

Appendix 8.22
Road Traffic Noise
Predictions and
Assessment for
Cumulative Scenarios
with Rail Central

Appendix 8.22 Road Traffic Noise Predictions and Assessment for Cumulative Scenarios with Rail Central

Table 1 Predicted road traffic noise levels and assessment for daytime period – 07:00-23:00 (free-field) – Around Main Site

Receptor		Predicted L _{Aeq,16hr} (dB) from Road Traffic Noise - Main Site		
Name	Height (m)	2031 DM	2031 DS w/Mit	2031 DS w/Mit inc. RC
R01 Woodpecker Way	1.5	51.8	52.0	52.2
R02 Northampton South SUE W	1.5	57.1	57.4	57.4
R03 Northampton South SUE S	1.5	70.6	70.9	70.9
R04 Collingtree Ct	1.5	69.4	69.6	69.7
R05 Collingtree Ct	1.5	75.1	75.3	75.3
R06 Watering Ln	1.5	61.9	62.4	62.5
R07 Windingbrook Ln	1.5	55.5	55.4	55.4
R08 Hilton West	1.5	60.9	61.2	61.2
R09 Hilton East	1.5	65.6	66.3	66.4
R10 Saxon Ave	1.5	51.0	51.0	51.0
R11 Holiday Inn West	1.5	61.4	61.9	61.9
R12 Maple Farm East	1.5	65.1	65.3	65.3
R13 Maple Farm South	1.5	61.4	58.4	58.6
R14 Collingtree Rd	1.5	55.7	54.2	54.6
R15 Collingtree Rd North	1.5	57.2	57.0	57.2
R16 Collingtree Rd South	1.5	51.9	50.0	50.2
R17 Collingtree Rd West 4.5	4.5*	53.9	53.5	53.8
R18 Collingtree Rd North	1.5	54.5	54.4	54.5
R19 Collingtree Rd South	1.5	58.9	58.2	58.6
R20 Stockwell Way	1.5	52.8	52.4	52.4
R21 Barn Lane	1.5	51.1	50.2	50.4
R22 Rectory Ln	1.5	60.0	59.7	59.9
R23 Barn Ln	1.5	50.5	48.6	48.6
R24 Lodge Farm	1.5	51.8	49.9	50.3
R25 Barn Ln	1.5	49.8	48.0	48.2
R26 Northampton Rd	1.5	61.0	61.3	61.4
R27 Blisworth High St	1.5	68.7	67.2	67.4
R28 Courteenhall Rd	1.5	47.7	45.8	46.1
R29 West Lodge Cottages West	1.5	53.1	54.8	54.7
R30 West Lodge Cottages East	1.5	68.0	69.7	69.6
R31 Bridge Cottage North	1.5	58.0	56.6	57.2
R32 Bridge Cottage South	1.5	47.4	47.5	48.0
R33 Bridge Cottage West	1.5	53.2	51.6	52.2
R34 Courteenhall West	1.5	56.3	56.4	56.4
R35 Thorpewood Farm North	1.5	51.0	50.3	50.4
R36 Thorpewood Farm South	1.5	43.5	45.1	45.2

Notes:

DM = Do Minimum, DS = Do Something;

* R17 does not have a window at 1.5 m so a receptor height of 4.5 m (where there is a window) has been used.

Appendix 8.22 Road Traffic Noise Predictions and Assessment for Cumulative Scenarios with Rail Central

Table 2 Predicted road traffic noise levels and assessment for daytime period – 07:00-23:00 (free-field) – Around Main Site

Receptor		L _{Aeq,16hr} (dB)		Do Something Effect Level	Change 2031 DS - DM	Impact Magnitude	Significant? (See Table 8.9)
Name	Height (m)	2031 DM	2031 DS inc. RC				
R01 Woodpecker Way	1.5	51.8	52.2	Between LOAEL and SOAEL	0.4	Negligible	NO
R02 Northampton South SUE W	1.5	57.1	57.4	Between LOAEL and SOAEL	0.3	Negligible	NO
R03 Northampton South SUE S	1.5	70.6	70.9	≥SOAEL	0.3	Negligible	NO
R04 Collingtree Ct	1.5	69.4	69.7	≥SOAEL	0.3	Negligible	NO
R05 Collingtree Ct	1.5	75.1	75.3	≥SOAEL	0.2	Negligible	NO
R06 Watering Ln	1.5	61.9	62.5	Between LOAEL and SOAEL	0.6	Negligible	NO
R07 Windingbrook Ln	1.5	55.5	55.4	Between LOAEL and SOAEL	-0.1	Negligible	NO
R08 Hilton West	1.5	60.9	61.2	Between LOAEL and SOAEL	0.3	Negligible	NO
R09 Hilton East	1.5	65.6	66.4	≥SOAEL	0.8	Negligible	NO
R10 Saxon Ave	1.5	51.0	51.0	Between LOAEL and SOAEL	0.0	No Change	NO
R11 Holiday Inn West	1.5	61.4	61.9	Between LOAEL and SOAEL	0.5	Negligible	NO
R12 Maple Farm East	1.5	65.1	65.3	≥SOAEL	0.2	Negligible	NO
R13 Maple Farm South	1.5	61.4	58.6	Between LOAEL and SOAEL	-2.8	Negligible	NO
R14 Collingtree Rd	1.5	55.7	54.6	Between LOAEL and SOAEL	-1.1	Negligible	NO
R15 Collingtree Rd North	1.5	57.2	57.2	Between LOAEL and SOAEL	0.0	No Change	NO
R16 Collingtree Rd South	1.5	51.9	50.2	Between LOAEL and SOAEL	-1.7	Negligible	NO
R17 Collingtree Rd West 4.5	4.5*	53.9	53.8	Between LOAEL and SOAEL	-0.1	Negligible	NO
R18 Collingtree Rd North	1.5	54.5	54.5	Between LOAEL and SOAEL	0.0	No Change	NO
R19 Collingtree Rd South	1.5	58.9	58.6	Between LOAEL and SOAEL	-0.3	Negligible	NO
R20 Stockwell Way	1.5	52.8	52.4	Between LOAEL and SOAEL	-0.4	Negligible	NO
R21 Barn Lane	1.5	51.1	50.4	Between LOAEL and SOAEL	-0.7	Negligible	NO
R22 Rectory Ln	1.5	60.0	59.9	Between LOAEL and SOAEL	-0.1	Negligible	NO
R23 Barn Ln	1.5	50.5	48.6	<LOAEL	-1.9	-	NO

Appendix 8.22 Road Traffic Noise Predictions and Assessment for Cumulative Scenarios with Rail Central

Receptor		L _{Aeq,16hr} (dB)		Do Something Effect Level	Change 2031 DS - DM	Impact Magnitude	Significant? (See Table 8.9)
Name	Height (m)	2031 DM	2031 DS inc. RC				
R24 Lodge Farm	1.5	51.8	50.3	Between LOAEL and SOAEL	-1.5	Negligible	NO
R25 Barn Ln	1.5	49.8	48.2	<LOAEL	-1.6	-	NO
R26 Northampton Rd	1.5	61.0	61.4	Between LOAEL and SOAEL	0.4	Negligible	NO
R27 Blisworth High St	1.5	68.7	67.4	≥SOAEL	-1.3	Minor Beneficial	NO
R28 Courteenhall Rd	1.5	47.7	46.1	<LOAEL	-1.6	-	NO
R29 West Lodge Cottages West	1.5	53.1	54.7	Between LOAEL and SOAEL	1.6	Negligible	NO
R30 West Lodge Cottages East	1.5	68.0	69.6	≥SOAEL	1.6	Minor Adverse	YES
R31 Bridge Cottage North	1.5	58.0	57.2	Between LOAEL and SOAEL	-0.8	Negligible	NO
R32 Bridge Cottage South	1.5	47.4	48.0	<LOAEL	0.6	-	NO
R33 Bridge Cottage West	1.5	53.2	52.2	Between LOAEL and SOAEL	-1.0	Negligible	NO
R34 Courteenhall West	1.5	56.3	56.4	Between LOAEL and SOAEL	0.1	Negligible	NO
R35 Thorpewood Farm North	1.5	51.0	50.4	Between LOAEL and SOAEL	-0.6	Negligible	NO
R36 Thorpewood Farm South	1.5	43.5	45.2	<LOAEL	1.7	-	NO

* R17 does not have a window at 1.5 m so a receptor height of 4.5 m (where there is a window) has been used.

Appendix 8.22 Road Traffic Noise Predictions and Assessment for Cumulative Scenarios with Rail Central

Table 3 Predicted road traffic noise levels and assessment for daytime period – 07:00-23:00 (free-field) – Roade Bypass

Receptor		Predicted $L_{Aeq,16hr}$ (dB) from Road Traffic Noise - Roade Bypass		
Name	Height (m)	2031 DM	2031 DS w/Mit	2031 DS w/Mit inc. RC
R37 Plain Woods Farm	1.5	44.5	49.2	49.3
R38 Hyde Farm E	1.5	48.0	52.1	52.0
R38a Hyde Farm S	1.5	45.0	53.2	53.2
R39 Bailey Brooks Ln West	1.5	41.1	47.5	47.4
R39a Bailey Brooks Ln West	1.5	45.8	52.0	51.9
R40 London Rd NW	1.5	55.8	54.2	54.3
R40a London Rd SE	1.5	63.1	59.6	59.7
R41 Blisworth Rd N-W	1.5	50.7	55.5	56.1
R42 Dovecote Rd	1.5	45.1	48.6	48.6
R42a Dovecote Rd	1.5	44.8	49.1	49.1
R43 Abbots Way	1.5	44.9	47.8	47.8
R44 Stratford Road 2	1.5	60.8	57.4	57.3
R45 Northampton Rd	1.5	55.0	53.4	53.3
R46 Blisworth Rd S-Left	1.5	41.9	48.1	48.2
R47 Blisworth Rd S-Right	1.5	49.5	53.1	53.8
R48 Hyde Rd	1.5	52.1	51.4	52.4
R49 Hyde Farm House	4.5*	40.6	47.4	47.4
R50 Stratford Rd West	1.5	63.2	55.2	54.8
R51 Stratford Rd East	1.5	65.4	57.5	57.0
R52 Roade High St	1.5	61.1	61.7	61.9
R53 Eliz Wood School	1.5	45.5	48.0	48.0
R54 Ashton Rd W	1.5	45.8	45.6	45.6
R55 Ashton Rd E	1.5	53.0	48.5	48.4
R56 Northampton Rd	1.5	56.7	58.0	57.9

Notes:

DM = Do Minimum, DS = Do Something;

Both DS scenarios include the effects of the additional mitigation fencing along some sections of the proposed Roade Bypass;

* R17 does not have a window at 1.5 m so a receptor height of 4.5 m (where there is a window) has been used.

Appendix 8.22 Road Traffic Noise Predictions and Assessment for Cumulative Scenarios with Rail Central

Table 4 Predicted road traffic noise levels and assessment for daytime period – 07:00-23:00 (free-field) – Roade Bypass

Receptor		L _{Aeq,16hr} (dB)		Do Something Effect Level	Change 2031 DS - DM	Impact Magnitude	Significant? (See Table 8.9)
Name	Height (m)	2031 DM	2031 DS inc. RC				
R37 Plain Woods Farm	1.5	44.5	49.3	<LOAEL	4.8	-	NO
R38 Hyde Farm E	1.5	48.0	52.0	Between LOAEL and SOAEL	4.0	Minor Adverse	NO
R38a Hyde Farm S	1.5	45.0	53.2	Between LOAEL and SOAEL	8.2	Moderate Adverse	NO
R39 Bailey Brooks Ln West	1.5	41.1	47.4	<LOAEL	6.3	-	NO
R39a Bailey Brooks Ln West	1.5	45.8	51.9	Between LOAEL and SOAEL	6.1	Moderate Adverse	NO
R40 London Rd NW	1.5	55.8	54.3	Between LOAEL and SOAEL	-1.5	Negligible	NO
R40a London Rd SE	1.5	63.1	59.7	Between LOAEL and SOAEL	-3.4	Minor Beneficial	NO
R41 Blisworth Rd N-W	1.5	50.7	56.1	Between LOAEL and SOAEL	5.4	Moderate Adverse	NO
R42 Dovecote Rd	1.5	45.1	48.6	<LOAEL	3.5	-	NO
R42a Dovecote Rd	1.5	44.8	49.1	<LOAEL	4.3	-	NO
R43 Abbots Way	1.5	44.9	47.8	<LOAEL	2.9	-	NO
R44 Stratford Road 2	1.5	60.8	57.3	Between LOAEL and SOAEL	-3.5	Minor Beneficial	NO
R45 Northampton Rd	1.5	55.0	53.3	Between LOAEL and SOAEL	-1.7	Negligible	NO
R46 Blisworth Rd S-Left	1.5	41.9	48.2	<LOAEL	6.3	-	NO
R47 Blisworth Rd S-Right	1.5	49.5	53.8	Between LOAEL and SOAEL	4.3	Minor Adverse	NO
R48 Hyde Rd	1.5	52.1	52.4	Between LOAEL and SOAEL	0.3	Negligible	NO
R49 Hyde Farm House	4.5*	40.6	47.4	<LOAEL	6.8	-	NO
R50 Stratford Rd West	1.5	63.2	54.8	Between LOAEL and SOAEL	-8.4	Moderate Beneficial	NO
R51 Stratford Rd East	1.5	65.4	57.0	Between LOAEL and SOAEL	-8.4	Moderate Beneficial	NO
R52 Roade High St	1.5	61.1	61.9	Between LOAEL and SOAEL	0.8	Negligible	NO
R53 Eliz Wood School	1.5	45.5	48.0	<LOAEL	2.5	-	NO
R54 Ashton Rd W	1.5	45.8	45.6	<LOAEL	-0.2	-	NO
R55 Ashton Rd E	1.5	53.0	48.4	<LOAEL	-4.6	-	NO
R56 Northampton Rd	1.5	56.7	57.9	Between LOAEL and SOAEL	1.2	Negligible	NO

* R17 does not have a window at 1.5 m so a receptor height of 4.5 m (where there is a window) has been used.

Appendix 8.22 Road Traffic Noise Predictions and Assessment for Cumulative Scenarios with Rail Central

Table 5 Predicted road traffic noise levels and assessment for daytime period – 07:00-23:00 (free-field) – Other Highway Works

Receptor		Predicted $L_{Aeq,16hr}$ (dB) from Road Traffic Noise - Other Highway Works		
Name	Height (m)	2031 DM	2031 DS w/Mit	2031 DS w/Mit inc. RC
R57 The Lodge	1.5	64.9	66.2	66.1
R57a Woodleys Farmhouse	1.5	59.4	60.9	60.8
R58 Tunnel Hill Cottages	1.5	53.2	56.6	57.1
R59 Blaize Farm	1.5	47.1	49.1	49.5
R60 Stokehill Cottage	1.5	68.4	66.9	66.8
R61 Northampton Rd	1.5	65.1	66.0	66.0
R62 Paddocks Farm	1.5	69.7	70.4	70.6

Notes:
DM = Do Minimum, DS = Do Something.

Table 6 Predicted road traffic noise levels and assessment for daytime period – 07:00-23:00 (free-field) – Other Highway Works

Receptor		$L_{Aeq,16hr}$ (dB)		Do Something Effect Level	Change 2031 DS - DM	Impact Magnitude	Significant? (See Table 8.9)
Name	Height (m)	2031 DM	2031 DS inc. RC				
R57 The Lodge	1.5	64.9	66.1	≥SOAEL	1.2	Minor Adverse	YES
R57a Woodleys Farmhouse	1.5	59.4	60.8	Between LOAEL and SOAEL	1.4	Negligible	NO
R58 Tunnel Hill Cottages	1.5	53.2	57.1	Between LOAEL and SOAEL	3.9	Minor Adverse	NO
R59 Blaize Farm	1.5	47.1	49.5	<LOAEL	2.4	-	NO
R60 Stokehill Cottage	1.5	68.4	66.8	≥SOAEL	-1.6	Minor Beneficial	NO
R61 Northampton Rd	1.5	65.1	66.0	≥SOAEL	0.9	Negligible	NO
R62 Paddocks Farm	1.5	69.7	70.6	≥SOAEL	0.9	Negligible	NO

Appendix 8.22 Road Traffic Noise Predictions and Assessment for Cumulative Scenarios with Rail Central

Table 7 Changes between 2031 DS scenarios with and without Rail Central traffic flows for daytime period

Receptor		Changes between 2031 DS and DS+RC scenarios - daytime		
Name	Height (m)	Type	2031 DS w/Mit	2031 DS w/Mit inc. RC
R13 Maple Farm South	1.5	Impact Magnitude	Minor Beneficial	Negligible (less than zero)
R15 Collingtree Rd North	1.5	Impact Magnitude	Negligible (less than zero)	No Change
R18 Collingtree Rd North	1.5	Impact Magnitude	Negligible (less than zero)	No Change
R24 Lodge Farm	1.5	Do-Something Effect Level	<LOAEL	Between LOAEL and SOAEL
		Impact Magnitude	-	Negligible
R41 Blisworth Rd N-W	1.5	Impact Magnitude	Minor Adverse	Moderate Adverse

Appendix 8.22 Road Traffic Noise Predictions and Assessment for Cumulative Scenarios with Rail Central

Table 8 Predicted road traffic noise levels and assessment for daytime period – 07:00-23:00 (free-field) – Around Main Site

Receptor		Predicted L _{night} (dB) from Road Traffic Noise - Main Site		
Name	Height (m)	2031 DM	2031 DS w/Mit	2031 DS w/Mit inc. RC
R01 Woodpecker Way	4.5	46.9	47.2	47.3
R02 Northampton South SUE W	4.5	48.5	48.7	48.8
R03 Northampton South SUE S	4.5	60.7	60.9	60.9
R04 Collingtree Ct	4.5	61.3	61.5	61.5
R05 Collingtree Ct	4.5	66.1	66.3	66.3
R06 Watering Ln	4.5	53.9	54.5	54.6
R07 Windingbrook Ln	4.5	49.6	49.5	49.5
R08 Hilton West	4.5	53.3	53.6	53.6
R09 Hilton East	4.5	59.3	59.8	59.9
R10 Saxon Ave	4.5	44.4	44.5	44.5
R11 Holiday Inn West	4.5	54.8	55.2	55.2
R12 Maple Farm East	4.5	56.4	56.6	56.7
R13 Maple Farm South	4.5	53.7	51.1	51.3
R14 Collingtree Rd	4.5	49.6	48.6	48.9
R15 Collingtree Rd North	4.5	50.4	50.3	50.5
R16 Collingtree Rd South	4.5	45.1	43.8	43.9
R17 Collingtree Rd West 4.5	4.5	45.5	45.1	45.4
R18 Collingtree Rd North	4.5	46.7	46.5	46.8
R19 Collingtree Rd South	4.5	52.1	51.5	51.8
R20 Stockwell Way	1.5*	43.5	43.2	43.2
R21 Barn Lane	4.5	43.2	42.6	42.7
R22 Rectory Ln	4.5	53.3	52.8	53.2
R23 Barn Ln	4.5	42.3	40.6	40.7
R24 Lodge Farm	4.5	43.6	42.3	42.6
R25 Barn Ln	1.5*	41.3	40.0	40.3
R26 Northampton Rd	4.5	54.6	54.9	54.9
R27 Blisworth High St	4.5	60.2	59.0	59.2
R28 Courteenhall Rd	4.5	40.9	39.8	40.1
R29 West Lodge Cottages West	4.5	46.5	48.3	48.2
R30 West Lodge Cottages East	4.5	60.2	61.8	61.7
R31 Bridge Cottage North	4.5	51.6	50.3	51.0
R32 Bridge Cottage South	4.5	42.5	42.5	42.9
R33 Bridge Cottage West	4.5	47.2	45.9	46.5
R34 Courteenhall West	4.5	47.2	47.5	47.5
R35 Thorpewood Farm North	4.5	43.5	43.2	43.3
R36 Thorpewood Farm South	4.5	37.8	39.4	39.5

Notes:

DM = Do Minimum, DS = Do Something;

* R20 & R25 are single storey so a receptor height of 1.5 m has been used.

Appendix 8.22 Road Traffic Noise Predictions and Assessment for Cumulative Scenarios with Rail Central

Table 9 Predicted road traffic noise levels and assessment for night-time period – 23:00-07:00 (free-field) – Around Main Site

Receptor		L _{night} (dB)		Do Something Effect Level	Change 2031 DS - DM	Impact Magnitude	Significant? (See Table 8.10)
Name	Height (m)	2031 DM	2031 DS inc. RC				
R01 Woodpecker Way	4.5	46.9	47.3	Between LOAEL and SOAEL	0.4	Negligible	NO
R02 Northampton South SUE W	4.5	48.5	48.8	Between LOAEL and SOAEL	0.3	Negligible	NO
R03 Northampton South SUE S	4.5	60.7	60.9	≥SOAEL	0.2	Negligible	NO
R04 Collingtree Ct	4.5	61.3	61.5	≥SOAEL	0.2	Negligible	NO
R05 Collingtree Ct	4.5	66.1	66.3	≥SOAEL	0.2	Negligible	NO
R06 Watering Ln	4.5	53.9	54.6	Between LOAEL and SOAEL	0.7	Negligible	NO
R07 Windingbrook Ln	4.5	49.6	49.5	Between LOAEL and SOAEL	-0.1	Negligible	NO
R08 Hilton West	4.5	53.3	53.6	Between LOAEL and SOAEL	0.3	Negligible	NO
R09 Hilton East	4.5	59.3	59.9	≥SOAEL	0.6	Negligible	NO
R10 Saxon Ave	4.5	44.4	44.5	Between LOAEL and SOAEL	0.1	Negligible	NO
R11 Holiday Inn West	4.5	54.8	55.2	≥SOAEL	0.4	Negligible	NO
R12 Maple Farm East	4.5	56.4	56.7	≥SOAEL	0.3	Negligible	NO
R13 Maple Farm South	4.5	53.7	51.3	Between LOAEL and SOAEL	-2.4	Minor Beneficial	NO
R14 Collingtree Rd	4.5	49.6	48.9	Between LOAEL and SOAEL	-0.7	Negligible	NO
R15 Collingtree Rd North	4.5	50.4	50.5	Between LOAEL and SOAEL	0.1	Negligible	NO
R16 Collingtree Rd South	4.5	45.1	43.9	Between LOAEL and SOAEL	-1.2	Minor Beneficial	NO
R17 Collingtree Rd West 4.5	4.5	45.5	45.4	Between LOAEL and SOAEL	-0.1	Negligible	NO
R18 Collingtree Rd North	4.5	46.7	46.8	Between LOAEL and SOAEL	0.1	Negligible	NO
R19 Collingtree Rd South	4.5	52.1	51.8	Between LOAEL and SOAEL	-0.3	Negligible	NO
R20 Stockwell Way	1.5*	43.5	43.2	Between LOAEL and SOAEL	-0.3	Negligible	NO
R21 Barn Lane	4.5	43.2	42.7	Between LOAEL and SOAEL	-0.5	Negligible	NO
R22 Rectory Ln	4.5	53.3	53.2	Between LOAEL and SOAEL	-0.1	Negligible	NO
R23 Barn Ln	4.5	42.3	40.7	Between LOAEL and SOAEL	-1.6	Minor Beneficial	NO

Appendix 8.22 Road Traffic Noise Predictions and Assessment for Cumulative Scenarios with Rail Central

Receptor		L _{night} (dB)		Do Something Effect Level	Change 2031 DS - DM	Impact Magnitude	Significant? (See Table 8.10)
Name	Height (m)	2031 DM	2031 DS inc. RC				
R24 Lodge Farm	4.5	43.6	42.6	Between LOAEL and SOAEL	-1.0	Minor Beneficial	NO
R25 Barn Ln	1.5*	41.3	40.3	Between LOAEL and SOAEL	-1.0	Minor Beneficial	NO
R26 Northampton Rd	4.5	54.6	54.9	Between LOAEL and SOAEL	0.3	Negligible	NO
R27 Blisworth High St	4.5	60.2	59.2	≥SOAEL	-1.0	Minor Beneficial	NO
R28 Courteenhall Rd	4.5	40.9	40.1	Between LOAEL and SOAEL	-0.8	Negligible	NO
R29 West Lodge Cottages West	4.5	46.5	48.2	Between LOAEL and SOAEL	1.7	Minor Adverse	NO
R30 West Lodge Cottages East	4.5	60.2	61.7	≥SOAEL	1.5	Minor Adverse	YES
R31 Bridge Cottage North	4.5	51.6	51.0	Between LOAEL and SOAEL	-0.6	Negligible	NO
R32 Bridge Cottage South	4.5	42.5	42.9	Between LOAEL and SOAEL	0.4	Negligible	NO
R33 Bridge Cottage West	4.5	47.2	46.5	Between LOAEL and SOAEL	-0.7	Negligible	NO
R34 Courteenhall West	4.5	47.2	47.5	Between LOAEL and SOAEL	0.3	Negligible	NO
R35 Thorpewood Farm North	4.5	43.5	43.3	Between LOAEL and SOAEL	-0.2	Negligible	NO
R36 Thorpewood Farm South	4.5	37.8	39.5	<LOAEL	1.7	-	NO

* R20 & R25 are single storey so a receptor height of 1.5 m has been used.

Appendix 8.22 Road Traffic Noise Predictions and Assessment for Cumulative Scenarios with Rail Central

Table 10 Predicted road traffic noise levels and assessment for night-time period – 23:00-07:00 (free-field) – Roade Bypass

Receptor		Predicted L _{night} (dB) from Road Traffic Noise - Roade Bypass		
Name	Height (m)	2031 DM	2031 DS w/Mit	2031 DS w/Mit inc. RC
R37 Plain Woods Farm	4.5	38.7	43.3	43.4
R38 Hyde Farm E	4.5	42.6	47.4	47.3
R38a Hyde Farm S	4.5	40.2	47.7	47.6
R39 Bailey Brooks Ln West	4.5	36.5	41.5	41.5
R39a Bailey Brooks Ln West	4.5	39.5	45.4	45.4
R40 London Rd NW	4.5	50.3	48.6	48.7
R40a London Rd SE	4.5	56.4	53.2	53.4
R41 Blisworth Rd N-W	4.5	45.4	49.5	50.1
R42 Dovecote Rd	4.5	38.6	42.3	42.3
R42a Dovecote Rd	4.5	38.6	43.0	43.0
R43 Abbots Way	4.5	38.8	41.4	41.4
R44 Stratford Road 2	4.5	54.3	51.3	51.2
R45 Northampton Rd	4.5	49.3	47.8	47.7
R46 Blisworth Rd S-Left	4.5	37.2	42.1	42.1
R47 Blisworth Rd S-Right	4.5	44.1	47.5	48.1
R48 Hyde Rd	4.5	46.7	46.0	46.9
R49 Hyde Farm House	4.5	35.6	41.3	41.2
R50 Stratford Rd West	4.5	56.4	49.2	48.8
R51 Stratford Rd East	4.5	58.1	50.9	50.4
R52 Roade High St	1.5*	53.5	53.9	54.1
R53 Eliz Wood School	4.5	40.5	41.9	41.8
R54 Ashton Rd W	4.5	39.2	39.1	39.1
R55 Ashton Rd E	4.5	47.3	42.8	42.7
R56 Northampton Rd	4.5	50.3	51.3	51.2

Notes:
DM = Do Minimum, DS = Do Something;
Both DS scenarios include the effects of the additional mitigation fencing along some sections of the proposed Roade Bypass;
* R20 & R25 are single storey so a receptor height of 1.5 m has been used.

Appendix 8.22 Road Traffic Noise Predictions and Assessment for Cumulative Scenarios with Rail Central

Table 11 Predicted road traffic noise levels and assessment for night-time period – 23:00-07:00 (free-field) – Roade Bypass

Receptor		L _{night} (dB)		Do Something Effect Level	Change 2031 DS - DM	Impact Magnitude	Significant? (See Table 8.10)
Name	Height (m)	2031 DM	2031 DS inc. RC				
R37 Plain Woods Farm	4.5	38.7	43.4	Between LOAEL and SOAEL	4.7	Moderate Adverse	NO
R38 Hyde Farm E	4.5	42.6	47.3	Between LOAEL and SOAEL	4.7	Moderate Adverse	NO
R38a Hyde Farm S	4.5	40.2	47.6	Between LOAEL and SOAEL	7.4	Major Adverse	NO
R39 Bailey Brooks Ln West	4.5	36.5	41.5	Between LOAEL and SOAEL	5.0	Major Adverse	NO
R39a Bailey Brooks Ln West	4.5	39.5	45.4	Between LOAEL and SOAEL	5.9	Major Adverse	NO
R40 London Rd NW	4.5	50.3	48.7	Between LOAEL and SOAEL	-1.6	Minor Beneficial	NO
R40a London Rd SE	4.5	56.4	53.4	Between LOAEL and SOAEL	-3.0	Moderate Beneficial	NO
R41 Blisworth Rd N-W	4.5	45.4	50.1	Between LOAEL and SOAEL	4.7	Moderate Adverse	NO
R42 Dovecote Rd	4.5	38.6	42.3	Between LOAEL and SOAEL	3.7	Moderate Adverse	NO
R42a Dovecote Rd	4.5	38.6	43.0	Between LOAEL and SOAEL	4.4	Moderate Adverse	NO
R43 Abbots Way	4.5	38.8	41.4	Between LOAEL and SOAEL	2.6	Minor Adverse	NO
R44 Stratford Road 2	4.5	54.3	51.2	Between LOAEL and SOAEL	-3.1	Moderate Beneficial	NO
R45 Northampton Rd	4.5	49.3	47.7	Between LOAEL and SOAEL	-1.6	Minor Beneficial	NO
R46 Blisworth Rd S-Left	4.5	37.2	42.1	Between LOAEL and SOAEL	4.9	Moderate Adverse	NO
R47 Blisworth Rd S-Right	4.5	44.1	48.1	Between LOAEL and SOAEL	4.0	Moderate Adverse	NO
R48 Hyde Rd	4.5	46.7	46.9	Between LOAEL and SOAEL	0.2	Negligible	NO
R49 Hyde Farm House	4.5	35.6	41.2	Between LOAEL and SOAEL	5.6	Major Adverse	NO
R50 Stratford Rd West	4.5	56.4	48.8	Between LOAEL and SOAEL	-7.6	Major Beneficial	NO
R51 Stratford Rd East	4.5	58.1	50.4	Between LOAEL and SOAEL	-7.7	Major Beneficial	NO
R52 Roade High St	1.5*	53.5	54.1	Between LOAEL and SOAEL	0.6	Negligible	NO
R53 Eliz Wood School	4.5	40.5	41.8	Between LOAEL and SOAEL	1.3	Minor Adverse	NO
R54 Ashton Rd W	4.5	39.2	39.1	<LOAEL	-0.1	-	NO
R55 Ashton Rd E	4.5	47.3	42.7	Between LOAEL and SOAEL	-4.6	Moderate Beneficial	NO
R56 Northampton Rd	4.5	50.3	51.2	Between LOAEL and SOAEL	0.9	Negligible	NO

* R20 & R25 are single storey so a receptor height of 1.5 m has been used.

Appendix 8.22 Road Traffic Noise Predictions and Assessment for Cumulative Scenarios with Rail Central

Table 12 Predicted road traffic noise levels and assessment for night-time period – 23:00-07:00 (free-field) – Other Highway Works

Receptor		Predicted L_{night} (dB) from Road Traffic Noise - Other Highway Works		
Name	Height (m)	2031 DM	2031 DS w/Mit	2031 DS w/Mit inc. RC
R57 The Lodge	4.5	58.5	59.4	59.3
R57a Woodleys Farmhouse	4.5	52.8	54.2	54.2
R58 Tunnel Hill Cottages	4.5	47.4	50.5	51.0
R59 Blaize Farm	4.5	41.6	43.7	44.2
R60 Stokehill Cottage	4.5	60.8	59.6	59.6
R61 Northampton Rd	4.5	58.2	58.9	58.9
R62 Paddocks Farm	4.5	61.6	62.0	62.1

Notes:
DM = Do Minimum, DS = Do Something.

Table 13 Predicted road traffic noise levels and assessment for night-time period – 23:00-07:00 (free-field) – Other Highway Works

Receptor		L_{night} (dB)		Do Something Effect Level	Change 2031 DS - DM	Impact Magnitude	Significant? (See Table 8.10)
Name	Height (m)	2031 DM	2031 DS inc. RC				
R57 The Lodge	4.5	58.5	59.4	≥SOAEL	0.8	Negligible	NO
R57a Woodleys Farmhouse	4.5	52.8	54.2	Between LOAEL and SOAEL	1.4	Minor Adverse	NO
R58 Tunnel Hill Cottages	4.5	47.4	50.5	Between LOAEL and SOAEL	3.6	Moderate Adverse	NO
R59 Blaize Farm	4.5	41.6	43.7	Between LOAEL and SOAEL	2.6	Minor Adverse	NO
R60 Stokehill Cottage	4.5	60.8	59.6	≥SOAEL	-1.2	Minor Beneficial	NO
R61 Northampton Rd	4.5	58.2	58.9	≥SOAEL	0.7	Negligible	NO
R62 Paddocks Farm	4.5	61.6	62.0	≥SOAEL	0.4	Negligible	NO

Appendix 8.22 Road Traffic Noise Predictions and Assessment for Cumulative Scenarios with Rail Central

Table 14 Changes between 2031 DS scenarios with and without Rail Central traffic flows for night-time period

Receptor		Changes between 2031 DS and DS+RC scenarios - night-time		
Name	Height (m)	Type	2031 DS w/Mit	2031 DS w/Mit inc. RC
R14 Collingtree Rd	4.5	Impact Magnitude	Minor Beneficial	Negligible (less than zero)
R28 Courteenhall Rd	4.5	Do-Something Effect Level	<LOAEL	Between LOAEL and SOAEL
		Impact Magnitude	-	Negligible (less than zero)
R31 Bridge Cottage North	4.5	Impact Magnitude	Minor Beneficial	Negligible (less than zero)
R32 Bridge Cottage South	4.5	Impact Magnitude	No Change	Negligible (greater than zero)
R33 Bridge Cottage West	4.5	Impact Magnitude	Minor Beneficial	Negligible (less than zero)
R56 Northampton Rd	4.5	Impact Magnitude	Minor Adverse	Negligible (greater than zero)