railway embankment relative to the southern end of Whitearch Park, the most effective solution would be to locate the barrier at the top of the embankment, adjacent to the railway line. The barrier would follow the level of the railway line as the embankment reduces in height, and would then follow the top of the cutting as the railway drops below the ground level of Whitearch Park.
- 3.1.5 The effect of a barrier of varying height has been considered. To be most effective, a barrier would need to be 4m above the railway line for its full length past Whitearch Park. That means, it would need to be 4m above rail level when the railway line is on an embankment above Whitearch Park, and 2.5m above ground level where the railway line is in the cutting, once the cutting is at least 1.5m deep.
- 3.1.6 The effect of the barrier is shown in Plate 3.1.

<sup>5</sup> Which can be found at **Volume 3, Appendix 21C** of SZC Co's responses to the Examining Authority's first written questions [[REP2-112](#)]

**Plate 3.1: Noise contours for Whitearch Park – with acoustic barrier adjacent to railway line**



- 3.1.7 Plate 3.1 shows that a barrier at the top of the embankment that transitions to the top of the cutting will be effective in reducing the train noise levels to below 70dB at every park home. This would result in no worse than minor adverse effects, which are not significant in an EIA context.
- 3.1.8 The supplemental noise assessment explained that any proposed barrier, whether on Network Rail land or land owned by Whitearch Park, would be subject to discussion with the relevant authorities, including Network Rail, East Suffolk Council and Benhall and Sternfield Parish Council, the owner and residents at Whitearch Park, and subject to the necessary permissions and further assessment of other potential environmental effects, prior to any decision whether or not to install any barriers. That remains the position.
- 3.1.9 The deliverability of this barrier alignment is currently under discussion with Network Rail, although it is noted that subject to a feasibility test and SZC Co. meeting the costs of any barriers, Network Rail has advised that it does not have an in-principle objection to acoustic fencing<sup>6</sup>.

<sup>6</sup> See paragraph 6.3 in the **Statement of Common Ground with Network Rail** [REP2-074]

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*Noise Mitigation Scheme and Rail Noise Mitigation Strategy*

- 3.1.10 SZC Co. has amended the **Noise Mitigation Scheme** to recognise the potential for the construction of the homes at Whitearch Park to vary, and has included a more flexible approach to the specification of insulation. This amended version of the **Noise Mitigation Scheme** will be submitted to the Examining Authority at Deadline 6 (6<sup>th</sup> August 2021).
- 3.1.11 Should a noise barrier be feasible along the East Suffolk line at Whitearch Park, provision for its installation will be included either in a further update of the **Noise Mitigation Scheme**, in an update to the draft **Rail Noise Mitigation Strategy** [[AS-258](#)], or via another securing mechanism as may be agreed between SZC Co. and the relevant stakeholders.

## 4 CONCLUSIONS

- 4.1.1 This document sets out an update to the supplemental noise assessment that was provided as part of the targeted consultation undertaken between 12<sup>th</sup> May 2021 and 11<sup>th</sup> June 2021. The targeted consultation related to the potential effects of night-time railway noise on the park homes at Whitearch Park, south of Saxmundham. This document also includes a correction to the supplemental noise assessment. In particular, it provides more information on the necessary scale and location of a noise barrier if it is to achieve the best levels of noise reduction.
- 4.1.2 It remains the case that the improvements in sound insulation offered by the **Noise Mitigation Scheme** [REP2-034] will be achievable for the park homes given their modern, high quality construction. Insulation would mean that noise levels would not exceed SOAEL in any instance. This outcome does not rely on the presence of a barrier.
- 4.1.3 The **Noise Mitigation Scheme** has been amended to allow a more flexible approach to the specification of insulation, in recognition for the potential for the construction of the homes at Whitearch Park to vary. This amended version of the **Noise Mitigation Scheme** will be submitted to the Examining Authority at Deadline 6 (6<sup>th</sup> August 2021).
- 4.1.4 The present document includes updated and corrected information on the potential acoustic benefits of a noise barrier. An alignment of a noise barrier is assessed which now follows the railway line as the embankment reduces in height, and then follows the top of the cutting as the railway drops below the ground level of Whitearch Park. The top of this assessed barrier remains 4m above the railway line for its entire length.
- 4.1.5 The effect of the updated barrier would be to bring railway noise levels to below 70dB L<sub>AFmax</sub> at every park home, which is considered to be a negligible or minor adverse effect, when taking account of the residential nature of the park homes. These effects are not considered significant in an EIA context. The noise levels would either fall below LOAEL, or between LOAEL and SOAEL, in all instances.
- 4.1.6 Any proposed barrier, whether on Network Rail land, or on land owned by Whitearch Park, would be subject to discussion with the relevant authorities, including Network Rail, East Suffolk Council and Benhall and Sternfield Parish Council, the owner and residents at Whitearch Park, and subject to the necessary permissions and further assessment of other potential environmental effects, prior to any decision whether or not to install any barriers.



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- 4.1.7 Should a noise barrier be feasible along the East Suffolk line at Whitearch Park, provision for its installation will be included either in a further update of the **Noise Mitigation Scheme**, in an update to the draft **Rail Noise Mitigation Strategy** [[AS-258](#)], or via another securing mechanism as may be agreed between SZC Co. and the relevant stakeholders.