



Sheringham Shoal and Dudgeon Offshore Wind Farm Extension Projects

Environmental Statement

Volume 3

Appendix 23.2 - Road Traffic Noise Assessment

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Glossary of Acronyms

AAWT	Annual Average Weekday Traffic
BNL	Basic Noise Level
DEP	Dudgeon Offshore Wind Farm Extension Project
ES	Environmental Statement
HGV	Heavy Goods Vehicle
HOW03	Hornsea Offshore Wind Farm Project 03
NSR	Noise Sensitive Receptor
NV	Norfolk Vanguard Offshore Wind Farm Project
SEP	Sheringham Shoal Offshore Wind Farm Extension Project

Glossary of Terms

Order Limits	The area subject to the application for development consent, including all permanent and temporary works for SEP and DEP.
Dudgeon Offshore Wind Farm Extension Project (DEP)	The Dudgeon Offshore Wind Farm Extension onshore and offshore sites including all onshore and offshore infrastructure.
DEP onshore site	The Dudgeon Offshore Wind Farm Extension onshore area consisting of the DEP onshore substation site, onshore cable corridor, construction compounds, temporary working areas and onshore landfall area.
Horizontal directional drilling (HDD) zones	The areas within the onshore cable route which would house HDD entry or exit points.
Jointing bays	Underground structures constructed at regular intervals along the onshore cable route to join sections of cable and facilitate installation of the cables into the buried ducts.
Landfall	The point at the coastline at which the offshore export cables are brought onshore, connecting to the onshore cables at the transition joint bay above mean high water
Onshore cable corridor	The area between the landfall and the onshore substation sites, within which the onshore cable circuits will be installed along with other temporary works for construction.
Onshore export cables	The cables which would bring electricity from the landfall to the onshore substation. 220 – 230kV.
Onshore Substation	Compound containing electrical equipment to enable connection to the National Grid.
PEIR boundary	The area subject to survey and preliminary impact assessment to inform the PEIR.
Separated Grid Option	Transmission infrastructure which allows each project to transmit electricity entirely separately.
Sheringham Shoal Offshore Wind Farm Extension Project (SEP)	The Sheringham Shoal Offshore Wind Farm Extension onshore and offshore sites including all onshore and offshore infrastructure.
SEP onshore site	The Sheringham Shoal Wind Farm Extension onshore area consisting of the SEP onshore substation site, onshore cable corridor, construction compounds, temporary working areas and onshore landfall area.



Study area	Area where potential impacts from the project could occur, as defined for each individual Environmental Impact Assessment (EIA) topic.
The Applicant	Equinor New Energy Limited

23.2 CONSTRUCTION ROAD TRAFFIC NOISE ASSESSMENT

23.2.1 Introduction

1. This appendix to the Environmental Statement (ES) 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.

23.2.2 Assessment Criteria

2. Traffic data were provided by the Transport Consultants as 18hr Annual Average Weekday Traffic (AAWT), along with speed data, Total Vehicles and percentage Heavy Goods Vehicles (HGVs).

23.2.3 Off-Site Construction Traffic Data

3. This section outlines the traffic data provided by the Transport Consultants and described in detail in ES **Chapter 24 Traffic and Transport**.
4. The data were provided for a baseline year plus growth ('without SEP and DEP scenario) and baseline year plus growth plus development ('with SEP and DEP scenario) and details the total traffic flow per link, the composition of the flow with percentage heavy goods vehicle and speed data.
5. The earliest realistic year that construction works will start is 2025. It is anticipated that later years would have higher baseline traffic flows so the calculated change in flows due to the project is maximised by assuming the earliest possible construction year. As discussed in the main ES Chapter, the calculations use the standardised methodology specified in the Calculation of Road Traffic Noise (CRTN) (Department of Transport, 1988) or the method detailed in 'A Guide to Measurement and Prediction of the Equivalent Continuous Sound Level L_{eq} , Report by a Working Party for the Technical Sub-committee of the Noise Advisory Council' (NAC, 1978). Neither of these calculation methods account for any potential changes in vehicle noise. Hence, the magnitude of effect is only dependent on the change in traffic flow, so assuming the earliest realistic construction year ensures a worst-case effect has been determined.

23.2.4 Noise from Off-Site Construction Traffic Assessment

6. Noise impacts on all road links to be used during the construction of SEP and DEP or SEP or DEP in isolation were assessed by comparing the calculated Basic Noise Level (BNL, as defined in CRTN) for the baseline traffic flows and for the Peak and Average scenarios, provided in **Table 23.2.1** to **Table 23.2.4**. Where the calculations have used the NAC method instead of CRTN, these cells are highlighted in orange.
7. Noise impacts on all road links to be used during the construction of SEP and DEP concurrently including cumulative traffic with Norfolk Vanguard Offshore Wind Farm Project (NV) and Hornsea Offshore Wind Farm Project 03 (HOW03) were assessed for the 2025 Factored Base scenario by undertaking of BNL calculations, provided in **Table 23.2.5**.

8. To determine the effect of the cumulative effects of NV and HOW03 on the shared links (63 of the 182, only) 2025 Factored Base + Peak Construction SEP/DEP concurrent versus 2025 Factored Base + Peak Construction SEP/DEP concurrent plus NV and HOW03 was calculated as a BNL, detailed in [Table 23.2.6](#).

Table 23.2.1: Calculated BNL – 2025 Factored Base versus 2025 Factored Base + Peak Construction SEP and DEP concurrent

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
1	A1078 Low Road / A148 Grimston Road	40	71.9	73.0	1.1	Low
2	A148 from A149 to A1065	30	68.1	69.1	1.0	Low
2	A148 from A149 to A1065	60	72.2	72.9	0.7	Negligible
3	A148 from A1065 to A1067	30	70.4	71.0	0.6	Negligible
3	A148 from A1065 to A1067	60	74.7	75.1	0.4	Negligible
4	A148 from A1067 to B1149	30	67.9	68.7	0.8	Negligible
4	A148 from A1067 to B1149	60	72.2	72.8	0.6	Negligible
5	A148 from B1149 to Hamstead Road	30	69.1	69.6	0.5	Negligible
5	A148 from B1149 to Hamstead Road	40	70.6	71.0	0.4	Negligible
6	A148 from Hemsetad Road to Bridge Road	40	70.6	71.0	0.4	Negligible
6	A148 from Hemsetad Road to Bridge Road	60	73.7	73.9	0.2	Negligible
7	Bridge Road	24.2	52.4	54.1	1.7	Low
8	The Street	24.2	52.4	53.7	1.3	Low
9	The Street	20	61.0	62.4	1.4	Low
9	The Street	60	67.3	68.0	0.7	Negligible
10	Holgate Hill / Holt Road	22.3	56.8	58.6	1.8	Low
11	A149 from Weybourne to Weybourne Road	30	63.5	64.5	1.0	Low



Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
11	A149 from Weybourne to Weybourne Road	60	68.5	69.2	0.7	Negligible
12	Station Road / Sandy Hill Lane / Gypsies' Lane	30.1	56.6	59.2	2.6	Low
13	A148 from Gypsie's Lane to B1436	30	69.6	70.1	0.5	Negligible
13	A148 from Gypsie's Lane to B1436	60	74.1	74.4	0.3	Negligible
14	B1436 - Felbrigg	40	69.0	69.5	0.5	Negligible
15	A140 - Roughton	43.4	68.5	69.1	0.6	Negligible
16	A149 - North Walsham	30	67.4	68.0	0.6	Negligible
16	A149 - North Walsham	60	71.9	72.3	0.4	Negligible
17	A149 from B1145 to B1150	50	72.0	72.3	0.3	Negligible
18	A149 from B1150 to Kidas Way	50	72.0	72.3	0.3	Negligible
18	A149 from B1150 to Kidas Way	60	73.4	73.7	0.3	Negligible
19	A149 from Kidas Way to Honning Road	60	71.1	71.6	0.5	Negligible
20	A149 from B1159 to Station Road	50	70.9	71.3	0.4	Negligible
21	A149 from Station Road to A1064	30	68.4	68.9	0.5	Negligible
21	A149 from Station Road to A1064	60	72.9	73.2	0.3	Negligible
22	A149 from A1064 to Yarmouth Road	60	76.2	76.3	0.1	Negligible
23	A149 from Yarmouth Road to B1141	30	70.6	70.9	0.3	Negligible
24	A149 from B1141 to A47	30	73.0	73.6	0.6	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
25	A12 from A47 to Williams Adams Way	50	76.3	76.5	0.2	Negligible
26	A12 from Williams Adams Way to B1385	40	73.4	73.7	0.3	Negligible
26	A12 from Williams Adams Way to B1385	50	75.0	75.3	0.3	Negligible
27	A12 from B1385 to A1117	40	71.6	72.1	0.5	Negligible
27	A12 from B1385 to A1117	50	73.2	73.7	0.5	Negligible
28	A12 from A1117 to Mill Road	30	68.5	69.4	0.9	Negligible
28	A12 from A1117 to Mill Road	60	72.7	73.3	0.6	Negligible
29	A12 from Mill Road to B1384 / A1145 from B1384 to A146	30	68.3	69.4	1.1	Low
29	A12 from Mill Road to B1384 / A1145 from B1384 to A146	60	72.9	73.6	0.7	Negligible
30	A146 from A47 to A1145	40	72.3	72.9	0.6	Negligible
31	A47 from A146 to A1042	70	81.1	81.3	0.2	Negligible
32	A47 from A1042 to Cucumber Lane	70	80.3	80.6	0.3	Negligible
33	A47 from Cucumber Lane to A1064	70	80.3	80.6	0.3	Negligible
34	A47 from A1064 to A12	70	77.6	78.0	0.4	Negligible
35	A1270 from A1151 to A47	70	77.7	78.0	0.3	Negligible
36	A1151 from A1042 to A1270	30	70.0	70.0	0.0	Negligible
36	A1151 from A1042 to A1270	50	73.1	73.1	0.0	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
37	A149 from A1151 to B1159	50	73.4	73.7	0.3	Negligible
38	A149 from The Street to A1151	31.1	69.4	69.8	0.4	Negligible
39	A149 from Honing Road to The Street	31.1	69.4	69.8	0.4	Negligible
40	A1270 from B1150 to A1151	70	77.7	78.0	0.3	Negligible
41	A1270 from A140 to B1150	70	77.7	78.0	0.3	Negligible
42	A140 from B1149 to A1042	40	72.1	72.2	0.1	Negligible
42	A140 from B1149 to A1042	60	75.1	75.3	0.2	Negligible
43	A140 from Cawston Road to A1270	50	72.6	73.0	0.4	Negligible
43	A140 from Cawston Road to A1270	60	74.0	74.4	0.4	Negligible
44	A140 from B1145 to Cawston Road	50	73.1	73.4	0.3	Negligible
44	A140 from B1145 to Cawston Road	60	74.5	74.8	0.3	Negligible
45	A140 from B1145 to Aylsham Road	60	73.0	73.0	0.0	Negligible
46	A140 from Thorpe Market Road to Aylsham Road	40	69.9	70.0	0.1	Negligible
46	A140 from Thorpe Market Road to Aylsham Road	60	73.0	73.1	0.1	Negligible
47	A1270 from Drayton Lane to A140	70	74.7	75.3	0.6	Negligible
48	Brewery Lane / B1149 from Brewrey Lane to Shorthorn Road	40	67.8	67.9	0.1	Negligible
48	Brewery Lane / B1149 from Brewrey Lane to Shorthorn Road	60	70.7	70.9	0.2	Negligible



Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
49	B1149 from Buxton Road to Shorthorn Road	50	69.3	69.7	0.4	Negligible
50	Buxton Road	44.3	57.8	59.1	1.3	Low
51	B1149 from B1145 to Buxton Road	50	70.8	71.1	0.3	Negligible
52	B1145 from B1149 to A140	60	69.3	70.0	0.7	Negligible
53	B1145 from Old Friendship Lane to B1149	60	67.8	68.1	0.3	Negligible
54	B1149 from Spink's Lane to B1145	60	69.7	70.7	1.0	Low
55	Spink's Lane	24	43.8	43.8	0.0	Negligible
56	B1149 from B1354 to Spink's Lane	60	69.7	70.7	1.0	Low
57	B1354 east of B1149	35.9	66.5	66.8	0.3	Negligible
58	Unnamed Road	39.5	58.5	61.9	3.4	Moderate
59	B1149 from A148 to B1354	60	69.0	69.8	0.8	Negligible
60	Hempstead Road / The Street	23.5	60.4	61.4	1.0	Low
61	Church Lane / Unnamed Road	23.7	39.3	48.9	9.6	Low
62	Unnamed Road	38.7	57.8	58.9	1.1	Low
63	Unnamed Road	38.7	57.8	58.9	1.1	Low
64	Church Street / Cherry Tree Road	24.2	47.6	51.8	4.2	Medium
65	Northfield Lane	36.9	50.2	50.6	0.4	Negligible
66	Plumstead Road	24.2	47.6	49.9	2.3	Low

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
67	Shorttorn Road	27.8	65.7	66.1	0.4	Negligible
68	The Street / Taverham Road	27.8	65.7	65.8	0.1	Negligible
69	Reepham Road	38	63.4	64.5	1.1	Low
70	Station Road	60	60.2	60.2	0.0	Negligible
71	Reepham Road	38	63.4	64.1	0.7	Negligible
72	A1270 from Reepham Road to Brewrey Lane	70	74.7	75.0	0.3	Negligible
73	A1270 from Fir Covert Road to Reepham Road	70	74.7	74.9	0.2	Negligible
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	68.7	68.8	0.1	Negligible
77	A1067 from A1270 to Fir Covert Road	32.8	66.9	66.9	0.0	Negligible
78	A1270 from A1067 to Fir Covert Road	70	74.7	74.9	0.2	Negligible
79	A1067 from Marl Hill Road to A1270	50	71.9	72.3	0.4	Negligible
80	A1067 from A148 to Marl Hill Road	30	67.3	67.9	0.6	Negligible
80	A1067 from A148 to Marl Hill Road	60	71.6	72.0	0.4	Negligible
81	Marl Hill Road	23.8	62.6	63.4	0.8	Negligible
82	Ringland Lane / Morton Lane	35.2	52.0	54.6	2.6	Low

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
83	Church Street / Church Farm Close / Woodforde Close / Honingham Road / Paddy's Lane	23.8	62.6	63.7	1.1	Low
84	The Broadway / Unnamed Road	25.5	38.2	50.7	12.5	High
85	Wood Lane	23.8	62.6	63.7	1.1	Low
86	A47 from A1065 to Berrys Lane	70	76.7	77.2	0.5	Negligible
87	A47 from A10 to A1065	50	73.7	74.3	0.6	Negligible
87	A47 from A10 to A1065	60	75.0	75.6	0.6	Negligible
88	A149 from A148 to A47	40	74.3	74.7	0.4	Negligible
89	A47 from Wood Lane to Taverham Road	70	78.6	78.9	0.3	Negligible
90	Taverham Road	60	54.0	60.2	6.2	High
91	Blind Lane	26.9	47.1	47.1	0.0	Negligible
92	Unnamed Road	36.1	56.3	56.3	0.0	Negligible
93	Unnamed Road / Dereham Road	36.1	56.3	59.0	2.7	Low
94	A47 from Blind Lane to Dereham Road	70	78.6	78.9	0.3	Negligible
95	A47 from Dereham Road to A1074	70	81.2	81.4	0.2	Negligible
96	A1074 from A47 to A140	40	71.5	71.6	0.1	Negligible
97	A47 from A1074 to B1108	70	81.2	81.4	0.2	Negligible
98	B1108 from Landlow Lane to B1108	60	71.5	71.9	0.4	Negligible
99	Bow Hill	36.2	55.4	56.7	1.3	Low

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
100	A148 from Bridge Road to Gypsie's Lane	60	73.7	73.9	0.2	Negligible
101	Church Road / Bow Hill	36.2	55.4	56.7	1.3	Low
102	Unnamed Roads	19.9	48.1	51.2	3.1	Medium
103	Chapel Street	34.4	57.6	59.5	1.9	Low
104	B1108 west of Bow Hill	60	69.8	70.3	0.5	Negligible
105	A47 from B1108 to A11	70	81.2	81.4	0.2	Negligible
106	B1172 from Ketteringham Lane to A47	30	70.3	70.5	0.2	Negligible
107	B1172 from New Road to Ketteringham Lane	30	70.3	70.5	0.2	Negligible
108	New Road	30	62.8	62.8	0.0	Negligible
109	Hethersett Road	41.8	56.1	56.1	0.0	Negligible
110	Melton Road / High Green	41.8	56.1	57.6	1.5	Low
111	B1135 from Melton Road to Norwich Common	34.1	70.0	70.1	0.1	Negligible
112	B1172 from B1135 to New Road	44.3	71.1	71.3	0.2	Negligible
113	B1135 from B1172 to A11	28.9	71.3	71.5	0.2	Negligible
114	A11 from B1135 to A47	70	81.4	81.4	0.0	Negligible
115	Ketteringham Lane	34.7	54.2	54.3	0.1	Negligible
116	Ketteringham Lane	34.7	54.2	55.8	1.6	Low
117	Low Street	33.4	56.7	58.4	1.7	Low



Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
118	Station Lane	41	62.6	64.1	1.5	Low
119	Hethersett Road	41	62.6	64.0	1.4	Low
120	Cantley Lane / Cantley Lane South	60	60.8	60.8	0.0	Negligible
121	A11 from A47 to A140	50	74.6	74.6	0.0	Negligible
122	A47 from A11 to A140	70	82.0	82.2	0.2	Negligible
123	B1113 south of the A47	30	67.2	67.4	0.2	Negligible
123	B1113 south of the A47	60	71.8	71.9	0.1	Negligible
124	B1113 from A47 to A140	60	71.8	71.9	0.1	Negligible
125	A140 from A146 to A47	60	76.1	76.2	0.1	Negligible
126	Aylsham Road	30	65.4	66.6	1.2	Low
127	A140 south of the A47	40	74.7	75.0	0.3	Negligible
128	Mangreen	60	55.4	63.2	7.8	High
129	A47 from A140 to A146	70	74.2	75.0	0.8	Negligible
130	Unnamed road, west of its junction with The Street	66	53.8	53.8	0.0	Negligible
131	The Street	60	64.5	65.2	0.7	Negligible
132	Buxton Road / Easton Way	40	57.8	60.2	2.4	Low
133	Porter's Lane / Hall Road	60	63.1	63.8	0.7	Negligible
134	Grove Lane / Unnamed road	33.1	48.1	48.1	0.0	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
135	Reepham Road from its junction with Hall Road to junction with unnamed road.	33.1	48.1	48.1	0.0	Negligible
136	Reepham Road from its junction with Hall Road to junction with Station Road	60	63.1	63.8	0.7	Negligible
137	Unnamed Road, east of its junction with Grove Lane	40	57.8	60.7	2.9	Low
138	Broad Lane / The Street	30	48.9	50.5	1.6	Low
138	Broad Lane / The Street	60	54.9	56.5	1.6	Low
139	Unnamed road	30	48.9	50.5	1.6	Low
139	Unnamed road	60	54.9	56.5	1.6	Low
140	Unnamed Road	60	54.9	54.9	0.0	Negligible
141	A1082 Holway Road	50	70.0	70.3	0.3	Negligible
142	Clay Lane	33.1	47.6	47.6	0.0	Negligible
143	Old Fakenham Road	60	62.9	64.7	1.8	Low
144	Ringland Lane	35.2	52.5	52.6	0.1	Negligible
145	Rectory Road	29.3	50.4	50.4	0.0	Negligible
146	Breck Road / Unnamed Road	38.9	67.5	67.5	0.0	Negligible
147	Breck Road / Weston Green Road	29.1	42.8	50.9	8.1	High
148	Weston Road	29.1	42.8	51.2	8.4	High
149	Unnamed road	29.1	42.8	50.5	7.7	High

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
150	Unnamed Road	29.3	50.4	50.9	0.5	Negligible
151	Hall Road	41.8	55.5	55.5	0.0	Negligible
152	Burdock Lane / Landlow Lane	60	59.8	61.4	1.6	Low
153	Rectory Road / Catbridge Lane	41	61.8	61.8	0.0	Negligible
154	Intwood Lane	60	58.9	58.9	0.0	Negligible
155	Unnamed Road	29.3	50.4	50.4	0.0	Negligible
156	Imingland Road / Spa Lane	25.8	37.6	37.6	0.0	Negligible
*	Where cells are highlighted in orange, this shows that the NAC calculation methodology has been used and the calculated level is an $L_{Aeq,18hr}$					

Table 23.2.2: Calculated BNL – 2025 Factored Base versus 2025 Factored Base + Average Construction SEP and DEP concurrent

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
1	A1078 Low Road / A148 Grimston Road	40	71.9	72.5	0.6	Negligible
2	A148 from A149 to A1065	30	68.1	68.5	0.4	Negligible
2	A148 from A149 to A1065	60	72.2	72.5	0.3	Negligible
3	A148 from A1065 to A1067	30	70.4	70.7	0.3	Negligible
3	A148 from A1065 to A1067	60	74.7	74.9	0.2	Negligible
4	A148 from A1067 to B1149	30	67.9	68.2	0.3	Negligible
4	A148 from A1067 to B1149	60	72.2	72.5	0.3	Negligible
5	A148 from B1149 to Hamstead Road	30	69.1	69.3	0.2	Negligible
5	A148 from B1149 to Hamstead Road	40	70.6	70.8	0.2	Negligible
6	A148 from Hemsetad Road to Bridge Road	40	70.6	70.7	0.1	Negligible
6	A148 from Hemsetad Road to Bridge Road	60	73.7	73.7	0.0	Negligible
7	Bridge Road	24.2	52.4	52.9	0.5	Negligible
8	The Street	24.2	52.4	52.8	0.4	Negligible
9	The Street	20	61.0	61.3	0.3	Negligible
9	The Street	60	67.3	67.5	0.2	Negligible
10	Holgate Hill / Holt Road	22.3	56.8	57.4	0.6	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
11	A149 from Weybourne to Weybourne Road	30	63.5	63.7	0.2	Negligible
11	A149 from Weybourne to Weybourne Road	60	68.5	68.7	0.2	Negligible
12	Station Road / Sandy Hill Lane / Gypsies' Lane	30.1	56.6	57.7	1.1	Low
13	A148 from Gypsie's Lane to B1436	30	69.6	69.8	0.2	Negligible
13	A148 from Gypsie's Lane to B1436	60	74.1	74.2	0.1	Negligible
14	B1436 - Felbrigg	40	69.0	69.2	0.2	Negligible
15	A140 - Roughton	43.4	68.5	68.7	0.2	Negligible
16	A149 - North Walsham	30	67.4	67.6	0.2	Negligible
16	A149 - North Walsham	60	71.9	72.0	0.1	Negligible
17	A149 from B1145 to B1150	50	72.0	72.1	0.1	Negligible
18	A149 from B1150 to Kidas Way	50	72.0	72.1	0.1	Negligible
18	A149 from B1150 to Kidas Way	60	73.4	73.5	0.1	Negligible
19	A149 from Kidas Way to Honning Road	60	71.1	71.2	0.1	Negligible
20	A149 from B1159 to Station Road	50	70.9	71.0	0.1	Negligible
21	A149 from Station Road to A1064	30	68.4	68.5	0.1	Negligible
21	A149 from Station Road to A1064	60	72.9	73.0	0.1	Negligible
22	A149 from A1064 to Yarmouth Road	60	76.2	76.2	0.0	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
23	A149 from Yarmouth Road to B1141	30	70.6	70.7	0.1	Negligible
24	A149 from B1141 to A47	30	73.0	73.3	0.3	Negligible
25	A12 from A47 to Williams Adams Way	50	76.3	76.4	0.1	Negligible
26	A12 from Williams Adams Way to B1385	40	73.4	73.5	0.1	Negligible
26	A12 from Williams Adams Way to B1385	50	75.0	75.1	0.1	Negligible
27	A12 from B1385 to A1117	40	71.6	71.9	0.3	Negligible
27	A12 from B1385 to A1117	50	73.2	73.4	0.2	Negligible
28	A12 from A1117 to Mill Road	30	68.5	68.9	0.4	Negligible
28	A12 from A1117 to Mill Road	60	72.7	73.0	0.3	Negligible
29	A12 from Mill Road to B1384 / A1145 from B1384 to A146	30	68.3	68.9	0.6	Negligible
29	A12 from Mill Road to B1384 / A1145 from B1384 to A146	60	72.9	73.2	0.3	Negligible
30	A146 from A47 to A1145	40	72.3	72.6	0.3	Negligible
31	A47 from A146 to A1042	70	81.1	81.2	0.1	Negligible
32	A47 from A1042 to Cucumber Lane	70	80.3	80.4	0.1	Negligible
33	A47 from Cucumber Lane to A1064	70	80.3	80.4	0.1	Negligible
34	A47 from A1064 to A12	70	77.6	77.8	0.2	Negligible
35	A1270 from A1151 to A47	70	77.7	77.8	0.1	Negligible
36	A1151 from A1042 to A1270	30	70.0	70.0	0.0	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
36	A1151 from A1042 to A1270	50	73.1	73.1	0.0	Negligible
37	A149 from A1151 to B1159	50	73.4	73.5	0.1	Negligible
38	A149 from The Street to A1151	31.1	69.4	69.5	0.1	Negligible
39	A149 from Honing Road to The Street	31.1	69.4	69.5	0.1	Negligible
40	A1270 from B1150 to A1151	70	77.7	77.8	0.1	Negligible
41	A1270 from A140 to B1150	70	77.7	77.8	0.1	Negligible
42	A140 from B1149 to A1042	40	72.1	72.2	0.1	Negligible
42	A140 from B1149 to A1042	60	75.1	75.2	0.1	Negligible
43	A140 from Cawston Road to A1270	50	72.6	72.7	0.1	Negligible
43	A140 from Cawston Road to A1270	60	74.0	74.2	0.2	Negligible
44	A140 from B1145 to Cawston Road	50	73.1	73.2	0.1	Negligible
44	A140 from B1145 to Cawston Road	60	74.5	74.6	0.1	Negligible
45	A140 from B1145 to Aylsham Road	60	73.0	73.0	0.0	Negligible
46	A140 from Thorpe Market Road to Aylsham Road	40	69.9	70.0	0.1	Negligible
46	A140 from Thorpe Market Road to Aylsham Road	60	73.0	73.0	0.0	Negligible
47	A1270 from Drayton Lane to A140	70	74.7	75.0	0.3	Negligible
48	Brewery Lane / B1149 from Brewrey Lane to Shorthorn Road	40	67.8	67.9	0.1	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
48	Brewery Lane / B1149 from Brewrey Lane to Shorthorn Road	60	70.7	70.8	0.1	Negligible
49	B1149 from Buxton Road to Shorthorn Road	50	69.3	69.5	0.2	Negligible
50	Buxton Road	44.3	57.8	58.2	0.4	Negligible
51	B1149 from B1145 to Buxton Road	50	70.8	71.0	0.2	Negligible
52	B1145 from B1149 to A140	60	69.3	69.6	0.3	Negligible
53	B1145 from Old Friendship Lane to B1149	60	67.8	67.9	0.1	Negligible
54	B1149 from Spink's Lane to B1145	60	69.7	70.2	0.5	Negligible
55	Spink's Lane	24	43.8	43.8	0.0	Negligible
56	B1149 from B1354 to Spink's Lane	60	69.7	70.2	0.5	Negligible
57	B1354 east of B1149	35.9	66.5	66.6	0.1	Negligible
58	Unnamed Road	39.5	58.5	60.0	1.5	Low
59	B1149 from A148 to B1354	60	69.0	69.3	0.3	Negligible
60	Hempstead Road / The Street	23.5	60.4	60.8	0.4	Negligible
61	Church Lane / Unnamed Road	23.7	39.3	44.6	5.3	High
62	Unnamed Road	38.7	57.8	58.2	0.4	Negligible
63	Unnamed Road	38.7	57.8	58.2	0.4	Negligible
64	Church Street / Cherry Tree Road	24.2	47.6	49.5	1.9	Low

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
65	Northfield Lane	36.9	50.2	50.6	0.4	Negligible
66	Plumstead Road	24.2	47.6	48.5	0.9	Negligible
67	Shorttorn Road	27.8	65.7	65.8	0.1	Negligible
68	The Street / Taverham Road	27.8	65.7	65.7	0.0	Negligible
69	Reepham Road	38	63.4	63.8	0.4	Negligible
70	Station Road	60	60.2	60.2	0.0	Negligible
71	Reepham Road	38	63.4	63.6	0.2	Negligible
72	A1270 from Reepham Road to Brewrey Lane	70	74.7	74.8	0.1	Negligible
73	A1270 from Fir Covert Road to Reepham Road	70	74.7	74.8	0.1	Negligible
74	Fir Covert Road	35.9	66.2	66.3	0.1	Negligible
75	Fir Covert Road	28.3	67.0	67.0	0.0	Negligible
76	A1067 from Beech Avenue to A140	30	68.7	68.7	0.0	Negligible
77	A1067 from A1270 to Fir Covert Road	32.8	66.9	66.9	0.0	Negligible
78	A1270 from A1067 to Fir Covert Road	70	74.7	74.8	0.1	Negligible
79	A1067 from Marl Hill Road to A1270	50	71.9	72.1	0.2	Negligible
80	A1067 from A148 to Marl Hill Road	30	67.3	67.6	0.3	Negligible
80	A1067 from A148 to Marl Hill Road	60	71.6	71.8	0.2	Negligible
81	Marl Hill Road	23.8	62.6	62.8	0.2	Negligible



Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
82	Ringland Lane / Morton Lane	35.2	52.0	52.9	0.9	Negligible
83	Church Street / Church Farm Close / Woodforde Close / Honingham Road / Paddy's Lane	23.8	62.6	62.9	0.3	Negligible
84	The Broadway / Unnamed Road	25.5	38.2	45.3	7.1	High
85	Wood Lane	23.8	62.6	62.9	0.3	Negligible
86	A47 from A1065 to Berrys Lane	70	76.7	77.0	0.3	Negligible
87	A47 from A10 to A1065	50	73.7	74.1	0.4	Negligible
87	A47 from A10 to A1065	60	75.0	75.3	0.3	Negligible
88	A149 from A148 to A47	40	74.3	74.5	0.2	Negligible
89	A47 from Wood Lane to Taverham Road	70	78.6	78.8	0.2	Negligible
90	Taverham Road	60	54.0	56.3	2.3	Low
91	Blind Lane	26.9	47.1	47.1	0.0	Negligible
92	Unnamed Road	36.1	56.3	56.3	0.0	Negligible
93	Unnamed Road / Dereham Road	36.1	56.3	57.4	1.1	Low
94	A47 from Blind Lane to Dereham Road	70	78.6	78.8	0.2	Negligible
95	A47 from Dereham Road to A1074	70	81.2	81.3	0.1	Negligible
96	A1074 from A47 to A140	40	71.5	71.6	0.1	Negligible
97	A47 from A1074 to B1108	70	81.2	81.3	0.1	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
98	B1108 from Landlow Lane to B1108	60	71.5	71.6	0.1	Negligible
99	Bow Hill	36.2	55.4	55.8	0.4	Negligible
100	A148 from Bridge Road to Gypsie's Lane	60	73.7	73.7	0.0	Negligible
101	Church Road / Bow Hill	36.2	55.4	55.8	0.4	Negligible
102	Unnamed Roads	19.9	48.1	49.3	1.2	Low
103	Chapel Street	34.4	57.6	58.2	0.6	Negligible
104	B1108 west of Bow Hill	60	69.8	70.0	0.2	Negligible
105	A47 from B1108 to A11	70	81.2	81.3	0.1	Negligible
106	B1172 from Ketteringham Lane to A47	30	70.3	70.4	0.1	Negligible
107	B1172 from New Road to Ketteringham Lane	30	70.3	70.4	0.1	Negligible
108	New Road	30	62.8	62.8	0.0	Negligible
109	Hethersett Road	41.8	56.1	56.1	0.0	Negligible
110	Melton Road / High Green	41.8	56.1	56.5	0.4	Negligible
111	B1135 from Melton Road to Norwich Common	34.1	70.0	70.0	0.0	Negligible
112	B1172 from B1135 to New Road	44.3	71.1	71.1	0.0	Negligible
113	B1135 from B1172 to A11	28.9	71.3	71.3	0.0	Negligible
114	A11 from B1135 to A47	70	81.4	81.4	0.0	Negligible
115	Ketteringham Lane	34.7	54.2	54.2	0.0	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
116	Ketteringham Lane	34.7	54.2	54.7	0.5	Negligible
117	Low Street	33.4	56.7	57.3	0.6	Negligible
118	Station Lane	41	62.6	63.4	0.8	Negligible
119	Hethersett Road	41	62.6	63.2	0.6	Negligible
120	Cantley Lane / Cantley Lane South	60	60.8	60.8	0.0	Negligible
121	A11 from A47 to A140	50	74.6	74.6	0.0	Negligible
122	A47 from A11 to A140	70	82.0	82.1	0.1	Negligible
123	B1113 south of the A47	30	67.2	67.3	0.1	Negligible
123	B1113 south of the A47	60	71.8	71.8	0.0	Negligible
124	B1113 from A47 to A140	60	71.8	71.8	0.0	Negligible
125	A140 from A146 to A47	60	76.1	76.1	0.0	Negligible
126	Aylsham Road	30	65.4	66.0	0.6	Negligible
127	A140 south of the A47	40	74.7	74.9	0.2	Negligible
128	Mangreen	60	55.4	62.4	7.0	High
129	A47 from A140 to A146	70	74.2	74.6	0.4	Negligible
130	Unnamed road, west of its junction with The Street	66	53.8	53.8	0.0	Negligible
131	The Street	60	64.5	64.6	0.1	Negligible
132	Buxton Road / Easton Way	40	57.8	58.7	0.9	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
133	Porter's Lane / Hall Road	60	63.1	63.4	0.3	Negligible
134	Grove Lane / Unnamed road	33.1	48.1	48.1	0.0	Negligible
135	Reepham Road from its junction with Hall Road to junction with unnamed road.	33.1	48.1	48.1	0.0	Negligible
136	Reepham Road from its junction with Hall Road to junction with Station Road	60	63.1	63.4	0.3	Negligible
137	Unnamed Road, east of its junction with Grove Lane	40	57.8	59.2	1.4	Low
138	Broad Lane / The Street	30	48.9	50.0	1.1	Low
138	Broad Lane / The Street	60	54.9	56.0	1.1	Low
139	Unnamed road	30	48.9	50.0	1.1	Low
139	Unnamed road	60	54.9	56.0	1.1	Low
140	Unnamed Road	60	54.9	54.9	0.0	Negligible
141	A1082 Holway Road	50	70.0	70.1	0.1	Negligible
142	Clay Lane	33.1	47.6	47.6	0.0	Negligible
143	Old Fakenham Road	60	62.9	64.3	1.4	Low
144	Ringland Lane	35.2	52.5	52.5	0.0	Negligible
145	Rectory Road	29.3	50.4	50.4	0.0	Negligible
146	Breck Road / Unnamed Road	38.9	67.5	67.5	0.0	Negligible
147	Breck Road / Weston Green Road	29.1	42.8	46.7	3.9	Medium

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Concurrent BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
148	Weston Road	29.1	42.8	47.0	4.2	Medium
149	Unnamed road	29.1	42.8	46.3	3.5	Medium
150	Unnamed Road	29.3	50.4	50.6	0.2	Negligible
151	Hall Road	41.8	55.5	55.5	0.0	Negligible
152	Burdock Lane / Landlow Lane	60	59.8	60.3	0.5	Negligible
153	Rectory Road / Catbridge Lane	41	61.8	61.8	0.0	Negligible
154	Intwood Lane	60	58.9	58.9	0.0	Negligible
155	Unnamed Road	29.3	50.4	50.4	0.0	Negligible
156	Imingland Road / Spa Lane	25.8	37.6	37.6	0.0	Negligible
*	Where cells are highlighted in orange, this shows that the NAC calculation methodology has been used and the calculated level is an $L_{Aeq,18hr}$					

Table 23.2.3: Calculated BNL – 2025 Factored Base versus 2025 Factored Base + Peak Construction Isolation (SEP or DEP Isolation)

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
1	A1078 Low Road / A148 Grimston Road	40	71.9	72.8	0.9	Negligible
2	A148 from A149 to A1065	30	68.1	68.9	0.8	Negligible
2	A148 from A149 to A1065	60	72.2	72.8	0.6	Negligible
3	A148 from A1065 to A1067	30	70.4	70.9	0.5	Negligible
3	A148 from A1065 to A1067	60	74.7	75.0	0.3	Negligible
4	A148 from A1067 to B1149	30	67.9	68.6	0.7	Negligible
4	A148 from A1067 to B1149	60	72.2	72.8	0.6	Negligible
5	A148 from B1149 to Hamstead Road	30	69.1	69.5	0.4	Negligible
5	A148 from B1149 to Hamstead Road	40	70.6	70.9	0.3	Negligible
6	A148 from Hemsetad Road to Bridge Road	40	70.6	70.9	0.3	Negligible
6	A148 from Hemsetad Road to Bridge Road	60	73.7	73.9	0.2	Negligible
7	Bridge Road	24.2	52.4	53.9	1.5	Low
8	The Street	24.2	52.4	53.6	1.2	Low
9	The Street	20	61.0	61.9	0.9	Negligible
9	The Street	60	67.3	67.8	0.5	Negligible
10	Holgate Hill / Holt Road	22.3	56.8	58.5	1.7	Low
11	A149 from Weybourne to Weybourne Road	30	63.5	64.1	0.6	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
11	A149 from Weybourne to Weybourne Road	60	68.5	69.0	0.5	Negligible
12	Station Road / Sandy Hill Lane / Gypsies' Lane	30.1	56.6	58.9	2.3	Low
13	A148 from Gypsie's Lane to B1436	30	69.6	70.0	0.4	Negligible
13	A148 from Gypsie's Lane to B1436	60	74.1	74.3	0.2	Negligible
14	B1436 - Felbrigg	40	69.0	69.4	0.4	Negligible
15	A140 - Roughton	43.4	68.5	69.0	0.5	Negligible
16	A149 - North Walsham	30	67.4	67.9	0.5	Negligible
16	A149 - North Walsham	60	71.9	72.2	0.3	Negligible
17	A149 from B1145 to B1150	50	72.0	72.2	0.2	Negligible
18	A149 from B1150 to Kidas Way	50	72.0	72.2	0.2	Negligible
18	A149 from B1150 to Kidas Way	60	73.4	73.6	0.2	Negligible
19	A149 from Kidas Way to Honning Road	60	71.1	71.5	0.4	Negligible
20	A149 from B1159 to Station Road	50	70.9	71.2	0.3	Negligible
21	A149 from Station Road to A1064	30	68.4	68.8	0.4	Negligible
21	A149 from Station Road to A1064	60	72.9	73.1	0.2	Negligible
22	A149 from A1064 to Yarmouth Road	60	76.2	76.3	0.1	Negligible
23	A149 from Yarmouth Road to B1141	30	70.6	70.8	0.2	Negligible
24	A149 from B1141 to A47	30	73.0	73.5	0.5	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
25	A12 from A47 to Williams Adams Way	50	76.3	76.5	0.2	Negligible
26	A12 from Williams Adams Way to B1385	40	73.4	73.7	0.3	Negligible
26	A12 from Williams Adams Way to B1385	50	75.0	75.2	0.2	Negligible
27	A12 from B1385 to A1117	40	71.6	72.0	0.4	Negligible
27	A12 from B1385 to A1117	50	73.2	73.6	0.4	Negligible
28	A12 from A1117 to Mill Road	30	68.5	69.2	0.7	Negligible
28	A12 from A1117 to Mill Road	60	72.7	73.2	0.5	Negligible
29	A12 from Mill Road to B1384 / A1145 from B1384 to A146	30	68.3	69.2	0.9	Negligible
29	A12 from Mill Road to B1384 / A1145 from B1384 to A146	60	72.9	73.4	0.5	Negligible
30	A146 from A47 to A1145	40	72.3	72.8	0.5	Negligible
31	A47 from A146 to A1042	70	81.1	81.2	0.1	Negligible
32	A47 from A1042 to Cucumber Lane	70	80.3	80.5	0.2	Negligible
33	A47 from Cucumber Lane to A1064	70	80.3	80.5	0.2	Negligible
34	A47 from A1064 to A12	70	77.6	77.9	0.3	Negligible
35	A1270 from A1151 to A47	70	77.7	77.9	0.2	Negligible
36	A1151 from A1042 to A1270	30	70.0	70.0	0.0	Negligible
36	A1151 from A1042 to A1270	50	73.1	73.1	0.0	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
37	A149 from A1151 to B1159	50	73.4	73.6	0.2	Negligible
38	A149 from The Street to A1151	31.1	69.4	69.7	0.3	Negligible
39	A149 from Honing Road to The Street	31.1	69.4	69.7	0.3	Negligible
40	A1270 from B1150 to A1151	70	77.7	77.9	0.2	Negligible
41	A1270 from A140 to B1150	70	77.7	77.9	0.2	Negligible
42	A140 from B1149 to A1042	40	72.1	72.2	0.1	Negligible
42	A140 from B1149 to A1042	60	75.1	75.2	0.1	Negligible
43	A140 from Cawston Road to A1270	50	72.6	73.0	0.4	Negligible
43	A140 from Cawston Road to A1270	60	74.0	74.4	0.4	Negligible
44	A140 from B1145 to Cawston Road	50	73.1	73.4	0.3	Negligible
44	A140 from B1145 to Cawston Road	60	74.5	74.8	0.3	Negligible
45	A140 from B1145 to Aylsham Road	60	73.0	73.0	0.0	Negligible
46	A140 from Thorpe Market Road to Aylsham Road	40	69.9	70.0	0.1	Negligible
46	A140 from Thorpe Market Road to Aylsham Road	60	73.0	73.1	0.1	Negligible
47	A1270 from Drayton Lane to A140	70	74.7	75.2	0.5	Negligible
48	Brewery Lane / B1149 from Brewrey Lane to Shorthorn Road	40	67.8	67.9	0.1	Negligible
48	Brewery Lane / B1149 from Brewrey Lane to Shorthorn Road	60	70.7	70.9	0.2	Negligible



Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
49	B1149 from Buxton Road to Shorthorn Road	50	69.3	69.7	0.4	Negligible
50	Buxton Road	44.3	57.8	59.1	1.3	Low
51	B1149 from B1145 to Buxton Road	50	70.8	71.1	0.3	Negligible
52	B1145 from B1149 to A140	60	69.3	70.0	0.7	Negligible
53	B1145 from Old Friendship Lane to B1149	60	67.8	68.1	0.3	Negligible
54	B1149 from Spink's Lane to B1145	60	69.7	70.7	1.0	Low
55	Spink's Lane	24	43.8	43.8	0.0	Negligible
56	B1149 from B1354 to Spink's Lane	60	69.7	70.7	1.0	Low
57	B1354 east of B1149	35.9	66.5	66.7	0.2	Negligible
58	Unnamed Road	39.5	58.5	61.7	3.2	Medium
59	B1149 from A148 to B1354	60	69.0	69.9	0.9	Negligible
60	Hempstead Road / The Street	23.5	60.4	61.3	0.9	Negligible
61	Church Lane / Unnamed Road	23.7	39.3	48.8	9.5	High
62	Unnamed Road	38.7	57.8	58.8	1.0	High
63	Unnamed Road	38.7	57.8	58.9	1.1	Min Low or
64	Church Street / Cherry Tree Road	24.2	47.6	51.7	4.1	Medium
65	Northfield Lane	36.9	50.2	50.6	0.4	Negligible
66	Plumstead Road	24.2	47.6	49.8	2.2	Low

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
67	Shorttorn Road	27.8	65.7	66.1	0.4	Negligible
68	The Street / Taverham Road	27.8	65.7	65.8	0.1	Negligible
69	Reepham Road	38	63.4	64.4	1.0	Low
70	Station Road	60	60.2	60.2	0.0	Negligible
71	Reepham Road	38	63.4	63.9	0.5	Negligible
72	A1270 from Reepham Road to Brewrey Lane	70	74.7	74.9	0.2	Negligible
73	A1270 from Fir Covert Road to Reepham Road	70	74.7	74.9	0.2	Negligible
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	68.7	68.8	0.1	Negligible
77	A1067 from A1270 to Fir Covert Road	32.8	66.9	66.9	0.0	Negligible
78	A1270 from A1067 to Fir Covert Road	70	74.7	74.9	0.2	Negligible
79	A1067 from Marl Hill Road to A1270	50	71.9	72.3	0.4	Negligible
80	A1067 from A148 to Marl Hill Road	30	67.3	67.8	0.5	Negligible
80	A1067 from A148 to Marl Hill Road	60	71.6	72.0	0.4	Negligible
81	Marl Hill Road	23.8	62.6	63.2	0.6	Negligible
82	Ringland Lane / Morton Lane	35.2	52.0	54.3	2.3	Low



Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
83	Church Street / Church Farm Close / Woodforde Close / Honingham Road / Paddy's Lane	23.8	62.6	63.3	0.7	Negligible
84	The Broadway / Unnamed Road	25.5	38.2	49.1	10.9	High
85	Wood Lane	23.8	62.6	63.4	0.8	Negligible
86	A47 from A1065 to Berrys Lane	70	76.7	77.1	0.4	Negligible
87	A47 from A10 to A1065	50	73.7	74.2	0.5	Negligible
87	A47 from A10 to A1065	60	75.0	75.5	0.5	Negligible
88	A149 from A148 to A47	40	74.3	74.6	0.3	Negligible
89	A47 from Wood Lane to Taverham Road	70	78.6	78.8	0.2	Negligible
90	Taverham Road	60	54.0	58.4	4.4	Medium
91	Blind Lane	26.9	47.1	47.1	0.0	Negligible
92	Unnamed Road	36.1	56.3	56.3	0.0	Negligible
93	Unnamed Road / Dereham Road	36.1	56.3	58.8	2.5	Low
94	A47 from Blind Lane to Dereham Road	70	78.6	78.8	0.2	Negligible
95	A47 from Dereham Road to A1074	70	81.2	81.4	0.2	Negligible
96	A1074 from A47 to A140	40	71.5	71.6	0.1	Negligible
97	A47 from A1074 to B1108	70	81.2	81.3	0.1	Negligible
98	B1108 from Landlow Lane to B1108	60	71.5	71.8	0.3	Negligible
99	Bow Hill	36.2	55.4	56.6	1.2	Low

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
100	A148 from Bridge Road to Gypsie's Lane	60	73.7	73.9	0.2	Negligible
101	Church Road / Bow Hill	36.2	55.4	56.6	1.2	Low
102	Unnamed Roads	19.9	48.1	51.4	3.3	Medium
103	Chapel Street	34.4	57.6	59.4	1.8	Low
104	B1108 west of Bow Hill	60	69.8	70.2	0.4	Negligible
105	A47 from B1108 to A11	70	81.2	81.4	0.2	Negligible
106	B1172 from Ketteringham Lane to A47	30	70.3	70.4	0.1	Negligible
107	B1172 from New Road to Ketteringham Lane	30	70.3	70.4	0.1	Negligible
108	New Road	30	62.8	62.8	0.0	Negligible
109	Hethersett Road	41.8	56.1	56.1	0.0	Negligible
110	Melton Road / High Green	41.8	56.1	57.5	1.4	Low
111	B1135 from Melton Road to Norwich Common	34.1	70.0	70.1	0.1	Negligible
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	81.4	81.4	0.0	Negligible
115	Ketteringham Lane	34.7	54.2	54.2	0.0	Negligible
116	Ketteringham Lane	34.7	54.2	55.8	1.6	Low
117	Low Street	33.4	56.7	58.4	1.7	Low



Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
118	Station Lane	41	62.6	63.9	1.3	Low
119	Hethersett Road	41	62.6	63.9	1.3	Low
120	Cantley Lane / Cantley Lane South	60	60.8	60.8	0.0	Negligible
121	A11 from A47 to A140	50	74.6	74.6	0.0	Negligible
122	A47 from A11 to A140	70	82.0	82.2	0.2	Negligible
123	B1113 south of the A47	30	67.2	67.5	0.3	Negligible
123	B1113 south of the A47	60	71.8	72.0	0.2	Negligible
124	B1113 from A47 to A140	60	71.8	72.0	0.2	Negligible
125	A140 from A146 to A47	60	76.1	76.2	0.1	Negligible
126	Aylsham Road	30	65.4	66.7	1.3	Low
127	A140 south of the A47	40	74.7	74.9	0.2	Negligible
128	Mangreen	60	55.4	61.7	6.3	High
129	A47 from A140 to A146	70	74.2	74.8	0.6	Negligible
130	Unnamed road, west of its junction with The Street	66	53.8	53.8	0.0	Negligible
131	The Street	60	64.5	65.1	0.6	Negligible
132	Buxton Road / Easton Way	40	57.8	60.4	2.6	Low
133	Porter's Lane / Hall Road	60	63.1	63.8	0.7	Negligible
134	Grove Lane / Unnamed road	33.1	48.1	48.1	0.0	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
135	Reepham Road from its junction with Hall Road to junction with unnamed road.	33.1	48.1	48.1	0.0	Negligible
136	Reepham Road from its junction with Hall Road to junction with Station Road	60	63.1	63.8	0.7	Negligible
137	Unnamed Road, east of its junction with Grove Lane	40	57.8	60.8	3.0	Moderate
138	Broad Lane / The Street	30	48.9	50.1	1.2	Low
138	Broad Lane / The Street	60	54.9	56.1	1.2	Low
139	Unnamed road	30	48.9	50.1	1.2	Low
139	Unnamed road	60	54.9	56.1	1.2	Low
140	Unnamed Road	60	54.9	54.9	0.0	Negligible
141	A1082 Holway Road	50	70.0	70.2	0.2	Negligible
142	Clay Lane	33.1	47.6	47.6	0.0	Negligible
143	Old Fakenham Road	60	62.9	64.6	1.7	Low
144	Ringland Lane	35.2	52.5	52.5	0.0	Negligible
145	Rectory Road	29.3	50.4	50.4	0.0	Negligible
146	Breck Road / Unnamed Road	38.9	67.5	67.5	0.0	Negligible
147	Breck Road / Weston Green Road	29.1	42.8	50.1	7.3	High
148	Weston Road	29.1	42.8	50.4	7.6	High
149	Unnamed road	29.1	42.8	49.8	7.0	High

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
150	Unnamed Road	29.3	50.4	50.8	0.4	Negligible
151	Hall Road	41.8	55.5	55.5	0.0	Negligible
152	Burdock Lane / Landlow Lane	60	59.8	61.4	1.6	Low
153	Rectory Road / Catbridge Lane	41	61.8	61.8	0.0	Negligible
154	Intwood Lane	60	58.9	58.9	0.0	Negligible
155	Unnamed Road	29.3	50.4	50.4	0.0	Negligible
156	Imingland Road / Spa Lane	25.8	37.6	37.6	0.0	Negligible
*	Where cells are highlighted in orange, this shows that the NAC calculation methodology has been used and the calculated level is an $L_{Aeq,18hr}$					

Table 23.2.4: Calculated BNL – 2025 Factored Base versus 2025 Factored Base + Average Construction SEP or DEP Isolation

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
1	A1078 Low Road / A148 Grimston Road	40	71.9	72.4	0.5	Negligible
2	A148 from A149 to A1065	30	68.1	68.5	0.4	Negligible
2	A148 from A149 to A1065	60	72.2	72.5	0.3	Negligible
3	A148 from A1065 to A1067	30	70.4	70.7	0.3	Negligible
3	A148 from A1065 to A1067	60	74.7	74.8	0.1	Negligible
4	A148 from A1067 to B1149	30	67.9	68.2	0.3	Negligible
4	A148 from A1067 to B1149	60	72.2	72.5	0.3	Negligible
5	A148 from B1149 to Hamstead Road	30	69.1	69.2	0.1	Negligible
5	A148 from B1149 to Hamstead Road	40	70.6	70.8	0.2	Negligible
6	A148 from Hemsetad Road to Bridge Road	40	70.6	70.7	0.1	Negligible
6	A148 from Hemsetad Road to Bridge Road	60	73.7	73.7	0.0	Negligible
7	Bridge Road	24.2	52.4	52.9	0.5	Negligible
8	The Street	24.2	52.4	52.8	0.4	Negligible
9	The Street	20	61.0	61.3	0.3	Negligible
9	The Street	60	67.3	67.5	0.2	Negligible
10	Holgate Hill / Holt Road	22.3	56.8	57.4	0.6	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
11	A149 from Weybourne to Weybourne Road	30	63.5	63.7	0.2	Negligible
11	A149 from Weybourne to Weybourne Road	60	68.5	68.7	0.2	Negligible
12	Station Road / Sandy Hill Lane / Gypsies' Lane	30.1	56.6	57.5	0.9	Negligible
13	A148 from Gypsie's Lane to B1436	30	69.6	69.8	0.2	Negligible
13	A148 from Gypsie's Lane to B1436	60	74.1	74.2	0.1	Negligible
14	B1436 - Felbrigg	40	69.0	69.2	0.2	Negligible
15	A140 - Roughton	43.4	68.5	68.7	0.2	Negligible
16	A149 - North Walsham	30	67.4	67.6	0.2	Negligible
16	A149 - North Walsham	60	71.9	72.0	0.1	Negligible
17	A149 from B1145 to B1150	50	72.0	72.1	0.1	Negligible
18	A149 from B1150 to Kidas Way	50	72.0	72.1	0.1	Negligible
18	A149 from B1150 to Kidas Way	60	73.4	73.5	0.1	Negligible
19	A149 from Kidas Way to Honning Road	60	71.1	71.2	0.1	Negligible
20	A149 from B1159 to Station Road	50	70.9	71.0	0.1	Negligible
21	A149 from Station Road to A1064	30	68.4	68.5	0.1	Negligible
21	A149 from Station Road to A1064	60	72.9	73.0	0.1	Negligible
22	A149 from A1064 to Yarmouth Road	60	76.2	76.2	0.0	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
23	A149 from Yarmouth Road to B1141	30	70.6	70.7	0.1	Negligible
24	A149 from B1141 to A47	30	73.0	73.2	0.2	Negligible
25	A12 from A47 to Williams Adams Way	50	76.3	76.4	0.1	Negligible
26	A12 from Williams Adams Way to B1385	40	73.4	73.5	0.1	Negligible
26	A12 from Williams Adams Way to B1385	50	75.0	75.1	0.1	Negligible
27	A12 from B1385 to A1117	40	71.6	71.8	0.2	Negligible
27	A12 from B1385 to A1117	50	73.2	73.4	0.2	Negligible
28	A12 from A1117 to Mill Road	30	68.5	68.9	0.4	Negligible
28	A12 from A1117 to Mill Road	60	72.7	73.0	0.3	Negligible
29	A12 from Mill Road to B1384 / A1145 from B1384 to A146	30	68.3	68.7	0.4	Negligible
29	A12 from Mill Road to B1384 / A1145 from B1384 to A146	60	72.9	73.1	0.2	Negligible
30	A146 from A47 to A1145	40	72.3	72.5	0.2	Negligible
31	A47 from A146 to A1042	70	81.1	81.2	0.1	Negligible
32	A47 from A1042 to Cucumber Lane	70	80.3	80.4	0.1	Negligible
33	A47 from Cucumber Lane to A1064	70	80.3	80.4	0.1	Negligible
34	A47 from A1064 to A12	70	77.6	77.8	0.2	Negligible
35	A1270 from A1151 to A47	70	77.7	77.8	0.1	Negligible
36	A1151 from A1042 to A1270	30	70.0	70.0	0.0	Negligible



Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
36	A1151 from A1042 to A1270	50	73.1	73.1	0.0	Negligible
37	A149 from A1151 to B1159	50	73.4	73.5	0.1	Negligible
38	A149 from The Street to A1151	31.1	69.4	69.5	0.1	Negligible
39	A149 from Honing Road to The Street	31.1	69.4	69.5	0.1	Negligible
40	A1270 from B1150 to A1151	70	77.7	77.8	0.1	Negligible
41	A1270 from A140 to B1150	70	77.7	77.8	0.1	Negligible
42	A140 from B1149 to A1042	40	72.1	72.2	0.1	Negligible
42	A140 from B1149 to A1042	60	75.1	75.2	0.1	Negligible
43	A140 from Cawston Road to A1270	50	72.6	72.7	0.1	Negligible
43	A140 from Cawston Road to A1270	60	74.0	74.2	0.2	Negligible
44	A140 from B1145 to Cawston Road	50	73.1	73.2	0.1	Negligible
44	A140 from B1145 to Cawston Road	60	74.5	74.6	0.1	Negligible
45	A140 from B1145 to Aylsham Road	60	73.0	73.0	0.0	Negligible
46	A140 from Thorpe Market Road to Aylsham Road	40	69.9	70.0	0.1	Negligible
46	A140 from Thorpe Market Road to Aylsham Road	60	73.0	73.0	0.0	Negligible
47	A1270 from Drayton Lane to A140	70	74.7	74.9	0.2	Negligible
48	Brewery Lane / B1149 from Brewrey Lane to Shorthorn Road	40	67.8	67.8	0.0	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
48	Brewery Lane / B1149 from Brewery Lane to Shorthorn Road	60	70.7	70.8	0.1	Negligible
49	B1149 from Buxton Road to Shorthorn Road	50	69.3	69.5	0.2	Negligible
50	Buxton Road	44.3	57.8	58.2	0.4	Negligible
51	B1149 from B1145 to Buxton Road	50	70.8	70.9	0.1	Negligible
52	B1145 from B1149 to A140	60	69.3	69.6	0.3	Negligible
53	B1145 from Old Friendship Lane to B1149	60	67.8	67.9	0.1	Negligible
54	B1149 from Spink's Lane to B1145	60	69.7	70.2	0.5	Negligible
55	Spink's Lane	24	43.8	43.8	0.0	Negligible
56	B1149 from B1354 to Spink's Lane	60	69.7	70.1	0.4	Negligible
57	B1354 east of B1149	35.9	66.5	66.6	0.1	Negligible
58	Unnamed Road	39.5	58.5	60.0	1.5	Low
59	B1149 from A148 to B1354	60	69.0	69.3	0.3	Negligible
60	Hempstead Road / The Street	23.5	60.4	60.8	0.4	Negligible
61	Church Lane / Unnamed Road	23.7	39.3	44.5	5.2	High
62	Unnamed Road	38.7	57.8	58.1	0.3	Negligible
63	Unnamed Road	38.7	57.8	58.2	0.4	Negligible
64	Church Street / Cherry Tree Road	24.2	47.6	49.5	1.9	Low

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
65	Northfield Lane	36.9	50.2	50.6	0.4	Negligible
66	Plumstead Road	24.2	47.6	48.5	0.9	Negligible
67	Shorttorn Road	27.8	65.7	65.8	0.1	Negligible
68	The Street / Taverham Road	27.8	65.7	65.7	0.0	Negligible
69	Reepham Road	38	63.4	63.7	0.3	Negligible
70	Station Road	60	60.2	60.2	0.0	Negligible
71	Reepham Road	38	63.4	63.6	0.2	Negligible
72	A1270 from Reepham Road to Brewrey Lane	70	74.7	74.8	0.1	Negligible
73	A1270 from Fir Covert Road to Reepham Road	70	74.7	74.8	0.1	Negligible
74	Fir Covert Road	35.9	66.2	66.3	0.1	Negligible
75	Fir Covert Road	28.3	67.0	67.0	0.0	Negligible
76	A1067 from Beech Avenue to A140	30	68.7	68.7	0.0	Negligible
77	A1067 from A1270 to Fir Covert Road	32.8	66.9	66.9	0.0	Negligible
78	A1270 from A1067 to Fir Covert Road	70	74.7	74.8	0.1	Negligible
79	A1067 from Marl Hill Road to A1270	50	71.9	72.1	0.2	Negligible
80	A1067 from A148 to Marl Hill Road	30	67.3	67.6	0.3	Negligible
80	A1067 from A148 to Marl Hill Road	60	71.6	71.8	0.2	Negligible
81	Marl Hill Road	23.8	62.6	62.8	0.2	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
82	Ringland Lane / Morton Lane	35.2	52.0	52.8	0.8	Negligible
83	Church Street / Church Farm Close / Woodforde Close / Honingham Road / Paddy's Lane	23.8	62.6	62.9	0.3	Negligible
84	The Broadway / Unnamed Road	25.5	38.2	45.1	6.9	High
85	Wood Lane	23.8	62.6	62.9	0.3	Negligible
86	A47 from A1065 to Berrys Lane	70	76.7	76.9	0.2	Negligible
87	A47 from A10 to A1065	50	73.7	74.0	0.3	Negligible
87	A47 from A10 to A1065	60	75.0	75.3	0.3	Negligible
88	A149 from A148 to A47	40	74.3	74.4	0.1	Negligible
89	A47 from Wood Lane to Taverham Road	70	78.6	78.7	0.1	Negligible
90	Taverham Road	60	54.0	56.3	2.3	Low
91	Blind Lane	26.9	47.1	47.1	0.0	Negligible
92	Unnamed Road	36.1	56.3	56.3	0.0	Negligible
93	Unnamed Road / Dereham Road	36.1	56.3	57.4	1.1	Low
94	A47 from Blind Lane to Dereham Road	70	78.6	78.7	0.1	Negligible
95	A47 from Dereham Road to A1074	70	81.2	81.3	0.1	Negligible
96	A1074 from A47 to A140	40	71.5	71.6	0.1	Negligible
97	A47 from A1074 to B1108	70	81.2	81.3	0.1	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
98	B1108 from Landlow Lane to B1108	60	71.5	71.7	0.2	Negligible
99	Bow Hill	36.2	55.4	55.8	0.4	Negligible
100	A148 from Bridge Road to Gypsie's Lane	60	73.7	73.7	0.0	Negligible
101	Church Road / Bow Hill	36.2	55.4	55.8	0.4	Negligible
102	Unnamed Roads	19.9	48.1	49.3	1.2	Low
103	Chapel Street	34.4	57.6	58.3	0.7	Negligible
104	B1108 west of Bow Hill	60	69.8	70.0	0.2	Negligible
105	A47 from B1108 to A11	70	81.2	81.3	0.1	Negligible
106	B1172 from Ketteringham Lane to A47	30	70.3	70.4	0.1	Negligible
107	B1172 from New Road to Ketteringham Lane	30	70.3	70.4	0.1	Negligible
108	New Road	30	62.8	62.8	0.0	Negligible
109	Hethersett Road	41.8	56.1	56.1	0.0	Negligible
110	Melton Road / High Green	41.8	56.1	56.5	0.4	Negligible
111	B1135 from Melton Road to Norwich Common	34.1	70.0	70.0	0.0	Negligible
112	B1172 from B1135 to New Road	44.3	71.1	71.1	0.0	Negligible
113	B1135 from B1172 to A11	28.9	71.3	71.4	0.1	Negligible
114	A11 from B1135 to A47	70	81.4	81.4	0.0	Negligible
115	Ketteringham Lane	34.7	54.2	54.2	0.0	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
116	Ketteringham Lane	34.7	54.2	54.8	0.6	Negligible
117	Low Street	33.4	56.7	57.3	0.6	Negligible
118	Station Lane	41	62.6	63.4	0.8	Negligible
119	Hethersett Road	41	62.6	63.3	0.7	Negligible
120	Cantley Lane / Cantley Lane South	60	60.8	60.8	0.0	Negligible
121	A11 from A47 to A140	50	74.6	74.6	0.0	Negligible
122	A47 from A11 to A140	70	82.0	82.1	0.1	Negligible
123	B1113 south of the A47	30	67.2	67.3	0.1	Negligible
123	B1113 south of the A47	60	71.8	71.8	0.0	Negligible
124	B1113 from A47 to A140	60	71.8	71.8	0.0	Negligible
125	A140 from A146 to A47	60	76.1	76.1	0.0	Negligible
126	Aylsham Road	30	65.4	66.0	0.6	Negligible
127	A140 south of the A47	40	74.7	74.9	0.2	Negligible
128	Mangreen	60	55.4	60.7	5.3	High
129	A47 from A140 to A146	70	74.2	74.5	0.3	Negligible
130	Unnamed road, west of its junction with The Street	66	53.8	53.8	0.0	Negligible
131	The Street	60	64.5	64.6	0.1	Negligible
132	Buxton Road / Easton Way	40	57.8	58.5	0.7	Negligible



Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
133	Porter's Lane / Hall Road	60	63.1	63.4	0.3	Negligible
134	Grove Lane / Unnamed road	33.1	48.1	48.1	0.0	Negligible
135	Reepham Road from its junction with Hall Road to junction with unnamed road.	33.1	48.1	48.1	0.0	Negligible
136	Reepham Road from its junction with Hall Road to junction with Station Road	60	63.1	63.4	0.3	Negligible
137	Unnamed Road, east of its junction with Grove Lane	40	57.8	58.9	1.1	Low
138	Broad Lane / The Street	30	48.9	49.5	0.6	Negligible
138	Broad Lane / The Street	60	54.9	55.6	0.7	Negligible
139	Unnamed road	30	48.9	49.5	0.6	Negligible
139	Unnamed road	60	54.9	55.6	0.7	Negligible
140	Unnamed Road	60	54.9	54.9	0.0	Negligible
141	A1082 Holway Road	50	70.0	70.1	0.1	Negligible
142	Clay Lane	33.1	47.6	47.6	0.0	Negligible
143	Old Fakenham Road	60	62.9	64.3	1.4	Low
144	Ringland Lane	35.2	52.5	52.5	0.0	Negligible
145	Rectory Road	29.3	50.4	50.4	0.0	Negligible
146	Breck Road / Unnamed Road	38.9	67.5	67.5	0.0	Negligible
147	Breck Road / Weston Green Road	29.1	42.8	46.5	3.7	Medium

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Average Construction Isolation BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
148	Weston Road	29.1	42.8	46.9	4.1	Medium
149	Unnamed road	29.1	42.8	46.2	3.4	Medium
150	Unnamed Road	29.3	50.4	50.6	0.2	Negligible
151	Hall Road	41.8	55.5	55.5	0.0	Negligible
152	Burdock Lane / Landlow Lane	60	59.8	60.4	0.6	Negligible
153	Rectory Road / Catbridge Lane	41	61.8	61.8	0.0	Negligible
154	Intwood Lane	60	58.9	58.9	0.0	Negligible
155	Unnamed Road	29.3	50.4	50.4	0.0	Negligible
156	Imingland Road / Spa Lane	25.8	37.6	37.6	0.0	Negligible
*	Where cells are highlighted in orange, this shows that the NAC calculation methodology has been used and the calculated level is an $L_{Aeq,18hr}$					

Table 23.2.5: Calculated BNL – 2025 Factored Base versus 2025 Factored Base + Peak Construction SEP and DEP concurrent including NV and HOW03 Cumulative

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent + NV + HOW03 Cumulative BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
2	A148 from A149 to A1065	30	69.1	70.6	1.5	Low
2	A148 from A149 to A1065	60	72.9	74.1	1.2	Low
3	A148 from A1065 to A1067	30	71.0	72.0	1.0	Low
3	A148 from A1065 to A1067	60	75.1	75.8	0.7	Negligible
4	A148 from A1067 to B1149	30	68.7	70.1	1.4	Low
4	A148 from A1067 to B1149	60	72.8	73.8	1.0	Low
5	A148 from B1149 to Hamstead Road	30	69.6	70.6	1.0	Low
5	A148 from B1149 to Hamstead Road	40	71.0	72.0	1.0	Low
6	A148 from Hemsetad Road to Bridge Road	40	71.0	71.9	0.9	Negligible
6	A148 from Hemsetad Road to Bridge Road	60	73.9	74.7	0.8	Negligible
13	A148 from Gypsie's Lane to B1436	30	70.1	71.1	1.0	Low
13	A148 from Gypsie's Lane to B1436	60	74.4	75.1	0.7	Negligible
14	B1436 - Felbrigg	40	69.5	71.0	1.5	Low
15	A140 - Roughton	43.4	69.1	70.1	1.0	Low
16	A149 - North Walsham	30	68.0	68.9	0.9	Negligible
16	A149 - North Walsham	60	72.3	72.9	0.6	Negligible



Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent + NV + HOW03 Cumulative BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
17	A149 from B1145 to B1150	50	72.3	72.7	0.4	Negligible
18	A149 from B1150 to Kidas Way	50	72.3	72.7	0.4	Negligible
18	A149 from B1150 to Kidas Way	60	73.7	74.1	0.4	Negligible
19	A149 from Kidas Way to Honning Road	60	71.6	72.2	0.6	Negligible
20	A149 from B1159 to Station Road	50	71.3	71.9	0.6	Negligible
21	A149 from Station Road to A1064	30	68.9	69.6	0.7	Negligible
21	A149 from Station Road to A1064	60	73.2	73.7	0.5	Negligible
22	A149 from A1064 to Yarmouth Road	60	76.3	76.5	0.2	Negligible
23	A149 from Yarmouth Road to B1141	30	70.9	71.3	0.4	Negligible
24	A149 from B1141 to A47	30	73.6	74.3	0.7	Negligible
25	A12 from A47 to Williams Adams Way	50	76.5	77.0	0.5	Negligible
26	A12 from Williams Adams Way to B1385	40	73.7	74.4	0.7	Negligible
26	A12 from Williams Adams Way to B1385	50	75.3	75.8	0.5	Negligible
28	A12 from A1117 to Mill Road	30	69.4	70.8	1.4	Low
28	A12 from A1117 to Mill Road	60	73.3	74.4	1.1	Low
29	A12 from Mill Road to B1384 / A1145 from B1384 to A146	30	69.4	70.0	0.6	Negligible
29	A12 from Mill Road to B1384 / A1145 from B1384 to A146	60	73.6	74.0	0.4	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent + NV + HOW03 Cumulative BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
30	A146 from A47 to A1145	40	72.9	73.3	0.4	Negligible
34	A47 from A1064 to A12	70	78.0	78.5	0.5	Negligible
35	A1270 from A1151 to A47	70	78.0	78.5	0.5	Negligible
37	A149 from A1151 to B1159	50	73.7	74.0	0.3	Negligible
38	A149 from The Street to A1151	31.1	69.8	70.3	0.5	Negligible
39	A149 from Honing Road to The Street	31.1	69.8	70.3	0.5	Negligible
40	A1270 from B1150 to A1151	70	78.0	78.5	0.5	Negligible
41	A1270 from A140 to B1150	70	78.0	78.5	0.5	Negligible
45	A140 from B1145 to Aylsham Road	60	73.0	73.7	0.7	Negligible
46	A140 from Thorpe Market Road to Aylsham Road	40	70.0	70.9	0.9	Negligible
46	A140 from Thorpe Market Road to Aylsham Road	60	73.1	73.8	0.7	Negligible
47	A1270 from Drayton Lane to A140	70	75.3	75.9	0.6	Negligible
48	Brewery Lane / B1149 from Brewrey Lane to Shorthorn Road	40	67.9	68.8	0.9	Negligible
48	Brewery Lane / B1149 from Brewrey Lane to Shorthorn Road	60	70.9	71.7	0.8	Negligible
49	B1149 from Buxton Road to Shorthorn Road	50	69.7	70.5	0.8	Negligible
51	B1149 from B1145 to Buxton Road	50	71.1	71.6	0.5	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent + NV + HOW03 Cumulative BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
52	B1145 from B1149 to A140	60	70.0	71.1	1.1	Low
53	B1145 from Old Friendship Lane to B1149	60	68.1	69.6	1.5	Low
54	B1149 from Spink's Lane to B1145	60	70.7	71.4	0.7	Negligible
57	B1354 east of B1149	35.9	66.8	67.1	0.3	Negligible
59	B1149 from A148 to B1354	60	69.8	70.9	1.1	Low
72	A1270 from Reepham Road to Brewrey Lane	70	75.0	75.6	0.6	Negligible
73	A1270 from Fir Covert Road to Reepham Road	70	74.9	75.6	0.7	Negligible
77	A1067 from A1270 to Fir Covert Road	32.8	66.9	68.6	1.7	Low
78	A1270 from A1067 to Fir Covert Road	70	74.9	75.6	0.7	Negligible
79	A1067 from Marl Hill Road to A1270	50	72.3	73.1	0.8	Negligible
80	A1067 from A148 to Marl Hill Road	30	67.9	69.3	1.4	Low
80	A1067 from A148 to Marl Hill Road	60	72.0	73.1	1.1	Low
100	A148 from Bridge Road to Gypsie's Lane	60	73.9	74.7	0.8	Negligible
131	The Street	60	65.2	67.3	2.1	Low
*	Where cells are highlighted in orange, this shows that the NAC calculation methodology has been used and the calculated level is an $L_{Aeq,18hr}$					

Table 23.2.6: Calculated BNL – 2025 Factored Base + Peak Construction SEP and DEP concurrent versus 2025 Factored Base + Peak Construction SEP and DEP concurrent including NV and HOW03 Cumulative

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent + NV + HOW03 Cumulative BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
2	A148 from A149 to A1065	30	69.1	70.6	1.5	Low
2	A148 from A149 to A1065	60	72.9	74.1	1.2	Low
3	A148 from A1065 to A1067	30	71.0	72.0	1.0	Low
3	A148 from A1065 to A1067	60	75.1	75.8	0.7	Negligible
4	A148 from A1067 to B1149	30	68.7	70.1	1.4	Low
4	A148 from A1067 to B1149	60	72.8	73.8	1.0	Low
5	A148 from B1149 to Hamstead Road	30	69.6	70.6	1.0	Low
5	A148 from B1149 to Hamstead Road	40	71.0	72.0	1.0	Low
6	A148 from Hemsetad Road to Bridge Road	40	71.0	71.9	0.9	Negligible
6	A148 from Hemsetad Road to Bridge Road	60	73.9	74.7	0.8	Negligible
13	A148 from Gypsie's Lane to B1436	30	70.1	71.1	1.0	Low
13	A148 from Gypsie's Lane to B1436	60	74.4	75.1	0.7	Negligible
14	B1436 - Felbrigg	40	69.5	71.0	1.5	Low
15	A140 - Roughton	43.4	69.1	70.1	1.0	Low
16	A149 - North Walsham	30	68.0	68.9	0.9	Negligible
16	A149 - North Walsham	60	72.3	72.9	0.6	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent + NV + HOW03 Cumulative BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
17	A149 from B1145 to B1150	50	72.3	72.7	0.4	Negligible
18	A149 from B1150 to Kidas Way	50	72.3	72.7	0.4	Negligible
18	A149 from B1150 to Kidas Way	60	73.7	74.1	0.4	Negligible
19	A149 from Kidas Way to Honning Road	60	71.6	72.2	0.6	Negligible
20	A149 from B1159 to Station Road	50	71.3	71.9	0.6	Negligible
21	A149 from Station Road to A1064	30	68.9	69.6	0.7	Negligible
21	A149 from Station Road to A1064	60	73.2	73.7	0.5	Negligible
22	A149 from A1064 to Yarmouth Road	60	76.3	76.5	0.2	Negligible
23	A149 from Yarmouth Road to B1141	30	70.9	71.3	0.4	Negligible
24	A149 from B1141 to A47	30	73.6	74.3	0.7	Negligible
25	A12 from A47 to Williams Adams Way	50	76.5	77.0	0.5	Negligible
26	A12 from Williams Adams Way to B1385	40	73.7	74.4	0.7	Negligible
26	A12 from Williams Adams Way to B1385	50	75.3	75.8	0.5	Negligible
28	A12 from A1117 to Mill Road	30	69.4	70.8	1.4	Low
28	A12 from A1117 to Mill Road	60	73.3	74.4	1.1	Low
29	A12 from Mill Road to B1384 / A1145 from B1384 to A146	30	69.4	70.0	0.6	Negligible
29	A12 from Mill Road to B1384 / A1145 from B1384 to A146	60	73.6	74.0	0.4	Negligible



Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent + NV + HOW03 Cumulative BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
30	A146 from A47 to A1145	40	72.9	73.3	0.4	Negligible
34	A47 from A1064 to A12	70	78.0	78.5	0.5	Negligible
35	A1270 from A1151 to A47	70	78.0	78.5	0.5	Negligible
37	A149 from A1151 to B1159	50	73.7	74.0	0.3	Negligible
38	A149 from The Street to A1151	31.1	69.8	70.3	0.5	Negligible
39	A149 from Honing Road to The Street	31.1	69.8	70.3	0.5	Negligible
40	A1270 from B1150 to A1151	70	78.0	78.5	0.5	Negligible
41	A1270 from A140 to B1150	70	78.0	78.5	0.5	Negligible
45	A140 from B1145 to Aylsham Road	60	73.0	73.7	0.7	Negligible
46	A140 from Thorpe Market Road to Aylsham Road	40	70.0	70.9	0.9	Negligible
46	A140 from Thorpe Market Road to Aylsham Road	60	73.1	73.8	0.7	Negligible
47	A1270 from Drayton Lane to A140	70	75.3	75.9	0.6	Negligible
48	Brewery Lane / B1149 from Brewrey Lane to Shorthorn Road	40	67.9	68.8	0.9	Negligible
48	Brewery Lane / B1149 from Brewrey Lane to Shorthorn Road	60	70.9	71.7	0.8	Negligible
49	B1149 from Buxton Road to Shorthorn Road	50	69.7	70.5	0.8	Negligible
51	B1149 from B1145 to Buxton Road	50	71.1	71.6	0.5	Negligible

Link ID	Description	Speed (mph)	2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Peak Construction Concurrent + NV + HOW03 Cumulative BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
52	B1145 from B1149 to A140	60	70.0	71.1	1.1	Low
53	B1145 from Old Friendship Lane to B1149	60	68.1	69.6	1.5	Low
54	B1149 from Spink's Lane to B1145	60	70.7	71.4	0.7	Negligible
57	B1354 east of B1149	35.9	66.8	67.1	0.3	Negligible
59	B1149 from A148 to B1354	60	69.8	70.9	1.1	Low
72	A1270 from Reepham Road to Brewrey Lane	70	75.0	75.6	0.6	Negligible
73	A1270 from Fir Covert Road to Reepham Road	70	74.9	75.6	0.7	Negligible
77	A1067 from A1270 to Fir Covert Road	32.8	66.9	68.6	1.7	Low
78	A1270 from A1067 to Fir Covert Road	70	74.9	75.6	0.7	Negligible
79	A1067 from Marl Hill Road to A1270	50	72.3	73.1	0.8	Negligible
80	A1067 from A148 to Marl Hill Road	30	67.9	69.3	1.4	Low
80	A1067 from A148 to Marl Hill Road	60	72.0	73.1	1.1	Low
100	A148 from Bridge Road to Gypsie's Lane	60	73.9	74.7	0.8	Negligible
131	The Street	60	65.2	67.3	2.1	Low
*	Where cells are highlighted in orange, this shows that the NAC calculation methodology has been used and the calculated level is an $L_{Aeq,18hr}$					

9. According to **Table 23.2.1**, there is the potential for medium magnitude effects to occur on links 58, 64, 90, 102 and 137, and high magnitude effects at links 61, 84, 128, 147, 148 and 149, due to the peak SEP or DEP in isolation traffic flows. To provide further context on the potential impacts, the closest receptor has been identified to these links and the road traffic noise level has been calculated for comparison with the LOAEL and SOAEL values stated in **Table 23-13** of the ES Noise and Vibration chapter. The calculation results are shown in **Table 23.2.7** and **Table 23.2.8**.

Table 23.2.7: Calculated road traffic noise levels, peak traffic, SEP or DEP in isolation

Link ID	Receptor distance (m)	Calculated daytime road traffic noise level (dB $L_{Aeq,T}$)	Road traffic noise level corrected for uncertainty (dB $L_{Aeq,T}$)	Comparison with LOAEL and SOAELs
58	3	62	65	> SOAEL
61	4	51	54	> LOAEL and <SOAEL
64	2	55	58	> LOAEL and <SOAEL
84	11.5	49	52	> LOAEL and <SOAEL
90	2	62	65	> SOAEL
102	1	55	58	> LOAEL and <SOAEL
137	10	63	66	> SOAEL
147	1	54	57	> LOAEL and <SOAEL
148	2	54	57	> LOAEL and <SOAEL
149	7	51	54	> LOAEL and <SOAEL

Table 23.2.8: Calculated road traffic noise levels, peak traffic, SEP and DEP concurrent

Link ID	Receptor distance (m)	Calculated daytime road traffic noise level (dB $L_{Aeq,T}$)	Road traffic noise level corrected for uncertainty (dB $L_{Aeq,T}$)	Comparison with LOAEL and SOAELs
58	3	63	66	> SOAEL
61	4	51	54	> LOAEL and <SOAEL
64	2	55	58	> LOAEL and <SOAEL
84	11.5	50	53	> LOAEL and <SOAEL
90	2	63	66	> SOAEL
102	1	55	58	> LOAEL and <SOAEL
147	1	55	58	> LOAEL and <SOAEL
148	2	54	57	> LOAEL and <SOAEL
149	7	51	54	> LOAEL and <SOAEL

10. For those links on which the calculated road traffic noise levels exceed the SOAEL, further analysis has been undertaken. The maximum HGV flows which could be introduced onto these links, without causing a change in the road traffic noise level of 3dB, has been identified, as shown in

11. **Table** 23.2.9. In the calculations for links 58 and 90, the number of light vehicles has not been changed from the provided traffic data. For link 137, the number of allowable HGVs was observed to be very low in comparison to the forecast flow. Hence, an alternative maximum construction traffic flow has been identified which includes a reduction in the forecast HGVs and LCVs. If this change is less than 3dB, the magnitude effect is no worse than low.

Table 23.2.9: Calculated maximum HGVs associated with construction of SEP and DEP to avoid flows to avoid road traffic noise level with significant effects

Link ID	Peak forecast construction traffic, SEP or DEP in isolation		Peak forecast construction HGVs, SEP and DEP concurrent		Maximum allowed construction traffic to avoid a moderate adverse effect		2025 Factored Base BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	2025 Factored Base + Maximum Construction Flows BNL (CRTN dB $L_{A10,18hr}$) (NAC dB $L_{Aeq,18hr}$)*	Overall change (dB)	Magnitude of effect
	HGVs	LCVs	HGVs	LCVs	HGVs	LCVs				
58	156	132	148	224	110	224	59.1	62.0	2.9	Low
90	75	86	137	144	120	144	57.8	60.6	2.8	Low
137	127	114	115	138	24	138	54.0	56.9	2.9	Low
					37	70		56.9		

12. To inform this assessment, the Transport Consultants have provided graphs of likely HGVs movements over time for those links on which a potentially significant impact has been identified, as shown in **Figure 23.2.1** to **Figure 23.3.3**.

Figure 23.2.1 Number of HGV movements on Link 58 due to SEP and SEP concurrent (worst-case scenario)

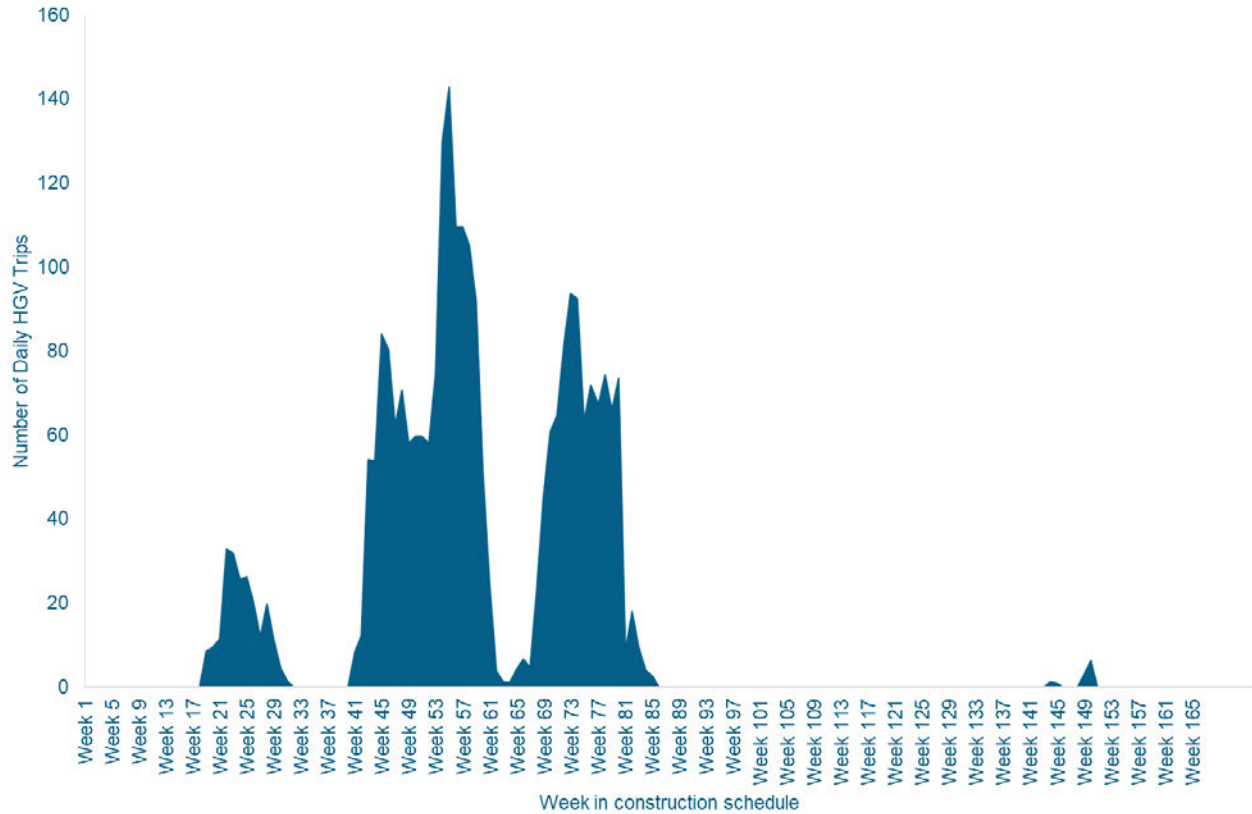


Figure 23.2.2 Number of HGV movements on Link 90 due to SEP or SEP concurrent (worst-case scenario)

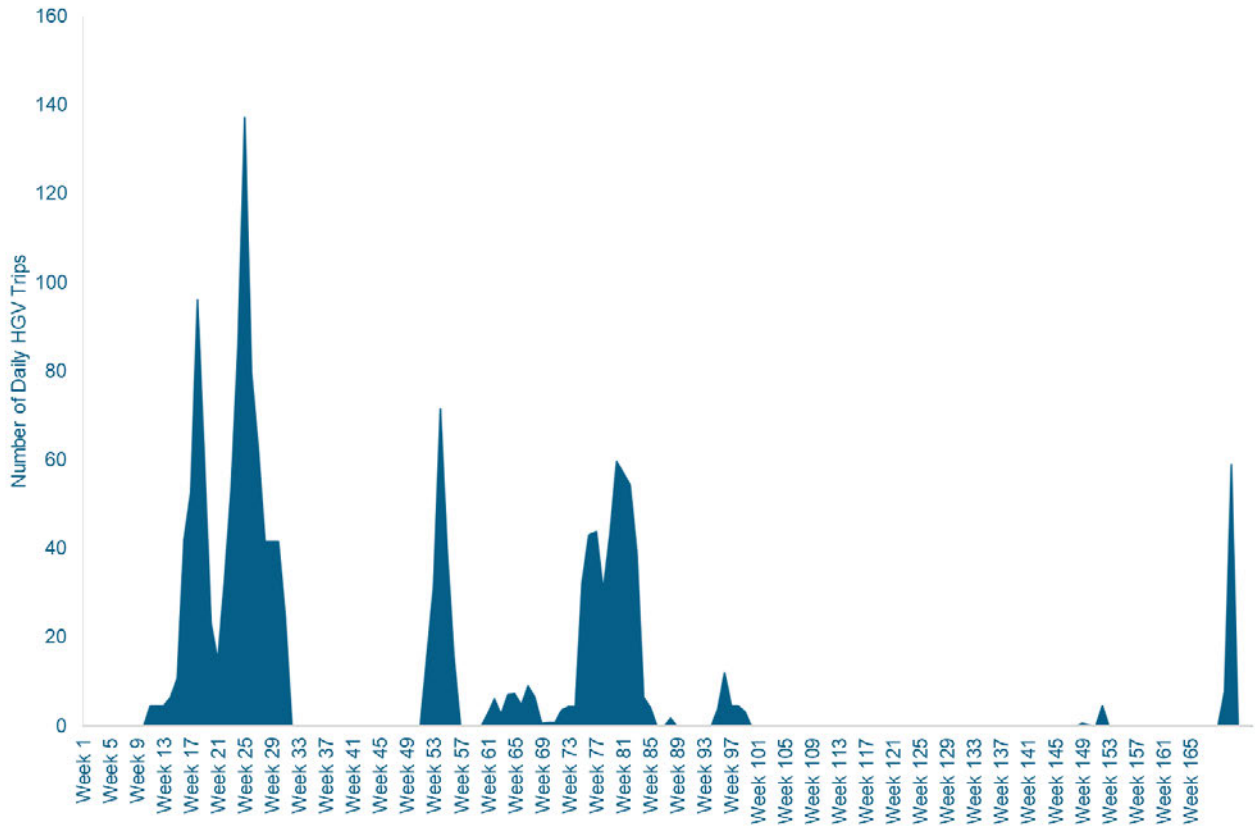
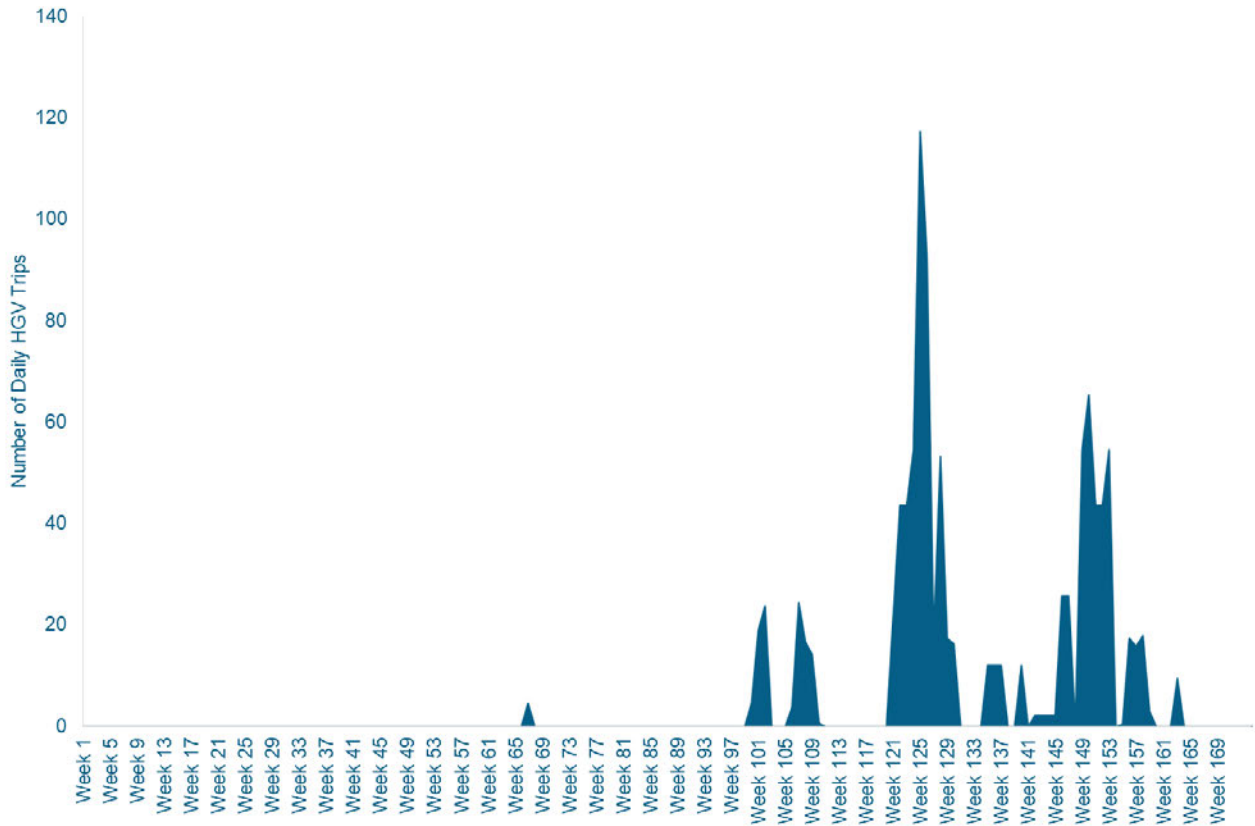


Figure 23.3.3 Number of HGV movements on Link 137 due to SEP or SEP in isolation (worst-case scenario)



- The flows shown in **Figure 23.2.1** have been compared with the maximum allowable construction-related HGVs on link 58 (110) shown in



14. **Table 23.2.9.** Analysis of the weekly flow data on this link shows that the number of construction-related HGVs associated with SEP and DEP concurrent will be more than 110 for 2 weeks in the entire construction schedule. Similarly, for link 90, SEP and DEP construction HGV flows are only anticipated to exceed the maximum (120) for 1 week. On link 137, SEP or DEP in isolation HGV flows are anticipated to exceed the maximum (24) for 19 weeks.

23.2.5 Summary

15. Construction road traffic noise impacts were determined by assessing the change in BNL across each identified road link associated with the Peak and Average construction traffic flows for the SEP and DEP concurrent and SEP or DEP in isolation scenarios.
16. Calculations considered the total number of vehicles (18hr AAWT), the percentage of HGVs and the average road speed per link.
17. **Table 23.2.10** to **Table 23.2.15** provide a summary of the number of links defined by each magnitude of effect from the BNL calculations presented in **Table 23.2.1** to **Table 23.2.6**.
18. Where the predicted magnitude of effect is medium or high (significant in EIA terms), link IDs are also displayed.

Table 23.2.10: Number of Links per Magnitude of Effect Criteria – 2025 Factored Base versus 2025 Factored Base + Peak Construction SEP and DEP concurrent

Magnitude of effect	Number of links	Link ID
Negligible	134	N/A
Low	38	N/A
Medium	3	Links 58, 64, 102.
High	7	Links 61, 84, 90, 128, 147, 148, 149.

Table 23.2.11: Number of Links per Magnitude of Effect Criteria – 2025 Factored Base versus 2025 Factored Base + Average Construction SEP and DEP concurrent

Magnitude of effect	Number of links	Link ID
Negligible	164	N/A
Low	12	N/A
Medium	3	Links 147, 148, 149.
High	3	Links 61, 84, 128.

Table 23.2.12: Number of Links per Magnitude of Effect Criteria – 2025 Factored Base versus 2025 Factored Base + Peak Construction Isolation (SEP or DEP in isolation)

Magnitude of effect	Number of links	Link ID
Negligible	142	N/A



Magnitude of effect	Number of links	Link ID
Low	29	N/A
Medium	5	Links 58, 64, 90, 102, 137.
High	6	Links 61, 84, 128, 147, 148, 149.

Table 23.2.13: Number of Links per Magnitude of Effect Criteria – 2025 Factored Base versus 2025 Factored Base + Average Construction (SEP or DEP in isolation)

Magnitude of effect	Number of links	Link ID
Negligible	169	N/A
Low	7	N/A
Medium	3	Links 147, 148, 149.
High	3	Links 61, 84, 128.

Table 23.2.14: Number of Links per Magnitude of Effect Criteria – 2025 Factored Base versus 2025 Factored Base + Peak Construction Concurrent (SEP/DEP together) plus NV and HOW03

Magnitude of effect	Number of links	Link ID
Negligible	22	N/A
Low	41	N/A
Medium	0	N/A
High	0	N/A

Table 23.2.15: Number of Links per Magnitude of Effect Criteria – 2025 Factored Base + Peak Construction Concurrent (SEP/DEP together) versus 2025 Factored Base + Peak Construction Concurrent (SEP/DEP together) plus NV and HOW03

Magnitude of effect	Number of links	Link ID
Negligible	44	N/A
Low	19	N/A
Medium	0	N/A
High	0	N/A

19. Road traffic noise levels have been calculated at identified noise sensitive receptors for each link on which medium or high magnitude effects are predicted, for comparison with the LOAEL and SOAEL values identified in [Table 23-13](#) of the ES Noise and Vibration Chapter.
20. Maximum allowable construction traffic flows have been identified on three links to avoid a change in road traffic noise levels of 3dB. Graphs of forecast construction HGV movements over time are provided and the weekly traffic data are compared with the maximum allowable construction traffic movements.



21.

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.

Working Party for the Technical Sub-committee of the Noise Advisory Council (1978), A Guide to Measurement and Prediction of the Equivalent Continuous Sound Level Leq. London: HMSO



ANNEX 23.2.1 NAC CALCULATION METHODOLOGY

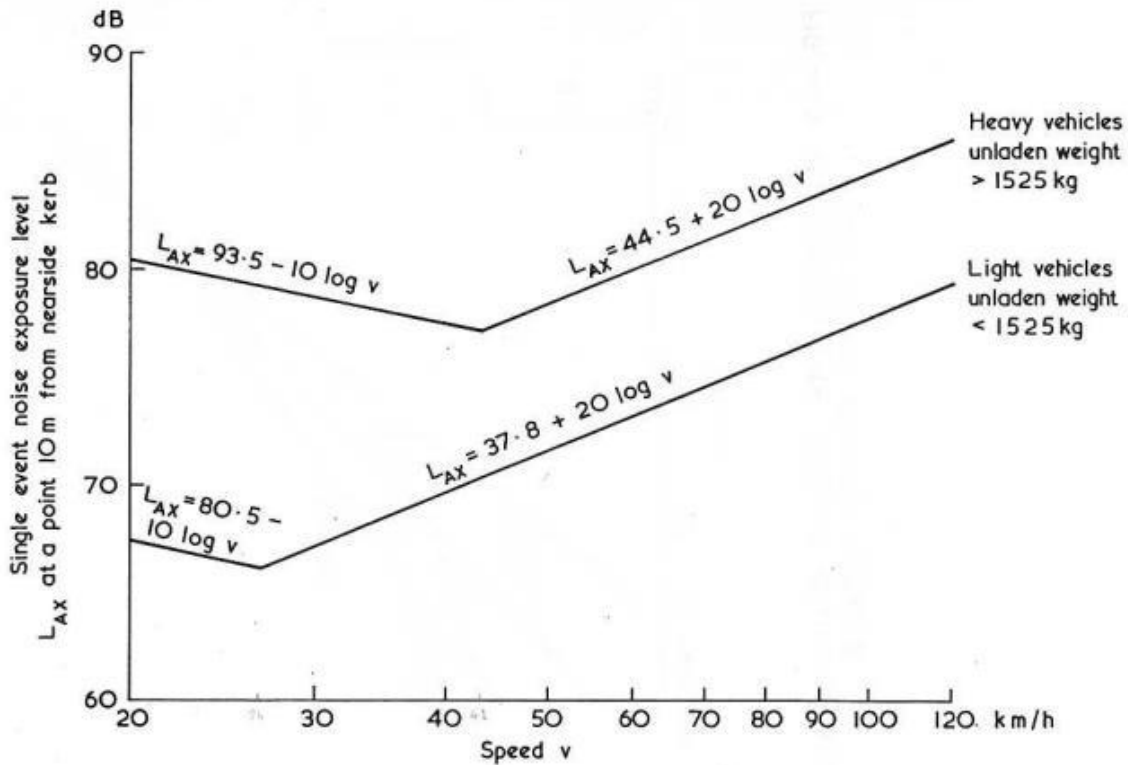


FIG. 4.1.4. RELATIONSHIPS BETWEEN L_{AX} (AT 10 m) AND SPEED

$$L_{eq} = L_{AX} + 10\log(n) - 10\log(T)$$

Where:

L_{AX} = Single event noise exposure level of the event (SEL)

n = number of events

T = time in seconds