



The Sizewell C Project

6.7 Volume 6 Sizewell Link Road Chapter 8 Amenity and Recreation Appendix 8A Tranquillity Assessment using the Natural Tranquillity Method

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1. Tranquillity Assessment Using the Natural Tranquillity Method – Sizewell Link Road

1.1 Introduction

1.1.1 This note provides an assessment of the existing baseline tranquillity in the area surrounding the proposed operation of the Sizewell link road and considers the effect that noise associated with its operation would have on that tranquillity. An assessment of the direct impact of noise from the operation of the proposed development on human receptors has been carried out and reported separately. That process involved predicting noise levels during different phases of work and reporting on the effects of this noise, when compared to various standards and guidance (for determining annoyance and sleep disturbance, for example). The predicted noise levels from the noise assessment work have been used to inform this tranquillity assessment.

1.1.2 This note provides one of a number inputs into the tranquillity assessment, which forms part of the assessment of effects of the proposed development on amenity and recreation. Further information regarding the methodology of this assessment can be found in **Volume 1, Appendix 6K** of the **ES** (Doc Ref. 6.2).

1.1.3 Tranquillity can be affected by much lower levels of noise than those which might cause disturbance (for the main noise assessment in **Chapter 4** of this volume (Doc Ref. 6.7)). Simply looking at existing and predicted noise levels would not be sufficient to determine how tranquil a place may be; it depends not just on level but also on the character of sound.

1.1.4 Government's National Planning Practice Guidance states under the heading "*What factors are relevant if seeking to identify areas of tranquillity?*":

'For an area to justify being protected for its tranquillity, it is likely to be relatively undisturbed by noise from human sources that undermine the intrinsic character of the area. It may, for example, provide a sense of peace and quiet or a positive soundscape where natural sounds such as birdsong or flowing water are more prominent than background noise, e.g., from transport. ...' (Ref. 1.1)

1.1.5 Four factors need to be considered:

- The overall level of sound (how loud or quiet it is);

- The relative levels of man-made and natural sounds;
- The proportion of the time during which only natural sounds are present; and
- The amount of transportation noise.

1.1.6 These parameters are assessed using the Natural Tranquillity Method (NTM), described in **Volume 1, Appendix 6G, Annex 6G.1** of the **ES** and in detail in “Tranquil Spaces” (Ref. 1.2) to provide a tranquillity score in relation to noise for existing (baseline) conditions and when the road is operational and construction of the Sizewell C Project is complete according to **Table 1.1**:

Table 1.1: Key to tranquillity scores (from the Natural Tranquillity Method)

NTM tranquillity score	NTM tranquillity description
1	Frantic / chaotic / harsh
2	Busy / noisy
3	Unsettled / slightly busy
4	Not quite tranquil
5	Just tranquil
6	Fairly tranquil
7	Good tranquillity
8	Excellent tranquillity
9	Perfect tranquillity (theoretical)

1.2 Approach

1.2.1 Baseline survey work was carried out between May and July 2019. The locations are intended to represent the key recreational and amenity locations such as the footpaths and cycleways, key viewpoints and other publicly accessible places, and provide coverage of recreational resources within the vicinity of the proposed development. The locations are shown in **Figure 8.2** of **Chapter 8** of this volume (Doc Ref. 6.7).

- 1.2.2 Survey work involved visiting each location at least once, measuring and recording the four NTM parameters (which describe the four factors listed above) and making detailed notes about the level and character of all sounds heard during the survey. This information was then processed using the approach described in the NTM to produce tranquillity scores in relation to noise for each location. This was then used as part of the assessment of tranquillity for the amenity and recreation assessment.
- 1.2.3 Predicted levels are represented when the road is operational and construction of the Sizewell C Project is complete. Predictions of road traffic noise levels have been made by modelling traffic flows for existing and future conditions.
- 1.2.4 Baseline survey results and predicted NTM parameters during operation (taking account of existing level and character of sounds and predicted level and character, combined) are shown in **Table 1.2** along with a commentary.

Table 1.2: Sizewell link road scores 2018 (baseline) and 2034 (road operational)

Location	2018	2034	Notes
R1	3	4	Road traffic dominant at present, and would remain dominant at a slightly reduced level with the development.
R2	6	5	Man made sound (various) at similar level to natural sounds. Some road traffic audible at present. With development, road traffic noise (RTN) would become significant.
R3	6	6	Birdsong, sheep, distant road traffic. Cars on local road passing. Distant dog barking. With development, RTN would become significant.
R5	2	6	Road traffic dominant. With development, road traffic noise would be reduced, although the noise from traffic on the Sizewell link road (SLR) would be significant here.
R7	7	2	Rustling foliage and birdsong dominant. Road traffic noise on B1122 is inaudible. Occasional local traffic. With development, RTN would become significant and the character would be significantly changed.
R9	4	4	Road traffic noise dominant, birdsong also significant. Little change with the development.
RT15	2	6	Road traffic noise dominant. With the

Location	2018	2034	Notes
			development, RTN would no longer dominate. Some local RTN would still be present, however. The development would result in a significant improvement in tranquillity in this location.
RT3	2	3	Road traffic noise dominant. With development, road traffic noise would be reduced, although remain dominant here.
RT4	3	4	Road traffic noise dominant. With development, road traffic noise would be reduced, although the noise from traffic on the SLR would be significant here.
RT6	2	6	Road traffic noise dominant. With development, RTN would no longer dominate. Local traffic would still present though. A significant improvement in tranquillity here.
SLR1	4	3	Road traffic noise dominant, birdsong also significant. With development, road traffic noise would remain dominant.
SLR2	6	6	Birdsong dominates, but road traffic also contributes significantly. With development, the SLR road traffic would be significant.
SLR3	7	6	Natural sounds dominate here. Distant train passing, distance dog barking. No road traffic audible on surrounding network. Very occasional vehicle passes on local road. With development, the SLR would become significant.
SLR4	7	4	Natural sounds dominate. No distant road traffic noise, but occasional local car passes. With development, the character would be significantly changed with a significant reduction in tranquillity due to road traffic noise.
SLR5	6	6	Road traffic and natural sounds present. No significant change would result from the development.
SLR6	6	6	Road traffic dominates but is not continuous. Birdsong also contributes. No significant change would result from the development.
SLR7	7	7	Birdsong, wind in hedgerows, distant road traffic. SLR road traffic would be audible here

Location	2018	2034	Notes
			but not quite at a sufficiently high level so as to become significant.
SLR8/R4	7	6	Birdsong, distant road traffic audible continuously. With development, SLR road traffic noise would be significant here and good tranquillity would be reduced to fair tranquillity.
SLR9	7	6	Birdsong and distant road traffic. Pump running at times. With development, SLR road traffic noise would be significant here and good tranquillity would be reduced to fair tranquillity.
T15	6	6	Birdsong. Occasional trains passing. Distant road traffic audible. No significant change as a result of the development although SLR would be audible.
T16	7	7	Birdsong dominant. Road traffic audible. Occasional trains passing. No change as a result of the development.
T17/R8	7	6	Very quiet. Birdsong dominant. Distant trains and road traffic audible at times. With development, noise from vehicles on the SLR would be significant and this would reduce tranquillity here.
T18	7	7	Natural sounds dominate, distant trains and road traffic audible at times. No significant change as a result of the development.
T19	7	6	Birdsong, wind in hedgerows, distant road traffic. Very quiet. With development, SLR road traffic would be significant and tranquillity would be reduced.
T20	7	7	Very quiet. Birdsong and vegetation dominant. Distant road traffic audible at times. No change with the development.
T21	7	7	Quiet location - birdsong dominates and road traffic noise audible. No change with the development.
T22/R6	7	6	Birdsong and breeze in foliage. Distant road traffic noise just audible. With development, SLR road traffic would be significant and tranquillity would be reduced.
T23	7	7	Birdsong and breeze in foliage. Distant road

Location	2018	2034	Notes
			traffic noise just audible. Very quiet. With development, SLR traffic would be noticeable due to the overall low level of sound, but there would not be a loss in tranquillity as a result.
T24	7	7	Birdsong, wind in hedgerows, distant road traffic. No change with the development.
T25	7	7	Birdsong dominant. Wind in trees and children's play area audible. Road traffic noise also audible. No change with the development.
T26	7	7	Birdsong, wind in hedgerows, distant road traffic, occasional local road traffic. No change with the development.
T27	7	4	Birdsong, distant road traffic just audible, occasional local road traffic. Dog barking in distance regularly. With development, the character would be significantly changed with a significant reduction in tranquillity due to road traffic noise.
T28	6	6	Birdsong, distant road traffic just audible, occasional local road traffic. Dog barking nearby quite often. With development, the SLR traffic would become significant, but the location would remain "fairly tranquil".
T29	5	5	Wind in trees, near agricultural plant, so this is audible for much of the time. RTN audible. No change with the development.
T30	6	6	Birdsong, sheep and some agricultural plant noise. Road traffic almost inaudible. No change with the development.
T31	7	7	Quiet, birdsong dominates, although distant road traffic also audible. No change with the development.

References

- 1.1 MHCLG (2019) Planning Practice Guidance – Noise
<https://www.gov.uk/guidance/noise--2> [Accessed November 2019]
- 1.2 Clive Bentley (2019). Tranquil Spaces. Measuring the tranquillity of public spaces.