The Great Grid Upgrade

Sea Link

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Suffolk Construction Traffic Noise Assessment

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Version History			
Date	**Issue**	**Status**	**Description / Changes**
March 2025	A	Final	For DCO submission
September 2025	B	Final	Update to reflect S89(3) Procedural Decision from the Examining Authority

1. Construction Traffic Noise Assessment

1.1 Introduction

1.1.1 This Appendix describes the assessment of construction traffic noise on the public highways. The assessment of construction traffic noise has been conducted following the guidance detailed in Design Manual for Roads and Bridges LA 111 (DMRB LA 111) (Highways England et al., 2020) and the Department of Transport (DoT) technical memorandum Calculation of Road Traffic Noise (CRTN) (DoT, 1988). DMRB LA 111 provides guidance for the assessment and noise impacts from road projects, however, the guidance is widely used in the assessment of construction noise impacts from other types of project, particularly with regards to construction traffic noise in lieu of other guidance.

1.2 Assessment Methodology

1.2.1 Noise from construction traffic on the public highway has been calculated in accordance with CRTN and assessed against the criteria detailed in DMRB LA 111. The basic noise level (BNL) from public roads used as construction traffic routes has been calculated in accordance with CRTN for the do-minimum and do-something scenarios in the construction period. The calculated BNL values were compared to determine the magnitude of the impact.

1.2.2 The BNL is a standardised metric for determining the noise level from a road and is defined as the noise level exceeded for 10% of the time at a reference point of 10 m away from the nearside carriageway edge. It is calculated using traffic flow, speed, composition road gradient and road surface information, in line with the methodology described in CRTN.

1.2.3 The study area is defined following the guidance detailed in DMRB LA 111, which states that the construction traffic study areas shall be defined to include a 50m width from the kerb line of public roads with the potential for an increase in BNL of 1 dB or more as a result of the additional construction traffic to existing traffic levels.

1.2.4 The calculation methodology described in CRTN utilizes the Annual Average Weekday Traffic over the 18-hour period between 06:00 and 00:00 (AAWT,18h).

1.2.5 The standard CRTN BNL calculation is applicable where traffic flows are greater than 4000 vehicles per 18-hour day. Where flows are between 1000 and 4000 vehicles per day, a ‘low flow’ correction can be applied which is a function of the distance from the carriageway. For the purposes of the initial assessment, a typical worst-case distance of 10 m has been assumed (the correction reduces with increased distance, with no correction applied beyond 30 m). Where flows are less than 1000 vehicles per day, the BNL has been calculated and compared but it results should be treated with caution as CRTN states that calculations of traffic flows below 1000 vehicles per 18-hour day are unreliable. However, where traffic flows are low, absolute noise levels would be expected to be low and would not likely lead to significant adverse effects. Additional discussion is provided in these cases, where applicable.

1.2.6 Where there are potential changes in the BNL on roads that would be greater than or equal to 1 dB(A) an assessment has been conducted of the impacts on NSR within 50 m of routes. NSR include dwellings (including listed buildings), healthcare facilities, education facilities or other buildings where noise or vibration can cause disturbance to people using the buildings.

1.2.7 Exceedance of the change in traffic noise by greater than or equal to 3.0 dB and less than 5dB is considered a medium magnitude impact, while a change in traffic noise level of greater than or equal to 5 dB is considered a large magnitude impact. For residential NSR, construction traffic noise effects are considered to be significant where there are medium or large magnitude impacts for a duration of ten or more days in any 15 consecutive days or for a total number of days exceeding 40 in any six consecutive months. The significance of effect at non-residential NSR considers their specific sensitivity on a case-by-case basis, where applicable.

1.3 Assessment Results

1.3.1 The results of the construction traffic noise assessment are provided in Table 1.1~~Table 1.1~~. It is assumed that there is no change in average speed between the do-minimum and do something scenarios.

1.3.2 The results indicate that the effect of construction traffic noise is **negligible** on all routes. The effect of construction traffic is therefore **not significant**.

Table 1.1 Construction traffic noise assessment – public highway

Road name/location	Baseline Data		Baseline data plus construction traffic		BNL, dB $L_{A10,18h}$		Change, dB	Outcome
	Total daily vehicles	%HGV	Total daily vehicles	%HGV	Baseline	Baseline plus construction traffic		
S-RL1: A12 (south of A1094)	14,755	5.4	~~14,104~~15,016	6.1	72.6	72.8	0.2	Negligible
S-RL2: A12 (between A1094 & B1121 Main Rd south junction)	10,939	6.4	11,124~~10,342~~	7.0	71.5	71.7	0.2	Negligible
S-RL3: A12 (between B1121 Main Road junctions)	9,756	6.7	9,937~~9,213~~	7.3	71.8	71.9	0.1	Negligible
S-RL4: A12 (north of B1121 Main Road northern junction)	10,144	6.2	10,325~~9,629~~	6.7	71.8	72.0	0.2	Negligible
S-RL5: B1121 Main Road (east of A12)	4,478	2.9	4,652~~4,436~~	4.6	63.9	64.6	0.7	Negligible
S-RL6: B1121 Main Road (south of B1119 Church Street)	4,347	2.4	4,351~~4,245~~	2.4	63.6	63.6	0.0	No change
S-RL7: B1119 Church Street (east of B1121 Main Road)	3,154	2.7	3,158~~3,074~~	2.7	62.2	62.2	0.0	No change
S-RL8: B1121 Aldeburgh Road (between A1094 and B1121 Saxmundham Road)	1,097	2.9	1,099~~1,067~~	2.9	55.3	55.3	0.0	No change

Road name/location	Baseline Data		Baseline data plus construction traffic		BNL, dB $L_{A10,18h}$		Change, dB	Outcome
	Total daily vehicles	%HGV	Total daily vehicles	%HGV	Baseline	Baseline plus construction traffic		
S-RL9: B1121 Saxmundham Road (north of Grove Road)	976	2.4	978~~954~~	2.4	very low flow	very low flow	very low flow	Negligible
S-RL10: A1094 (between A12 and B1069 Snape Road)	7,176	3.3	7,364~~7,072~~	4.0	66.1	66.4	0.3	Negligible
S-RL11: A1094 Aldeburgh Road (between B1069 Snape Road and Leiston Road)	3,956	2.3	3,990~~3,882~~	2.7	63.2	63.4	0.2	Negligible
S-RL12: B1069 Snape Road (between A1094 Aldeburgh Road and Aldringham Lane)	5,880	2.9	6,068~~5,842~~	3.7	65.1	65.5	0.4	Negligible
S-RL13: Leiston Road (between A1094 Aldeburgh Road and Aldringham Lane)	2,858	4.7	2,866~~2,731~~	4.7	62.4	62.4	0.0	Negligible

References

DoT. (1988). *Calcualtion of Road Traffic Noise.* Welsh Office: Department for Transport.

Highways England et al. (2020). *Design Manual for Roads and Bridges LA 111 Noise and Vibration.* London: Highways England et al.

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