



Dudgeon and Sheringham Shoal Offshore Wind Farm Extensions

Preliminary Environmental Information Report

Volume 3

Appendix 25.1 - Road Traffic Noise Assessment

April 2021

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Glossary of Acronyms

AAWT	Annual Average Weekday Traffic
BNL	Basic Noise Level
CRTN	Construction of Road Traffic Noise
DEP	Dudgeon Extension Project
DMRB	Design Manual for Roads and Bridges
HGV	Heavy Goods Vehicle
LOAEL	Lowest Observed Adverse Effect Level
NPSE	Noise Policy Statement England
OAE	Observed Adverse Effect
PEIR	Preliminary Environmental Information Report
PPG	Planning Practice Guidance
SEP	Sheringham Shoal Extension Project
SOAEL	Significant Observed Adverse Effect Level
UAE	Unacceptable Adverse Effect

Glossary of Terms

The Applicant	Equinor New Energy Limited
Dudgeon Offshore Wind Farm Extension site	The Dudgeon Offshore Wind Farm Extension offshore wind farm boundary.
The Dudgeon Offshore Wind Farm Extension Project (DEP)	The Dudgeon Offshore Wind Farm Extension site as well as all onshore and offshore infrastructure.
Sheringham Shoal Offshore Wind Farm Extension site	Sheringham Shoal Offshore Wind Farm Extension offshore wind farm boundary.
The Sheringham Shoal Offshore Wind Farm Extension Project (SEP)	The Sheringham Offshore Wind Farm Extension site as well as all onshore and offshore infrastructure.

25.1 CONSTRUCTION ROAD TRAFFIC NOISE ASSESSMENT

25.1.1 Introduction

1. This appendix to the Preliminary Environmental Information Report (PEIR) for the proposed Dudgeon Offshore Wind Farm Extension Project (DEP) and Sheringham Shoal Offshore Wind Farm Extension Project (SEP) details the construction road traffic noise assessment including traffic data, assessment criteria and the associated magnitude of effect per road link.

25.1.2 Assessment Criteria

2. Construction road traffic noise impacts were determined by assessing the change in Basic Noise Level (BNL) in accordance with the methodology provided in Construction of Road Traffic Noise (CRTN). Magnitude of effect criteria are provided in **Table 25.1.1** as detailed in Table 3.17 of the Design Manual for Roads and Bridges (DMRB), LA 111 Noise and Vibration, Revision 2.

Table 25.1.1: Magnitude criteria for relative change due to construction road traffic

Increase in BNL of closest public road used for construction traffic (dB)	Magnitude of effect	Noise Policy Statement England (NPSE) / Planning Practice Guidance (PPG) Category
<1.0	Negligible	Lowest Observed Adverse Effect Level (LOAEL)
≥1.0 to <3.0	Minor/Low	Observed Adverse Effect (OAE)
≥3.0 to <5.0	Moderate/Medium	Significant Observed Adverse Effect Level (SOAEL)
>5.0	Major/High	Unacceptable Adverse Effect (UAE)

25.1.3 Off-Site Construction Traffic Data

3. This section outlines the traffic data provided by the Transport Consultants, displayed in **Table 25.1.2**.
4. The data were provided for a baseline year plus growth ('without DEP and SEP scenario) and baseline year plus growth plus development ('with DEP and SEP scenario) and details the total traffic flow per link, the composition of the flow with percentage heavy goods vehicle (HGVs) and speed data.
5. The assessment scenarios comprise of:
 - 2025 Factored Base; and
 - 2025 Factored Base + Peak Construction.
6. It is understood that 2025 is the earliest realistic year that construction works will start and is therefore considered the worst case year for assessment. It is anticipated that later years would have higher baseline traffic flows and therefore a lesser magnitude of effect.

7. All data are provided encapsulating the cumulative traffic for DEP and SEP in combination. During the ES stage, an assessment of both DEP and SEP in isolation will be provided.
8. An initial study was undertaken to assess whether there would be significant changes in traffic volume and composition on surrounding local roads as a result of DEP and SEP. The study identifies road links with a predicted increase in traffic volume or traffic composition of 25% or a decrease of 20%, highlighted in **Table 25.1.2**. Traffic flow variations below this level indicate a maximum change in the noise level of less than 1 dB(A) and therefore considered negligible in magnitude of effect in accordance with the criteria provided in **Table 25.1.1**.

Table 25.1.2: Peak construction road traffic data (18hr Annual Average Weekday Traffic (AAWT))

Link ID	Description	Speed (mph)	2025 Factored Base		2025 Factored Base + Peak Construction		Overall change (%)	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
1	A1078 Low Road / A148 Grimston Road	40.0	18132	904	18957	1534	4.6	69.7
2	A148 from A149 to A1065	30.0	8831	675	9656	1305	9.3	93.3
		60.0	8831	675	9258	907	4.8	34.2
3	A148 from A1065 to A1067	30.0	16566	997	16993	1229	2.6	23.2
		60.0	16566	997	16986	1229	2.5	23.2
4	A148 from A1067 to B1149	30.0	9721	518	10141	749	4.3	44.6
		60.0	9721	518	10107	693	4.0	33.9
5	A148 from B1149 to Hempstead Road	30.0	14557	507	14944	683	2.7	34.6
		40.0	14557	507	14830	583	1.9	14.9
6	A148 from Hempstead Road to Bridge Road	40.0	14557	507	14830	583	1.9	14.9
		60.0	14557	507	14808	564	1.7	11.1
7	Bridge Road	24.2	844	64	1058	94	25.4	46.9

Link ID	Description	Speed (mph)	2025 Factored Base		2025 Factored Base + Peak Construction		Overall change (%)	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
8	The Street	24.2	844	64	1049	81	24.3	26.6
9	The Street	20.0	3693	56	3898	73	5.6	30.3
		60.0	3693	56	3938	89	6.6	57.7
10	Holgate Hill / Holt Road	22.3	1298	83	1495	96	15.2	15.6
11	A149 from Weybourne to Weybourne Road	30.0	5123	285	5320	298	3.8	4.5
		60.0	5123	285	5360	321	4.6	12.8
12	Station Road / Sandy Hill Lane / Gypsies' Lane	30.1	1028	106	1244	138	21.0	30.2
13	A148 from Gypsie's Lane to B1436	30.0	15404	1297	15621	1329	1.4	2.5
		60.0	15404	1297	15676	1369	1.8	5.6
14	B1436 - Felbrigg	40.0	7436	675	7650	736	2.9	9.1
15	A140 - Roughton	43.4	6047	526	6306	587	4.3	11.7
16	A149 - North Walsham	30.0	9426	385	9685	447	2.8	16.0
		60.0	9426	385	9544	447	1.3	16.0

Link ID	Description	Speed (mph)	2025 Factored Base		2025 Factored Base + Peak Construction		Overall change (%)	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
17	A149 from B1145 to B1150	50.0	13240	597	13358	659	0.9	10.3
18	A149 from B1150 to Kidas Way	50.0	13240	597	13358	659	0.9	10.3
		60.0	13240	597	13358	659	0.9	10.3
19	A149 from Kidas Way to Honning Road	60.0	7515	390	7633	452	1.6	15.8
20	A149 from B1159 to Station Road	50.0	9840	553	9959	615	1.2	11.1
21	A149 from Station Road to A1064	30.0	11787	496	11905	557	1.0	12.4
		60.0	11787	496	11905	557	1.0	12.4
22	A149 from A1064 to Yarmouth Road	60.0	26823	725	26941	786	0.4	8.5
23	A149 from Yarmouth Road to B1141	30.0	21428	632	21546	693	0.6	9.7
24	A149 from B1141 to A47	30.0	36941	1119	37449	1576	1.4	40.8
25	A12 from A47 to Williams Adams Way	50.0	38170	1205	38604	1440	1.1	19.6
26	A12 from Williams Adams Way to B1385	40.0	27768	938	28203	1173	1.6	25.1
		50.0	27768	938	28188	1177	1.5	25.5
27	A12 from B1385 to A1117	40.0	19365	515	19785	754	2.2	46.4

Link ID	Description	Speed (mph)	2025 Factored Base		2025 Factored Base + Peak Construction		Overall change (%)	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
		50.0	19365	515	19604	754	1.2	46.4
28	A12 from A1117 to Mill Road	30.0	10311	686	10550	925	2.3	34.9
		60.0	10311	686	10550	925	2.3	34.9
29	A12 from Mill Road to B1384 / A1145 from B1384 to A146	30.0	11996	454	12235	693	2.0	52.6
		60.0	11996	454	12217	676	1.8	48.6
30	A146 from A47 to A1145	40.0	20338	887	20808	1108	2.3	24.9
31	A47 from A146 to A1042	70.0	56824	2570	57296	2791	0.8	8.6
32	A47 from A1042 to Cucumber Lane	70.0	47344	2151	47956	2547	1.3	18.4
33	A47 from Cucumber Lane to A1064	70.0	47344	2151	47945	2547	1.3	18.4
34	A47 from A1064 to A12	70.0	23684	1467	24277	1862	2.5	27.0
35	A1270 from A1151 to A47	70.0	12102	775	12513	950	3.4	22.5
36	A1151 from A1042 to A1270	30.0	17825	642	18235	816	2.3	27.1
		50.0	17825	642	17825	642	0.0	0.0
37	A149 from A1151 to B1159	50.0	14996	1392	15081	1454	0.6	4.4

Link ID	Description	Speed (mph)	2025 Factored Base		2025 Factored Base + Peak Construction		Overall change (%)	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
38	A149 from The Street to A1151	31.1	9320	1118	9405	1179	0.9	5.5
39	A149 from Honing Road to The Street	31.1	9320	1118	9405	1179	0.9	5.5
40	A1270 from B1150 to A1151	70.0	24209	1550	24632	1724	1.8	11.2
41	A1270 from A140 to B1150	70.0	24209	1550	24613	1724	1.7	11.2
42	A140 from B1149 to A1042	40.0	19913	789	20317	964	2.0	22.1
		60.0	19913	789	20216	789	1.5	0.0
43	A140 from Cawston Road to A1270	50.0	15479	644	15782	644	2.0	0.0
		60.0	15479	644	15812	762	2.2	18.3
44	A140 from B1145 to Cawston Road	50.0	16892	1515	17226	1632	2.0	7.8
		60.0	16892	1515	17200	1618	1.8	6.8
45	A140 from B1145 to Aylsham Road	60.0	12485	420	12691	420	1.7	0.0
46	A140 from Thorpe Market Road to Aylsham Road	40.0	12485	420	12691	420	1.7	0.0
		60.0	12485	420	12692	420	1.7	0.0
47	A1270 from Drayton Lane to A140	70.0	12102	775	12490	936	3.2	20.7

Link ID	Description	Speed (mph)	2025 Factored Base		2025 Factored Base + Peak Construction		Overall change (%)	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
48	Brewery Lane / B1149 from Brewrey Lane to Shorthorn Road	40.0	7188	307	7576	467	5.4	52.2
		60.0	7188	307	7415	307	3.2	0.0
49	B1149 from Buxton Road to Shorthorn Road	50.0	7188	307	7419	307	3.2	0.0
50	Buxton Road	44.3	765	109	910	124	19.0	12.9
51	B1149 from B1145 to Buxton Road	50.0	8814	656	9064	672	2.8	2.5
52	B1145 from B1149 to A140	60.0	4453	364	4625	468	3.9	28.4
53	B1145 from Old Friendship Lane to B1149	60.0	3640	341	3857	361	6.0	6.0
54	B1149 from Spink's Lane to B1145	60.0	5369	311	5765	469	7.4	50.8
55	Spink's Lane	24.0	111	10	295	10	166.3	0.0
56	B1149 from B1354 to Spink's Lane	60.0	5369	311	5738	442	6.9	42.4
57	B1354 east of B1149	35.9	5637	333	5837	349	3.6	4.8
58	Unnamed Road	39.5	1123	113	1375	180	22.4	59.8

Link ID	Description	Speed (mph)	2025 Factored Base		2025 Factored Base + Peak Construction		Overall change (%)	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
59	B1149 from A148 to B1354	60.0	4871	370	5175	470	6.2	27.0
60	Hempstead Road / The Street	23.5	1873	184	1931	203	3.1	10.5
61	Church Lane / Unnamed Road	23.7	31	5	233	22	638.8	366.2
62	Unnamed Road	38.7	1100	90	1301	107	18.3	19.1
63	Unnamed Road	38.7	1100	90	1311	117	19.2	30.1
64	Church Street / Cherry Tree Road	24.2	257	23	474	56	84.2	139.1
65	Northfield Lane	36.9	226	21	436	47	93.0	125.5
66	Plumstead Road	24.2	257	23	305	52	18.7	121.3
67	Shorttorn Road	27.8	4444	501	4632	501	4.2	0.0
68	The Street / Taverham Road	27.8	4444	501	4632	501	4.2	0.0
69	Reepham Road	38.0	2484	200	2701	233	8.7	16.4
70	Station Road	60.0	859	73	859	73	0.0	0.0
71	Reepham Road	38.0	2484	200	2701	233	8.7	16.4

Link ID	Description	Speed (mph)	2025 Factored Base		2025 Factored Base + Peak Construction		Overall change (%)	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
72	A1270 from Reepham Road to Brewrey Lane	70.0	12102	775	12350	832	2.1	7.3
73	A1270 from Fir Covert Road to Reepham Road	70.0	12102	775	12341	825	2.0	6.4
74	Fir Covert Road	35.9	4705	385	4893	385	4.0	0.0
75	Fir Covert Road	28.3	8410	443	8597	443	2.2	0.0
76	A1067 from Beech Avenue to A140	30.0	14025	405	14234	405	1.5	0.0
77	A1067 from A1270 to Fir Covert Road	32.8	6444	444	6516	444	1.1	0.0
78	A1270 from A1067 to Fir Covert Road	70.0	12102	775	12345	825	2.0	6.4
79	A1067 from Marl Hill Road to A1270	50.0	12045	770	12322	850	2.3	10.4
80	A1067 from A148 to Marl Hill Road	30.0	8229	489	8507	569	3.4	16.4
		60.0	8229	489	8480	544	3.0	11.3
81	Marl Hill Road	23.8	2696	257	2920	294	8.3	14.3
82	Ringland Lane / Morton Lane	35.2	351	39	558	63	59.3	61.0

Link ID	Description	Speed (mph)	2025 Factored Base		2025 Factored Base + Peak Construction		Overall change (%)	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
83	Church Street / Church Farm Close / Woodforde Close / Honingham Road / Paddy's Lane	23.8	2696	257	2916	288	8.2	12.3
84	The Broadway / Unnamed Road	25.5	31	2	236	23	668.7	972.5
85	Wood Lane	23.8	2696	257	2936	302	8.9	17.5
86	A47 from A1065 to Berrys Lane	70.0	17224	1692	17847	2091	3.6	23.6
87	A47 from A10 to A1065	50.0	15321	1618	15944	2016	4.1	24.7
		60.0	15321	1618	15932	2016	4.0	24.7
88	A149 from A148 to A47	40.0	27475	1987	27924	2386	1.6	20.1
89	A47 from Wood Lane to Taverham Road	70.0	27634	2364	28259	2752	2.3	16.4
90	Taverham Road	60.0	225	14	427	32	90.1	134.9
91	Blind Lane	26.9	130	36	130	36	0.0	0.0
92	Unnamed Road	36.1	708	139	708	139	0.0	0.0
93	Unnamed Road / Dereham Road	36.1	708	139	923	170	30.4	22.3

Link ID	Description	Speed (mph)	2025 Factored Base		2025 Factored Base + Peak Construction		Overall change (%)	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
94	A47 from Blind Lane to Dereham Road	70.0	27634	2364	28253	2748	2.2	16.2
95	A47 from Dereham Road to A1074	70.0	55173	3318	55788	3694	1.1	11.3
96	A1074 from A47 to A140	40.0	15763	920	15951	920	1.2	0.0
97	A47 from A1074 to B1108	70.0	55173	3318	55791	3694	1.1	11.3
98	B1108 from Landlow Lane to B1108	60.0	6774	734	6995	771	3.3	5.1
99	Bow Hill	36.2	812	62	972	74	19.7	20.2
100	A148 from Bridge Road to Gypsie's Lane	60.0	14557	507	14799	555	1.7	9.3
101	Church Road / Bow Hill	36.2	812	62	972	74	19.7	20.2
102	Unnamed Roads	19.9	224	40	434	66	94.2	67.4
103	Chapel Street	34.4	1110	106	1306	119	17.7	11.7
104	B1108 west of Bow Hill	60.0	6082	202	6290	227	3.4	12.3
105	A47 from B1108 to A11	70.0	55173	3318	55787	3689	1.1	11.2
106	B1172 from Ketteringham Lane to A47	30.0	16532	937	16767	989	1.4	5.5

Link ID	Description	Speed (mph)	2025 Factored Base		2025 Factored Base + Peak Construction		Overall change (%)	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
107	B1172 from New Road to Ketteringham Lane	30.0	16532	937	16759	989	1.4	5.5
108	New Road	30.0	3632	104	3657	129	0.7	23.7
109	Hethersett Road	41.8	813	34	838	59	3.0	72.6
110	Melton Road / High Green	41.8	813	34	1022	59	25.7	72.6
111	B1135 from Melton Road to Norwich Common	34.1	11490	983	11507	983	0.2	0.0
112	B1172 from B1135 to New Road	44.3	11890	759	12101	786	1.8	3.5
113	B1135 from B1172 to A11	28.9	20425	1295	20657	1343	1.1	3.7
114	A11 from B1135 to A47	70.0	55011	3845	55272	3893	0.5	1.2
115	Ketteringham Lane	34.7	660	51	748	51	13.3	0.0
116	Ketteringham Lane	34.7	660	51	851	58	29.0	14.1
117	Low Street	33.4	1092	75	1302	101	19.2	34.9
118	Station Lane	41.0	1923	191	2167	239	12.7	25.1

Link ID	Description	Speed (mph)	2025 Factored Base		2025 Factored Base + Peak Construction		Overall change (%)	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
119	Hethersett Road	41.0	1923	191	2141	213	11.3	11.5
120	Cantley Lane / Cantley Lane South	60.0	1229	39	1229	39	0.0	0.0
121	A11 from A47 to A140	50.0	22210	1384	22402	1384	0.9	0.0
122	A47 from A11 to A140	70.0	67972	3703	68564	4040	0.9	9.1
123	B1113 south of the A47	30.0	9501	654	10092	990	6.2	51.5
		60.0	9501	654	9716	684	2.3	4.7
124	B1113 from A47 to A140	60.0	9102	594	9317	625	2.4	5.2
125	A140 from A146 to A47	60.0	24499	1080	24822	1111	1.3	2.9
126	Aylsham Road	30.0	5369	311	5701	434	6.2	39.8
127	A140 south of the A47	40.0	23778	3087	24599	3437	3.5	11.3
128	Mangreen	60.0	339	13	1158	363	241.1	2767.3
129	A47 from A140 to A146	70.0	10413	810	10927	1031	4.9	27.3
130	Unnamed road, west of its junction with The Street	66.0	170	13	369	28	117.3	115.9

Link ID	Description	Speed (mph)	2025 Factored Base		2025 Factored Base + Peak Construction		Overall change (%)	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
131	The Street	60.0	2092	59	2302	85	10.0	44.1
132	Buxton Road / Easton Way	40.0	1040	95	1111	126	6.8	31.9
133	Porter's Lane / Hall Road	60.0	1168	273	1250	285	7.0	4.6
134	Grove Lane / Unnamed road	33.1	177	15	189	15	6.8	0.0
135	Reepham Road from its junction with Hall Road to junction with unnamed road.	33.1	177	15	189	15	6.8	0.0
136	Reepham Road from its junction with Hall Road to junction with Station Road	60.0	1168	273	1219	285	4.3	4.6
137	Unnamed Road, east of its junction with Grove Lane	40.0	1040	95	1237	109	19.0	13.9
138	Broad Lane / The Street	30.0	307	11	504	25	64.4	117.7
		60.0	307	11	513	34	67.3	197.9
139	Unnamed road	30.0	307	11	513	34	67.3	197.9
		60.0	307	11	340	11	11.0	0.0

Link ID	Description	Speed (mph)	2025 Factored Base		2025 Factored Base + Peak Construction		Overall change (%)	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
140	Unnamed Road	60.0	307	11	508	28	65.6	152.1
141	A1082 Holway Road	50.0	9540	194	9581	213	0.4	10.0
142	Clay Lane	33.1	149	15	355	38	138.5	147.5
143	Old Fakenham Road	60.0	1723	27	1761	51	2.2	87.3
144	Ringland Lane	35.2	416	38	612	50	47.1	31.0
145	Rectory Road	29.3	367	35	367	35	0.0	0.0
146	Breck Road / Unnamed Road	38.9	4071	665	4107	665	0.9	0.0
147	Breck Road / Weston Green Road	29.1	68	5	148	24	117.8	341.2
148	Weston Road	29.1	68	5	270	24	298.2	341.2
149	Unnamed road	29.1	68	5	68	5	0.0	0.0
150	Unnamed Road	29.3	367	35	408	35	11.2	0.0
151	Hall Road	41.8	686	35	776	35	13.1	0.0
152	Burdock Lane / Landlow Lane	60.0	6082	202	6288	225	3.4	11.2
153	Rectory Road / Catbridge Lane	41.0	1621	194	1739	215	7.3	11.0

Link ID	Description	Speed (mph)	2025 Factored Base		2025 Factored Base + Peak Construction		Overall change (%)	
			Total vehicles	Total HGV	Total vehicles	Total HGV	Total vehicles	Total HGV
154	Intwood Lane	41.0	1621	194	1827	215	12.7	11.0
155	Unnamed Road	29.3	367	35	367	35	0.0	0.0
156	Imingland Road / Spa Lane	25.8	31	1	229	15	647.6	1303.9
	>-20%, >+25% change in total traffic flow or composition criteria exceedance.							

25.1.4 Noise from Off-Site Construction Traffic Assessment

9. All road links to be used during the construction of DEP and SEP were assessed by undertaking of BNL calculations, provided in **Table 25.1.3**.

Table 25.1.3: Calculated BNL – 2025 Factored Baseline vs. 2025 Factored Base + Peak Construction

Link ID	Description	Speed (mph)	2025 Factored Baseline BNL (dB LA10,18hr)	2025 Factored Baseline + Peak Construction BNL (dB LA10,18hr)	Overall change (dB)	Magnitude of effect
1	A1078 Low Road / A148 Grimston Road	40.0	71.9	72.8	0.9	Negligible
2	A148 from A149 to A1065	30.0	68.1	69.8	1.7	Low
		60.0	72.2	72.7	0.5	Negligible
3	A148 from A1065 to A1067	30.0	70.4	70.8	0.4	Negligible
		60.0	74.7	75.0	0.3	Negligible
4	A148 from A1067 to B1149	30.0	67.9	68.6	0.7	Negligible
		60.0	72.2	72.7	0.5	Negligible
5	A148 from B1149 to Hempstead Road	30.0	69.1	69.5	0.4	Negligible
		40.0	70.6	70.8	0.2	Negligible
6	A148 from Hempstead Road to Bridge Road	40.0	70.6	70.8	0.2	Negligible
		60.0	73.7	73.8	0.1	Negligible
7	Bridge Road	24.2	57.3	58.6	1.3	Low
8	The Street	24.2	57.3	58.3	1.0	Low

Link ID	Description	Speed (mph)	2025 Factored Baseline BNL (dB L _{A10,18hr})	2025 Factored Baseline + Peak Construction BNL (dB L _{A10,18hr})	Overall change (dB)	Magnitude of effect
9	The Street	20.0	61.0	61.4	0.4	Negligible
		60.0	67.3	67.7	0.4	Negligible
10	Holgate Hill / Holt Road	22.3	58.7	59.3	0.6	Negligible
11	A149 from Weybourne to Weybourne Road	30.0	65.2	65.3	0.1	Negligible
		60.0	69.5	69.8	0.3	Negligible
12	Station Road / Sandy Hill Lane / Gypsies' Lane	30.1	59.4	60.4	1.0	Low
13	A148 from Gypsie's Lane to B1436	30.0	70.7	70.8	0.1	Negligible
		60.0	74.7	74.9	0.2	Negligible
14	B1436 - Felbrigg	40.0	69.0	69.2	0.2	Negligible
15	A140 - Roughton	43.4	68.5	68.8	0.3	Negligible
16	A149 - North Walsham	30.0	67.4	67.7	0.3	Negligible
		60.0	71.9	72.0	0.1	Negligible
17	A149 from B1145 to B1150	50.0	72.0	72.1	0.1	Negligible

Link ID	Description	Speed (mph)	2025 Factored Baseline BNL (dB L _{A10,18hr})	2025 Factored Baseline + Peak Construction BNL (dB L _{A10,18hr})	Overall change (dB)	Magnitude of effect
18	A149 from B1150 to Kidas Way	50.0	72.0	72.1	0.1	Negligible
		60.0	73.4	73.5	0.1	Negligible
19	A149 from Kidas Way to Honning Road	60.0	71.1	71.3	0.2	Negligible
20	A149 from B1159 to Station Road	50.0	70.9	71.1	0.2	Negligible
21	A149 from Station Road to A1064	30.0	68.4	68.6	0.2	Negligible
		60.0	72.9	73.0	0.1	Negligible
22	A149 from A1064 to Yarmouth Road	60.0	76.2	76.2	0.0	No change
23	A149 from Yarmouth Road to B1141	30.0	70.6	70.7	0.1	Negligible
24	A149 from B1141 to A47	30.0	73.0	73.4	0.4	Negligible
25	A12 from A47 to Williams Adams Way	50.0	76.3	76.5	0.2	Negligible
26	A12 from Williams Adams Way to B1385	40.0	73.4	73.7	0.3	Negligible
		50.0	75.0	75.2	0.2	Negligible
27	A12 from B1385 to A1117	40.0	71.6	72.0	0.4	Negligible
		50.0	73.2	73.5	0.3	Negligible

Link ID	Description	Speed (mph)	2025 Factored Baseline BNL (dB L _{A10,18hr})	2025 Factored Baseline + Peak Construction BNL (dB L _{A10,18hr})	Overall change (dB)	Magnitude of effect
28	A12 from A1117 to Mill Road	30.0	68.5	69.1	0.6	Negligible
		60.0	72.7	73.2	0.5	Negligible
29	A12 from Mill Road to B1384 / A1145 from B1384 to A146	30.0	68.3	69.0	0.7	Negligible
		60.0	72.9	73.3	0.4	Negligible
30	A146 from A47 to A1145	40.0	72.3	72.6	0.3	Negligible
31	A47 from A146 to A1042	70.0	81.1	81.2	0.1	Negligible
32	A47 from A1042 to Cucumber Lane	70.0	80.3	80.5	0.2	Negligible
33	A47 from Cucumber Lane to A1064	70.0	80.3	80.5	0.2	Negligible
34	A47 from A1064 to A12	70.0	77.6	77.9	0.3	Negligible
35	A1270 from A1151 to A47	70.0	74.7	75.0	0.3	Negligible
36	A1151 from A1042 to A1270	30.0	70.0	70.4	0.4	Negligible
		50.0	73.1	73.1	0.0	No change
37	A149 from A1151 to B1159	50.0	73.4	73.5	0.1	Negligible
38	A149 from The Street to A1151	31.1	69.4	69.6	0.2	Negligible

Link ID	Description	Speed (mph)	2025 Factored Baseline BNL (dB L _{A10,18hr})	2025 Factored Baseline + Peak Construction BNL (dB L _{A10,18hr})	Overall change (dB)	Magnitude of effect
39	A149 from Honing Road to The Street	31.1	69.4	69.6	0.2	Negligible
40	A1270 from B1150 to A1151	70.0	77.7	77.9	0.2	Negligible
41	A1270 from A140 to B1150	70.0	77.7	77.9	0.2	Negligible
42	A140 from B1149 to A1042	40.0	72.1	72.4	0.3	Negligible
		60.0	75.1	75.2	0.1	Negligible
43	A140 from Cawston Road to A1270	50.0	72.6	72.7	0.1	Negligible
		60.0	74.0	74.3	0.3	Negligible
44	A140 from B1145 to Cawston Road	50.0	73.9	74.1	0.2	Negligible
		60.0	75.2	75.4	0.2	Negligible
45	A140 from B1145 to Aylsham Road	60.0	73.0	73.0	0.0	No change
46	A140 from Thorpe Market Road to Aylsham Road	40.0	69.9	70.0	0.1	Negligible
		60.0	73.0	73.0	0.0	No change
47	A1270 from Drayton Lane to A140	70.0	74.7	75.0	0.3	Negligible
48		40.0	67.8	68.4	0.6	Negligible

Link ID	Description	Speed (mph)	2025 Factored Baseline BNL (dB L _{A10,18hr})	2025 Factored Baseline + Peak Construction BNL (dB L _{A10,18hr})	Overall change (dB)	Magnitude of effect
	Brewery Lane / B1149 from Brewrey Lane to Shorthorn Road	60.0	70.7	70.8	0.1	Negligible
49	B1149 from Buxton Road to Shorthorn Road	50.0	69.3	69.4	0.1	Negligible
50	Buxton Road	44.3	60.6	61.2	0.6	Negligible
51	B1149 from B1145 to Buxton Road	50.0	70.8	70.9	0.1	Negligible
52	B1145 from B1149 to A140	60.0	69.3	69.8	0.5	Negligible
53	B1145 from Old Friendship Lane to B1149	60.0	68.6	68.9	0.3	Negligible
54	B1149 from Spink's Lane to B1145	60.0	69.7	70.4	0.7	Negligible
55	Spink's Lane	24.0	48.8	51.3	2.5	Low
56	B1149 from B1354 to Spink's Lane	60.0	69.7	70.3	0.6	Negligible
57	B1354 east of B1149	35.9	66.5	66.7	0.2	Negligible
58	Unnamed Road	39.5	60.9	62.3	1.4	Low
59	B1149 from A148 to B1354	60.0	69.6	70.1	0.5	Negligible
60	Hempstead Road / The Street	23.5	61.3	61.6	0.3	Negligible

Link ID	Description	Speed (mph)	2025 Factored Baseline BNL (dB LA10,18hr)	2025 Factored Baseline + Peak Construction BNL (dB LA10,18hr)	Overall change (dB)	Magnitude of effect
61	Church Lane / Unnamed Road	23.7	44.7	52.1	7.4	High
62	Unnamed Road	38.7	60.3	61.1	0.8	Negligible
63	Unnamed Road	38.7	60.3	61.2	0.9	Negligible
64	Church Street / Cherry Tree Road	24.2	52.5	55.8	3.3	Medium
65	Northfield Lane	36.9	53.4	56.6	3.2	Medium
66	Plumstead Road	24.2	52.5	54.9	2.4	Low
67	Shorttorn Road	27.8	65.7	65.8	0.1	Negligible
68	The Street / Taverham Road	27.8	65.7	65.8	0.1	Negligible
69	Reepham Road	38.0	63.7	64.2	0.5	Negligible
70	Station Road	60.0	62.2	62.2	0.0	No change
71	Reepham Road	38.0	63.7	64.2	0.5	Negligible
72	A1270 from Reepham Road to Brewrey Lane	70.0	74.7	74.8	0.1	Negligible
73	A1270 from Fir Covert Road to Reepham Road	70.0	74.7	74.8	0.1	Negligible

Link ID	Description	Speed (mph)	2025 Factored Baseline BNL (dB LA10,18hr)	2025 Factored Baseline + Peak Construction BNL (dB LA10,18hr)	Overall change (dB)	Magnitude of effect
74	Fir Covert Road	35.9	66.2	66.3	0.1	Negligible
75	Fir Covert Road	28.3	67.0	67.1	0.1	Negligible
76	A1067 from Beech Avenue to A140	30.0	68.7	68.8	0.1	Negligible
77	A1067 from A1270 to Fir Covert Road	32.8	66.9	66.9	0.0	No change
78	A1270 from A1067 to Fir Covert Road	70.0	74.7	74.8	0.1	Negligible
79	A1067 from Marl Hill Road to A1270	50.0	71.9	72.1	0.2	Negligible
80	A1067 from A148 to Marl Hill Road	30.0	67.3	67.7	0.4	Negligible
		60.0	71.6	71.8	0.2	Negligible
81	Marl Hill Road	23.8	62.8	63.3	0.5	Negligible
82	Ringland Lane / Morton Lane	35.2	55.5	57.5	2.0	Low
83	Church Street / Church Farm Close / Woodforde Close / Honingham Road / Paddy's Lane	23.8	62.8	63.3	0.5	Negligible
84	The Broadway / Unnamed Road	25.5	42.9	52.4	9.5	High
85	Wood Lane	23.8	62.8	63.4	0.6	Negligible

Link ID	Description	Speed (mph)	2025 Factored Baseline BNL (dB L _{A10,18hr})	2025 Factored Baseline + Peak Construction BNL (dB L _{A10,18hr})	Overall change (dB)	Magnitude of effect
86	A47 from A1065 to Berrys Lane	70.0	76.7	77.1	0.4	Negligible
87	A47 from A10 to A1065	50.0	73.7	74.2	0.5	Negligible
		60.0	75.0	75.5	0.5	Negligible
88	A149 from A148 to A47	40.0	74.3	74.6	0.3	Negligible
89	A47 from Wood Lane to Taverham Road	70.0	78.6	78.8	0.2	Negligible
90	Taverham Road	60.0	56.0	59.0	3.0	Medium
91	Blind Lane	26.9	52.9	52.9	0.0	No change
92	Unnamed Road	36.1	60.0	60.0	0.0	No change
93	Unnamed Road / Dereham Road	36.1	60.0	61.0	1.0	Low
94	A47 from Blind Lane to Dereham Road	70.0	78.6	78.8	0.2	Negligible
95	A47 from Dereham Road to A1074	70.0	81.2	81.4	0.2	Negligible
96	A1074 from A47 to A140	40.0	71.5	71.6	0.1	Negligible
97	A47 from A1074 to B1108	70.0	81.2	81.4	0.2	Negligible
98	B1108 from Landlow Lane to B1108	60.0	71.5	71.7	0.2	Negligible

Link ID	Description	Speed (mph)	2025 Factored Baseline BNL (dB LA10,18hr)	2025 Factored Baseline + Peak Construction BNL (dB LA10,18hr)	Overall change (dB)	Magnitude of effect
99	Bow Hill	36.2	58.5	59.3	0.8	Negligible
100	A148 from Bridge Road to Gypsie's Lane	60.0	73.7	73.8	0.1	Negligible
101	Church Road / Bow Hill	36.2	58.5	59.3	0.8	Negligible
102	Unnamed Roads	19.9	53.7	56.1	2.4	Low
103	Chapel Street	34.4	60.1	60.7	0.6	Negligible
104	B1108 west of Bow Hill	60.0	69.8	70.0	0.2	Negligible
105	A47 from B1108 to A11	70.0	81.2	81.4	0.2	Negligible
106	B1172 from Ketteringham Lane to A47	30.0	70.3	70.4	0.1	Negligible
107	B1172 from New Road to Ketteringham Lane	30.0	70.3	70.4	0.1	Negligible
108	New Road	30.0	62.8	63.1	0.3	Negligible
109	Hethersett Road	41.8	58.5	59.3	0.8	Negligible
110	Melton Road / High Green	41.8	58.5	59.9	1.4	Low
111	B1135 from Melton Road to Norwich Common	34.1	70.0	70.0	0.0	No change

Link ID	Description	Speed (mph)	2025 Factored Baseline BNL (dB L _{A10,18hr})	2025 Factored Baseline + Peak Construction BNL (dB L _{A10,18hr})	Overall change (dB)	Magnitude of effect
112	B1172 from B1135 to New Road	44.3	71.1	71.2	0.1	Negligible
113	B1135 from B1172 to A11	28.9	71.3	71.4	0.1	Negligible
114	A11 from B1135 to A47	70.0	81.4	81.4	0.0	No change
115	Ketteringham Lane	34.7	57.5	57.8	0.3	Negligible
116	Ketteringham Lane	34.7	57.5	58.3	0.8	Negligible
117	Low Street	33.4	59.2	60.2	1.0	Low
118	Station Lane	41.0	63.4	64.1	0.7	Negligible
119	Hethersett Road	41.0	63.4	63.9	0.5	Negligible
120	Cantley Lane / Cantley Lane South	60.0	62.9	62.9	0.0	No change
121	A11 from A47 to A140	50.0	74.6	74.6	0.0	No change
122	A47 from A11 to A140	70.0	82.0	82.1	0.1	Negligible
123	B1113 south of the A47	30.0	68.2	69.2	1.0	Low
		60.0	72.4	72.5	0.1	Negligible
124	B1113 from A47 to A140	60.0	72.2	72.3	0.1	Negligible

Link ID	Description	Speed (mph)	2025 Factored Baseline BNL (dB L _{A10,18hr})	2025 Factored Baseline + Peak Construction BNL (dB L _{A10,18hr})	Overall change (dB)	Magnitude of effect
125	A140 from A146 to A47	60.0	76.1	76.2	0.1	Negligible
126	Aylsham Road	30.0	65.4	66.2	0.8	Negligible
127	A140 south of the A47	40.0	74.7	75.0	0.3	Negligible
128	Mangreen	60.0	57.4	66.1	8.7	High
129	A47 from A140 to A146	70.0	74.2	74.7	0.5	Negligible
130	Unnamed road, west of its junction with The Street	66.0	55.8	59.2	3.4	Medium
131	The Street	60.0	65.1	65.7	0.6	Negligible
132	Buxton Road / Easton Way	40.0	60.5	61.1	0.6	Negligible
133	Porter's Lane / Hall Road	60.0	65.4	65.7	0.3	Negligible
134	Grove Lane / Unnamed road	33.1	51.7	51.8	0.1	Negligible
135	Reepham Road from its junction with Hall Road to junction with unnamed road.	33.1	51.7	51.8	0.1	Negligible
136	Reepham Road from its junction with Hall Road to junction with Station Road	60.0	65.4	65.6	0.2	Negligible

Link ID	Description	Speed (mph)	2025 Factored Baseline BNL (dB LA10,18hr)	2025 Factored Baseline + Peak Construction BNL (dB LA10,18hr)	Overall change (dB)	Magnitude of effect
137	Unnamed Road, east of its junction with Grove Lane	40.0	60.5	61.1	0.6	Negligible
138	Broad Lane / The Street	30.0	52.4	54.9	2.5	Low
		60.0	56.9	59.7	2.8	Low
139	Unnamed road	30.0	52.4	55.5	3.1	Medium
		60.0	56.9	57.3	0.4	Negligible
140	Unnamed Road	60.0	56.9	59.5	2.6	Low
141	A1082 Holway Road	50.0	70.0	70.1	0.1	Negligible
142	Clay Lane	33.1	51.3	55.2	3.9	Medium
143	Old Fakenham Road	60.0	64.0	64.4	0.4	Negligible
144	Ringland Lane	35.2	55.8	57.3	1.5	Low
145	Rectory Road	29.3	54.6	54.6	0.0	No change
146	Breck Road / Unnamed Road	38.9	67.5	67.5	0.0	No change
147	Breck Road / Weston Green Road	29.1	46.9	52.0	5.1	High

Link ID	Description	Speed (mph)	2025 Factored Baseline BNL (dB L _{A10,18hr})	2025 Factored Baseline + Peak Construction BNL (dB L _{A10,18hr})	Overall change (dB)	Magnitude of effect
148	Weston Road	29.1	46.9	53.1	6.2	High
149	Unnamed road	29.1	46.9	46.9	0.0	No change
150	Unnamed Road	29.3	54.6	54.9	0.3	Negligible
151	Hall Road	41.8	58.0	58.4	0.4	Negligible
152	Burdock Lane / Landlow Lane	60.0	69.8	70.0	0.2	Negligible
153	Rectory Road / Catbridge Lane	41.0	63.0	63.4	0.4	Negligible
154	Intwood Lane	41.0	63.0	63.5	0.5	Negligible
155	Unnamed Road	29.3	54.6	54.6	0.0	No change
156	Imingland Road / Spa Lane	25.8	41.8	51.5	9.7	High

25.1.5 Summary

10. Construction road traffic noise impacts were determined by assessing the change in BNL across each identified road link associated with the construction phase.
11. Calculations considered the total number of vehicles (18hr AAWT), the percentage of HGVs and the average road speed per link.
12. **Table 25.1.4** provides a summary of the number of links defined by each magnitude of effect from the BNL calculations presented in **Table 25.1.3**. Where the predicted magnitude of effect is medium or high, link IDs is also displayed.

Table 25.1.4: Number of links per magnitude of effect criteria

Magnitude of effect	Number of links	Link ID
No change	16	N/A
Negligible	137	N/A
Low	17	N/A
Medium	6	Links 64, 65, 90, 130, 139, 142.
High	6	Links 61, 84, 128, 147, 148, 156.

25.1.6 References

Department of Transport, Welsh Office (1988) Calculation of Road Traffic Noise (CRTN). London, HMSO.
Highways England (2020). Design Manual for Roads and Bridges, Sustainability & Environment Appraisal LA111 Noise and Vibration (formerly HD213/11, IAN 185/15) Revision 2. Highways England.