A12 Chelmsford to A120 widening scheme

TR010060

6.3 ENVIRONMENTAL STATEMENT APPENDIX 12.5 NOISE IMPACT TABLES

APFP Regulation 5(2)(a)

Planning Act 2008

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

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A12 Chelmsford to A120 widening scheme

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ENVIRONMENTAL STATEMENT
APPENDIX 12.5 NOISE IMPACT TABLES

Regulation Reference	Regulation 5(2)(a)
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1 Introduction

1.1.1 This appendix includes the required magnitude of impact tables, as shown in Table 3.55a and 3.55b of DMRB LA 111 (Highways England, 2020). These are provided for the unmitigated scheme in the short-term (Table 2.1) and long-term (Table 2.2), and then the mitigated scheme in the short-term (Table 3.1) and long-term (Table 3.2). The long-term change without the proposed scheme is also presented (Table 4.1).

1.1.2 In Section 5 of this appendix, there are three tables presented following a request by Public Health England in response to the Preliminary Environmental Information Report (Highways England, 2021). These show the change in noise at dwellings broken down into L_{den} bands for day and night.

1.1.3 The reported change in noise is on the facade of the building as required by paragraph 3.53 of DMRB LA 111 (Highways England, 2020). Where the term 'unmitigated' is used, this refers to the proposed scheme with standard mitigation only.

2 Unmitigated scheme

Table 2.1 Operational unmitigated road traffic noise summary - short-term change

Scenario		Unmitigated scheme. Do Minimum opening year 2027 against Do Something opening year 2027			
		Daytime		Night-time	
		Number of dwellings	Number of other sensitive receptors	Number of dwellings	Number of other sensitive receptors
Increase in noise level dB $L_{A10,18h}$ / L_{night}	<1.0	3,209	26	3,480	2
	1.0-2.9	6,146	40	5,627	4
	3-4.9	67	1	35	1
	>5	66	7	47	1
No Change	0	328	1	792	0
Decrease in noise level dB $L_{A10,18h}$ / L_{night}	<1.0	1,866	17	1,788	1
	1.0-2.9	400	11	386	2
	3-4.9	553	12	497	3
	>5	129	3	112	1

Table 2.2 Operational unmitigated road traffic noise summary - long-term change

Scenario		Unmitigated scheme. Do Minimum opening year 2027 against Do Something future year 2042			
		Daytime		Night-time	
		Number of dwellings	Number of other sensitive receptors	Number of dwellings	Number of other sensitive receptors
Increase in noise level dB $L_{A10,18h}$ / L_{night}	<3.0	9,861	69	9,479	7
	3.0-4.9	144	1	52	0
	5-9.9	69	6	48	2
	>10	2	1	2	0
No Change	0	419	5	253	0
Decrease in noise level dB $L_{A10,18h}$ / L_{night}	<3.0	1,733	28	2,401	2
	3.0-4.9	428	5	421	3
	5-9.9	91	2	83	1
	>10	17	1	25	0

3 Mitigated scheme

Table 3.1 Operational mitigated road traffic noise summary - short-term change

Scenario		Mitigated scheme. Do Minimum opening year 2027 against Do Something opening year 2027			
		Daytime		Night-time	
		Number of dwellings	Number of other sensitive receptors	Number of dwellings	Number of other sensitive receptors
Increase in noise level dB $L_{A10,18h}$ / L_{night}	<1.0	3,039	30	2,000	1
	1.0-2.9	391	6	151	1
	3-4.9	17	0	20	0
	>5	54	4	37	0
No Change	0	351	1	1,146	0
Decrease in noise level dB $L_{A10,18h}$ / L_{night}	<1.0	4,555	31	5,340	4
	1.0-2.9	3,566	28	3,349	3
	3-4.9	630	12	573	4
	>5	161	6	148	2

Table 3.2 Operational mitigated road traffic noise summary - long-term change

Scenario		Mitigated scheme. Do Minimum opening year 2027 against Do Something future year 2042			
		Daytime		Night-time	
		Number of dwellings	Number of other sensitive receptors	Number of dwellings	Number of other sensitive receptors
Increase in noise level dB $L_{A10,18h}$ / L_{night}	<3.0	9,710	67	9,361	7
	3.0-4.9	151	1	45	0
	5-9.9	60	4	40	0
	>10	1	0	1	0
No Change	0	430	5	286	0
Decrease in noise level dB $L_{A10,18h}$ / L_{night}	<3.0	1,845	31	2,473	3
	3.0-4.9	455	5	449	3
	5-9.9	90	4	78	1
	>10	22	1	31	1

4 Without proposed scheme

Table 4.1 Operational road traffic noise summary - long-term change with no scheme

Scenario		Mitigated scheme. Do Minimum opening year 2027 against Do Minimum future year 2042			
		Daytime		Night-time	
		Number of dwellings	Number of other sensitive receptors	Number of dwellings	Number of other sensitive receptors
Increase in noise level dB $L_{A10,18h}$ / L_{night}	<3.0	9,124	81	7,054	6
	3.0-4.9	0	0	0	0
	5-9.9	0	0	0	0
	>10	0	0	0	0
No Change	0	1,854	16	3,411	2
Decrease in noise level dB $L_{A10,18h}$ / L_{night}	<3.0	1,786	21	2,299	7
	3.0-4.9	0	0	0	0
	5-9.9	0	0	0	0
	>10	0	0	0	0

5 Additional tables - L_{den}

5.1.1 These tables are presented following a request by Public Health England in response to the Preliminary Environmental Impact Report. These show the impact at dwellings broken down into L_{den} bands. Table 5.1 shows the predicted change in noise in the opening year with the absolute noise level at each dwelling grouped by the predicted noise level in the Do Something opening year. Table 5.2 shows the predicted change in noise in the future year with the absolute noise level at each dwelling grouped by the predicted noise level in the Do Something future year. Finally, Table 5.3 shows the predicted change in noise in the future year without the proposed scheme, with the absolute noise level at each dwelling grouped by the predicted noise level in the Do Minimum future year.

Table 5.1 Operational mitigated road traffic noise summary - short-term change

Scenario		**Mitigated scheme, dwellings only. Do Minimum opening year 2027 against Do Something opening year 2027**			
		Daytime		**Night-time**	
		Above 53 L_{den} dB(A)	**Below 53 L_{den} dB(A)**	**Above 45 L_{night} dB(A)**	**Below 45 L_{night} dB(A)**
Increase in noise level dB L_{den} / L_{night}	<1.0	2,546	493	1,609	391
	1.0-2.9	315	76	141	10
	3-4.9	8	9	12	8
	>5	47	7	30	7
No Change	0	340	11	1,113	33
Decrease in noise level dB L_{den} / L_{night}	<1.0	3,915	640	4,958	382
	1.0-2.9	3,057	509	3,195	154
	3-4.9	587	43	560	13
	>5	160	1	148	0

Table 5.2 Operational mitigated road traffic noise summary – long-term change

Scenario		Mitigated scheme, dwellings only. Do Minimum opening year 2027 against Do Something future year 2042			
		Daytime		Night-time	
		Above 53 L_{den} dB(A)	Below 53 L_{den} dB(A)	Above 45 L_{night} dB(A)	Below 45 L_{night} dB(A)
Increase in noise level dB L_{den} / L_{night}	<3.0	8,995	715	8,851	510
	3.0-4.9	141	10	37	8
	5-9.9	51	9	31	9
	>10	1	0	1	0
No Change	0	359	71	215	71
Decrease in noise level dB L_{den} / L_{night}	<3.0	1,739	106	2,324	149
	3.0-4.9	444	11	446	3
	5-9.9	90	0	78	0
	>10	22	0	31	0

Table 5.3 Operational mitigated road traffic noise summary – without proposed scheme

Scenario		Mitigated scheme, dwellings only. Do Minimum opening year 2027 against Do Minimum future year 2042			
		Daytime		Night-time	
		Above 53 L_{den} dB(A)	Below 53 L_{den} dB(A)	Above 45 L_{night} dB(A)	Below 45 L_{night} dB(A)
Increase in noise level dB L_{den} / L_{night}	<3.0	8,115	1,009	6,375	679
	3.0-4.9	0	0	0	0
	5-9.9	0	0	0	0
	>10	0	0	0	0
No Change	0	1,720	133	3,323	88
Decrease in noise level dB L_{den} / L_{night}	<3.0	1,509	278	2,172	127
	3.0-4.9	0	0	0	0
	5-9.9	0	0	0	0
	>10	0	0	0	0

References

Highways England (2020). Design Manual for Roads and Bridges, LA 111 Revision 2, Noise and Vibration.

Highways England (2021). A12 Chelmsford to A120 Widening Scheme: Preliminary Environmental Information Report. Available at: [redacted] Accessed May 2022.