

Appendix 8.18

Comparison of Predicted Rating Levels for SRFI Operations and Typical Background Sound Levels

Appendix 8.18 Comparison of Predicted Rating Levels for SRFI Operations and Typical Background Sound Levels

Table 1 Initial estimate of SRFI operational sound impact – modal background sound levels – 07:00–23:00

Receptor		Rating Level * dB L _{Ar,1hr}	Under broadly south-westerly winds		Under broadly north-easterly winds	
Name	Height (m)		Modal Background Sound Level dB L _{A90,15min}	Rating Level - Background Sound Level	Modal Background Sound Level dB L _{A90,15min}	Rating Level - Background Sound Level
R02 Northampton South SUE W	1.5	36	67	-31	67	-31
R03 Northampton South SUE S	1.5	40	67	-27	67	-27
R04 Collingtree Ct	1.5	42	67	-25	67	-25
R05 Collingtree Ct	1.5	44	67	-23	67	-23
R06 Watering Ln	1.5	41	59	-18	55	-14
R08 Hilton West	1.5	42	61	-19	57	-15
R11 Holiday Inn West	1.5	35	56	-21	55	-20
R12 Maple Farm East	1.5	43	61	-18	61	-18
R13 Maple Farm South	1.5	44	57	-13	57	-13
R14 Collingtree Rd	1.5	38	47	-9	60	-22
R15 Collingtree Rd North	1.5	32	46	-14	58	-26
R16 Collingtree Rd South	1.5	41	46	-5	58	-17
R17 Collingtree Rd West	4.5	43	46	-3	58	-15
R19 Collingtree Rd South	1.5	43	46	-3	58	-15
R21 Barn Lane	1.5	42	40	2	55	-13
R23 Barn Ln	1.5	44	41	3	41	3
R24 Lodge Farm	1.5	41	41	0	41	0
R25 Barn Ln	1.5	45	41	4	41	4
R28 Courteenhall Rd	1.5	42	36	6	50	-8
R29 West Lodge Cottages West	1.5	41	52	-11	50	-9

Notes:

* Rating level includes applies a +3 dB(A) correction to the predicted specific sound level for sound features that are readily distinctive against the residual acoustic environment.

Appendix 8.18 Comparison of Predicted Rating Levels for SRFI Operations and Typical Background Sound Levels

Table 2 Initial estimate of SRFI operational sound impact – sensitivity test background sound levels – 07:00–23:00

Receptor		Rating Level * dB L _{Ar,1hr}	Under broadly south-westerly winds		Under broadly north-easterly winds	
Name	Height (m)		Sensitivity Test Background Sound Level dB L _{A90,15min}	Rating Level - Background Sound Level	Sensitivity Test Background Sound Level dB L _{A90,15min}	Rating Level - Background Sound Level
R02 Northampton South SUE W	1.5	36	-	-	-	-
R03 Northampton South SUE S	1.5	40	-	-	-	-
R04 Collingtree Ct	1.5	42	-	-	-	-
R05 Collingtree Ct	1.5	44	-	-	-	-
R06 Watering Ln	1.5	41	55	-14	-	-
R08 Hilton West	1.5	42	57	-15	-	-
R11 Holiday Inn West	1.5	35	-	-	-	-
R12 Maple Farm East	1.5	43	-	-	-	-
R13 Maple Farm South	1.5	44	-	-	-	-
R14 Collingtree Rd	1.5	38	44	-6	48	-10
R15 Collingtree Rd North	1.5	32	42	-10	45	-13
R16 Collingtree Rd South	1.5	41	42	-1	45	-4
R17 Collingtree Rd West	4.5	43	42	1	45	-2
R19 Collingtree Rd South	1.5	43	42	1	45	-2
R21 Barn Lane	1.5	42	-	-	46	-4
R23 Barn Ln	1.5	44	38	6	-	-
R24 Lodge Farm	1.5	41	38	3	-	-
R25 Barn Ln	1.5	45	38	7	-	-
R28 Courteenhall Rd	1.5	42	-	-	42	0
R29 West Lodge Cottages West	1.5	41	48	-7	-	-

Notes:

* Rating level includes applies a +3 dB(A) correction to the predicted specific sound level for sound features that are readily distinctive against the residual acoustic environment.

Appendix 8.18 Comparison of Predicted Rating Levels for SRFI Operations and Typical Background Sound Levels

Table 3 Initial estimate of SRFI operational sound impact – modal background sound levels – 23:00–07:00

Receptor		Rating Level * dB L _{Ar,15min}	Under broadly south-westerly winds		Under broadly north-easterly winds	
Name	Height (m)		Modal Background Sound Level dB L _{A90,15min}	Rating Level - Background Sound Level	Modal Background Sound Level dB L _{A90,15min}	Rating Level - Background Sound Level
R02 Northampton South SUE W	4.5	36	60	-24	60	-24
R03 Northampton South SUE S	4.5	41	60	-19	60	-19
R04 Collingtree Ct	4.5	44	60	-16	60	-16
R05 Collingtree Ct	4.5	46	60	-14	60	-14
R06 Watering Ln	4.5	42	54	-12	50	-8
R08 Hilton West	4.5	43	56	-13	52	-9
R11 Holiday Inn West	4.5	39	54	-15	51	-12
R12 Maple Farm East	4.5	46	54	-8	54	-8
R13 Maple Farm South	4.5	48	50	-2	50	-2
R14 Collingtree Rd	4.5	40	43	-3	52	-12
R15 Collingtree Rd North	4.5	35	43	-8	52	-17
R16 Collingtree Rd South	4.5	43	43	0	52	-9
R17 Collingtree Rd West	4.5	43	43	0	52	-9
R19 Collingtree Rd South	4.5	43	43	0	52	-9
R21 Barn Lane	4.5	42	36	6	51	-9
R23 Barn Ln	4.5	45	42	3	44	1
R24 Lodge Farm	4.5	43	42	1	44	-1
R25 Barn Ln	1.5	45	42	3	44	1
R28 Courteenhall Rd	4.5	43	35	8	50	-7
R29 West Lodge Cottages West	4.5	42	40	2	49	-7

Notes:

* Rating level includes applies a +3 dB(A) correction to the predicted specific sound level for sound features that are readily distinctive against the residual acoustic environment.

Appendix 8.18 Comparison of Predicted Rating Levels for SRFI Operations and Typical Background Sound Levels

Table 4 Initial estimate of SRFI operational sound impact – sensitivity test background sound levels – 23:00-07:00

Receptor		Rating Level * dB L _{Ar,15min}	Under broadly south-westerly winds		Under broadly north-easterly winds	
Name	Height (m)		Sensitivity Test Background Sound Level dB L _{A90,15min}	Rating Level - Background Sound Level	Sensitivity Test Background Sound Level dB L _{A90,15min}	Rating Level - Background Sound Level
R02 Northampton South SUE W	4.5	36	-	-	57	-21
R03 Northampton South SUE S	4.5	41	-	-	57	-16
R04 Collingtree Ct	4.5	44	-	-	57	-13
R05 Collingtree Ct	4.5	46	-	-	57	-11
R06 Watering Ln	4.5	42	51	-9	-	-
R08 Hilton West	4.5	43	53	-10	-	-
R11 Holiday Inn West	4.5	39	-	-	-	-
R12 Maple Farm East	4.5	46	51	-5	-	-
R13 Maple Farm South	4.5	48	47	1	-	-
R14 Collingtree Rd	4.5	40	-	-	48	-8
R15 Collingtree Rd North	4.5	35	40	-5	45	-10
R16 Collingtree Rd South	4.5	43	40	3	45	-2
R17 Collingtree Rd West	4.5	43	40	3	45	-2
R19 Collingtree Rd South	4.5	43	40	3	45	-2
R21 Barn Lane	4.5	42	-	-	47	-5
R23 Barn Ln	4.5	45	36	9	-	-
R24 Lodge Farm	4.5	43	36	7	-	-
R25 Barn Ln	1.5	45	36	9	-	-
R28 Courteenhall Rd	4.5	43	-	-	43	0
R29 West Lodge Cottages West	4.5	42	-	-	44	-2

Notes:

* Rating level includes applies a +3 dB(A) correction to the predicted specific sound level for sound features that are readily distinctive against the residual acoustic environment.

Appendix 8.18 Comparison of Predicted Rating Levels for SRFI Operations and Typical Background Sound Levels

Table 5 Predicted maximum short-term sound levels from SRFI operations – 23:00-07:00

Receptor		dB L _{AFmax} (façade)	Source
Name	Height (m)		
R02 Northampton South SUE W	4.5	39	Rail Terminal
R03 Northampton South SUE S	4.5	44	Rail Terminal
R04 Collingtree Ct	4.5	55	HGV in Service Yard
R05 Collingtree Ct	4.5	57	HGV in Service Yard
R06 Watering Ln	4.5	49	HGV in Service Yard
R08 Hilton West	4.5	47	HGV in Service Yard
R11 Holiday Inn West	4.5	44	HGV in Service Yard
R12 Maple Farm East	4.5	48	HGV in Service Yard
R13 Maple Farm South	4.5	49	HGV in Service Yard
R14 Collingtree Rd	4.5	41	HGV in Service Yard
R15 Collingtree Rd North	4.5	31	Rail Terminal
R16 Collingtree Rd South	4.5	46	Rail Terminal
R17 Collingtree Rd West	4.5	46	Rail Terminal
R19 Collingtree Rd South	4.5	48	Rail Terminal
R21 Barn Lane	4.5	46	Rail Terminal
R23 Barn Ln	4.5	50	Rail Terminal
R24 Lodge Farm	4.5	48	Rail Terminal
R25 Barn Ln	1.5	49	Rail Terminal
R28 Courteenhall Rd	4.5	48	HGV in Service Yard
R29 West Lodge Cottages West	4.5	47	Rail Terminal