

APPENDIX 11.4

CONSTRUCTION NOISE ASSESSMENT

Appendix 11.4: Construction Noise Assessment

Table A11.4.1: Plant assumed for site preparation works

Plant Item	BS5228 Reference	L _{WA} , dB	%-on-time	Number of Plant Items
Tracked Excavator	Table C2, Ref 19	105	50	10
Lorry	Table C2, Ref 34	108	50	5
Wheeled Loader	Table C2, Ref 28	104	50	10
Dump Truck	Table C2, Ref 30	107	50	10
Diesel generator	Table C4, Ref 79	92	100	3

Table A11.4.2: Plant assumed for foundations works

Plant Item	BS5228 Reference	L _{WA} , dB	%-on-time	Number of Plant Items
Poker vibrator	Table C4, Ref 33	106	75	4
Concrete pump and a cement mixer truck	Table C4, Ref 24	95	50	4
Concrete truck	Table C4, Ref 18	103	75	10
Excavators	Table C2, Ref 19	105	50	3
Dump truck	Table C2, Ref 30	107	50	2
Vibratory Roller	Table C2, Ref 38	101	50	4
Lorry	Table D7, Ref 121	98	25	1
Vibro-displacement	Table C3, 27	108	75	4

Table A11.4.3: Plant assumed for building erection works

Plant Item	BS5228 Reference	L _{WA} , dB	%-on-time	Number of Plant Items
Hammering	Table D2, Ref 15	112	25	20
Lorry - pull up	Table D7, Ref 121	98	25	8
Dump truck	Table C2, Ref 30	107	50	2
Diesel generator	Table C4, Ref 79	92	100	2
Compressor	Table D7, Ref 8	98	80	4
tracked crane	Table C4, Ref 45	82	50	2
Excavators	Table C2, Ref 19	105	50	7
hand-held nail gun	Table C4, Ref 95	101	10	10

Table A11.4.4: Plant assumed for road construction works

Plant Item	BS5228 Reference	L _{WA} , dB	%-on-time	Number of Plant Items
Asphalt paver (+ tipping lorry)	Table C5, Ref 30	103	100	2
Road Lorry (Full)	Table C6, Ref 21	108	100	2

Table A11.4.5: Plant assumed for landscaping works

Plant Item	BS5228 Reference	L _{WA} , dB	%-on-time	Number of Plant Items
Tracked Excavator	Table C5, Ref 18	108	50	10
Dozer	Table C2, Ref 10	108	50	10

Table A11.4.6: Construction traffic flows

Link ID	Road	Traffic Flow ⁽¹⁾	
		2019 base	2019 With Construction Traffic
A	Radwinter Road, East of Site Access	4,301 (0.6)	4,431 (1.3)
B	Site Access	_(2)	_(2)
C	Radwinter Road, between Site Access and Proposed Link Road	4,301 (0.6)	4,431 (1.3)
D	Proposed Link Road, South of Radwinter Road	_(2)	_(2)
E	Proposed Link Road, East of Thaxted Road	_(2)	_(2)
F	Radwinter Road, West of Proposed Link Road	4,301 (0.6)	4,431 (1.3)
G	Radwinter Road, East of Elizabeth Way	9,153 (2.1)	9,283 (2.4)
H	Elizabeth Way, North of Radwinter Road	5,650 (3.5)	5,780 (3.9)
I	Radwinter Road, West of Elizabeth Way	9,612 (3.5)	9,742 (3.8)
J	Elizabeth Way, South of Ashdon Road	5,670 (4.7)	5,800 (5.1)
K	Ashdon Road, East of Elizabeth Way	5,053 (6.1)	5,183 (6.5)
L	Ashdon Road, West of Elizabeth Way	5,252 (1.6)	5,382 (2.1)
M	Ashdon Road, East of Chaters Hill	5,946 (1.7)	6,076 (2.2)
N	Chaters Hill, South of Ashdon Road	1,895 (2.6)	2,025 (4)
O	Ashdon Road, West of Chaters Hill	7,200 (2.1)	7,330 (2.5)
P	Ashdon Road, East of Castle Hill	6,994 (1.8)	7,124 (2.2)
Q	Common Hill	5,934 (1.4)	6,064 (1.9)
R	Castle Hill, North of Ashdon Road	7,908 (1.3)	8,038 (1.7)
S	Castle Hill, South of Pound Walk	8,014 (1.6)	8,144 (2)
T	Little Walden Road	6,915 (1.9)	7,045 (2.3)
U	Castle Street, West of Castle Hill	3,582 (1.3)	3,712 (2.1)
V	Castle Street, East of High Street	3,289 (1.3)	3,419 (2.1)
W	Bridge Street	11,047 (1.8)	11,177 (2)
X	High Street, South of Castle Street	9,403 (1.8)	9,533 (2.1)
Y	High Street, North of Church Street	9,290 (1.9)	9,420 (2.2)
Z	Church Street, East of High Street	4,201 (2.0)	4,331 (2.7)
A1	High Street, North of Abbey Lane	8,080 (2.4)	8,210 (2.7)
B1	George Street/Hill Street	6,623 (2.7)	6,753 (3.1)
C1	High Street, South of Abbey Lane	11,506 (2.3)	11,636 (2.5)

Link ID	Road	Traffic Flow ⁽¹⁾	
		2019 base	2019 With Construction Traffic
D1	High Street, North of Audley Road	11,823 (2.5)	11,953 (2.7)
E1	Audley Road	5,965 (2.5)	6,095 (3)
F1	Debden Road, South of Audley Road	14,238 (2.4)	14,368 (2.6)
G1	London Road, North of Borough Lane	10,792 (2.5)	10,922 (2.7)
H1	Borough Lane, East of London Road	4,631 (1.8)	4,761 (2.4)
I1	London Road, South of Borough Lane	14,394 (2.5)	14,524 (2.7)
J1	Audley End Road	9,622 (2.1)	9,752 (2.4)
K1	Newport	7,977 (2.9)	8,107 (3.2)
L1	Borough Lane, West of Debden Road	4,359 (1.7)	4,489 (2.3)
M1	Debden Road, North of Borough Lane	5,791 (2.1)	5,921 (2.6)
N1	Mount Pleasant, East of Debden Road	6,136 (1.9)	6,266 (2.3)
P1	Thaxted Road, South of Peaslands Road	8,355 (2.3)	8,485 (2.6)
Q1	Thaxted Road, North of Peaslands Road	9,076 (1.1)	9,206 (1.4)
R1	Thaxted Road, North of Proposed Link Road	8,355 (2.3)	8,485 (2.6)
S1	Thaxted Road, South of Proposed Link Road	8,355 (2.3)	8,485 (2.6)
T1	Thaxted Road, South of Shire Hill	9,293 (3.5)	9,423 (3.8)
U1	Shire Hill	5,783 (5.2)	5,913 (5.6)
V1	Thaxted Road, North of Shire Hill	8,896 (3.6)	9,026 (3.9)
W1	Thaxted Road, South of Radwinter Road	9,053 (2.9)	9,183 (3.2)
X1	East Street	8,955 (3.6)	9,085 (3.9)
Y1	Chaters Hill, North of Radwinter Road	2,085 (1.8)	22,15 (3.1)
Z1	Radwinter Road, East of Chaters Hill	10,215 (3.8)	10,345 (4.1)
A2	Church Street, West of Castle Hill	4,917 (2.2)	5,047 (2.8)
Notes:			
⁽¹⁾ Traffic flow in terms of vehicle movements between 06:00 and 24:00 hours, with percentage of heavy goods vehicles in brackets.			
⁽²⁾ No flow			

Table A11.4.7: Construction traffic noise levels, free-field dB L_{A10,18hrs}

Link ID	Road	Scenario	
		2019 base	2019 With Construction Traffic ⁽¹⁾
A	Radwinter Road, East of Site Access	66.2	66.5 (+0.3)
B	Site Access	_(2)	_(2)
C	Radwinter Road, between Site Access and Proposed Link Road	66.2	66.5 (+0.3)
D	Proposed Link Road, South of Radwinter Road	_(2)	_(2)
E	Proposed Link Road, East of Thaxted Road	_(2)	_(2)
F	Radwinter Road, West of Proposed Link Road	61.9	62.3 (+0.4)
G	Radwinter Road, East of Elizabeth Way	65.7	65.9 (+0.2)
H	Elizabeth Way, North of Radwinter Road	64.1	64.3 (+0.2)
I	Radwinter Road, West of Elizabeth Way	66.4	66.6 (+0.2)
J	Elizabeth Way, South of Ashdon Road	64.5	64.7 (+0.2)
K	Ashdon Road, East of Elizabeth Way	64.4	64.6 (+0.2)
L	Ashdon Road, West of Elizabeth Way	63.1	63.4 (+0.3)
M	Ashdon Road, East of Chaters Hill	63.7	64.0 (+0.3)
N	Chaters Hill, South of Ashdon Road	58.5	59.3 (+0.8)
O	Ashdon Road, West of Chaters Hill	64.7	64.9 (+0.2)
P	Ashdon Road, East of Castle Hill	64.5	64.7 (+0.2)

Link ID	Road	Scenario	
		2019 base	2019 With Construction Traffic ⁽¹⁾
Q	Common Hill	63.6	63.9 (+0.3)
R	Castle Hill, North of Ashdon Road	64.8	65.0 (+0.2)
S	Castle Hill, South of Pound Walk	65.0	65.2 (+0.2)
T	Little Walden Road	64.5	64.7 (+0.2)
U	Castle Street, West of Castle Hill	61.4	61.8 (+0.4)
V	Castle Street, East of High Street	61.0	61.4 (+0.4)
W	Bridge Street	66.5	66.6 (+0.1)
X	High Street, South of Castle Street	65.8	65.9 (+0.1)
Y	High Street, North of Church Street	65.7	65.9 (+0.2)
Z	Church Street, East of High Street	62.3	62.7 (+0.4)
A1	High Street, North of Abbey Lane	65.3	65.5 (+0.2)
B1	George Street/Hill Street	64.5	64.8 (+0.3)
C1	High Street, South of Abbey Lane	66.8	66.9 (+0.1)
D1	High Street, North of Audley Road	67.0	67.1 (+0.1)
E1	Audley Road	64.0	64.3 (+0.3)
F1	Debden Road, South of Audley Road	67.8	67.9 (+0.1)
G1	London Road, North of Borough Lane	66.6	66.7 (+0.1)
H1	Borough Lane, East of London Road	62.7	63.0 (+0.3)
I1	London Road, South of Borough Lane	67.9	68.0 (+0.1)
J1	Audley End Road	66.0	66.1 (+0.1)
K1	Newport	65.4	65.6 (+0.2)
L1	Borough Lane, West of Debden Road	62.4	62.7 (+0.3)
M1	Debden Road, North of Borough Lane	63.8	64.0 (+0.2)
N1	Mount Pleasant, East of Debden Road	63.9	64.2 (+0.3)
P1	Thaxted Road, South of Peaslands Road	65.4	65.6 (+0.2)
Q1	Thaxted Road, North of Peaslands Road	65.3	65.5 (+0.2)
R1	Thaxted Road, North of Proposed Link Road	65.4	65.6 (+0.2)
S1	Thaxted Road, South of Proposed Link Road	65.4	65.6 (+0.2)
T1	Thaxted Road, South of Shire Hill	66.3	66.4 (+0.1)
U1	Shire Hill	64.7	64.9 (+0.2)
V1	Thaxted Road, North of Shire Hill	66.1	66.3 (+0.2)
W1	Thaxted Road, South of Radwinter Road	66.0	66.1 (+0.1)
X1	East Street	66.2	66.3 (+0.1)
Y1	Chaters Hill, North of Radwinter Road	58.7	59.5 (+0.8)
Z1	Radwinter Road, East of Chaters Hill	66.8	66.9 (+0.1)
A2	Church Street, West of Castle Hill	63.1	63.4 (+0.3)
Note: ⁽¹⁾ Figures in brackets are the changes from the 2019 base year to the 2019 baseline year with construction traffic. ⁽²⁾ No flow. ⁽³⁾ Below range of validity for CRTN.			