



DCO Submission

Environmental Statement

Chapter 5: Noise and Vibration
Appendix 5.9: Construction Noise Predictions

Document 6.5I

On behalf of
Oxfordshire Railfreight Limited

Prepared by Vanguardia
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Appendix 5.9

Construction Noise Predictions

Appendix 5.9 Construction Noise Predictions

Table 1 Predicted construction noise levels from Main Site construction activities

Receptor		Height (m)	Predicted Construction Noise Level from activity L _{Aeq,12hr} (dB) free field; Levels are when works are in relatively close proximity to receptor																		
			A) Earthworks - soft soil strip	B) Earthworks - Bunding	C) Landscaping to bund	D) Main Earthworks Phase 1 (West)	E) Main Earthworks Phase 2 (East)	F) Landscaping Phase 1 (West)	G) Landscaping P2 (East)	H) Other retaining walls	I) Rail Terminal	J) Rail Sidings	K) Road Construction - Part 1	L) Road Construction - Part 2	M) Road Construction - Part 3	N) Concreting Activities	O) Main Build	P1) Piling Platforms	P2) Piling	P3) Piling Cropping	P4) Piling Capping
R00	Property in Woods	1.5	54	54	38	66	63	55	53	30	60	50	53	44	42	57	44	48	49	39	45
R5-S	Crossroads Farm - South	1.5	48	48	32	54	40	47	30	30	51	41	40	30	28	35	33	33	39	24	28
R6-S	Quarry Cottages - South	1.5	55	55	39	64	49	54	39	36	58	42	50	41	39	48	40	47	47	37	43
R11-E	2/4 Ardley Road - East	1.5	34	34	18	46	43	36	33	19	41	40	40	30	28	36	34	31	31	21	26
R12	Castle Fields - South	1.5	45	45	29	54	50	44	40	28	47	40	46	36	34	43	38	39	39	29	35
R13-S	Manor Farm Ardley - South	1.5	42	42	26	49	47	38	41	24	46	41	43	33	31	37	37	33	36	23	28
R14-W	Church Road - West	1.5	42	42	26	52	51	41	41	24	46	43	45	36	34	44	38	36	36	25	30
R15	Orchard Cottage - South	1.5	44	44	28	54	54	46	43	27	50	44	48	38	36	48	39	40	41	31	37
R24-W	3 Station Road – West	1.5	41	41	25	53	50	44	40	26	45	44	47	37	36	43	38	35	37	25	30
R27-S	Upland Cottage – South	1.5	49	49	33	55	55	45	48	25	51	53	49	39	37	49	44	41	44	31	37
R28-W	Ardley Field Farm Cottages – West	1.5	63	63	47	53	70	43	62	27	51	56	57	48	46	60	53	40	41	30	35
R30-E	Upper Heyford – East	1.5	58	58	42	68	49	57	39	34	37	36	62	54	52	62	49	28	28	17	22
R30-S	Upper Heyford – South	1.5	59	59	43	65	49	58	39	32	36	35	63	54	53	63	54	26	26	16	21
R30-W	Upper Heyford – West	1.5	47	47	31	57	47	46	37	22	33	32	58	50	48	65	54	23	22	12	16
R31	Camp Road – East	1.5	43	42	26	52	45	41	36	19	32	29	47	38	36	42	43	22	21	11	15
R32	Heyford Grange – East	1.5	45	45	29	51	46	44	36	18	31	28	47	38	36	47	42	21	20	10	14

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Receptor		Height (m)	Predicted Construction Noise Level from activity L _{Aeq,12hr} (dB) free field; Levels are when works are in relatively close proximity to receptor																		
			A) Earthworks - soft soil strip	B) Earthworks - Bunding	C) Landscaping to bund	D) Main Earthworks Phase 1 (West)	E) Main Earthworks Phase 2 (East)	F) Landscaping Phase 1 (West)	G) Landscaping P2 (East)	H) Other retaining walls	I) Rail Terminal	J) Rail Sidings	K) Road Construction - Part 1	L) Road Construction - Part 2	M) Road Construction - Part 3	N) Concreting Activities	O) Main Build	P1) Piling Platforms	P2) Piling	P3) Piling Cropping	P4) Piling Capping
R33	42 Trenchard Close – East	1.5	47	47	30	52	46	46	36	18	30	27	49	40	38	43	44	20	20	9	13
R34A	Richborough Estates Development	1.5	59	59	42	65	51	58	42	20	33	30	62	53	51	55	54	21	21	11	15
R35-E	50 Duvall Park – East	1.5	43	45	29	51	47	44	37	17	29	27	50	40	38	44	42	19	18	8	12
R36	Manor Farm - North	1.5	40	40	23	45	49	35	39	15	28	27	40	30	28	38	33	19	17	6	11
R37-N	4 Manor Farm Cottages – North	1.5	51	51	35	39	58	29	50	12	26	27	40	30	28	38	33	17	16	5	10
R39-W	Dewars Farm – West	1.5	48	48	32	38	56	28	47	11	26	28	39	29	27	34	33	17	16	5	10
R40-W	Dewars Farm Cottages – West	1.5	44	44	28	38	53	27	43	11	25	25	37	28	26	33	31	16	15	4	8
O4	Ardley Woods	1.5	52	52	36	61	52	51	42	33	55	40	52	43	41	49	41	46	47	37	43
O5	Ardley Fields Quarry LWS	1.5	61	61	45	43	66	32	60	17	40	69	42	32	30	38	36	30	30	20	25
O6	Ardley Fields Ponds West LWS	1.5	61	61	45	49	69	39	60	26	48	49	50	41	39	64	52	36	36	26	31
O7	The Heath (pDWS)	1.5	47	47	31	55	59	49	50	21	32	30	56	47	45	61	54	21	22	10	14
O8	Upper Heyford Airfield LWS	1.5	55	55	39	63	48	54	39	42	54	42	54	45	43	55	49	39	41	29	35
Key to effect levels:		< LOAEL					Between LOAEL and SOAEL						> SOAEL								

Appendix 5.9 Construction Noise Predictions

Table 2 Predicted construction noise levels from Ardley Bypass construction activities

Receptor		Height (m)	Predicted Construction Noise Level from activity L _{Aeq,12hr} (dB) free field; Levels are when works are in relatively close proximity to receptor				
			R1) Enabling Works	R2) Road Construction - Part 1	R3) Road Construction - Part 2 Kerbing	R4) Road Construction - Part 3 Surfacing	R5) Bridges
R00	Property in Woods	1.5	48	39	32	41	45
R14-W	Church Road - West	1.5	42	32	24	34	37
R15	Orchard Cottage - South	1.5	42	34	28	35	37
R19-E	Grooms Cottage - East	1.5	50	42	35	43	45
R20-W	Barnhouse Kennels – West	1.5	58	50	44	52	55
R24-E	3 Station Road – East	1.5	47	38	32	40	42
R27-S	Upland Cottage – South	1.5	55	46	40	48	42
R28-W	Ardley Field Farm Cottages – West	1.5	57	48	42	50	54
O1	St Marys Church	1.5	46	36	31	38	38
O2	Ardley Village Hall	1.5	52	43	37	45	40
O3	Ardley Playing Fields	1.5	49	39	34	41	34
O4	Ardley Woods	1.5	40	30	25	32	36
O5	Ardley Fields Quarry LWS	1.5	42	33	27	34	36
O6	Ardley Fields Ponds West LWS	1.5	48	38	33	41	43
Key to effect levels:			< LOAEL	Between LOAEL and SOAEL		≥ SOAEL	

Appendix 5.9 Construction Noise Predictions

Table 3 Predicted construction noise levels from Heyford Park Link Road construction activities

Receptor		Height (m)	Predicted Construction Noise Level from activity $L_{Aeq,12hr}$ (dB) free field; Levels are when works are in relatively close proximity to receptor			
			R1) Enabling Works	R2) Road Construction - Part 1	R3) Road Construction - Part 2 Kerbing	R4) Road Construction -Part 3 Surfacing
R30-E	Upper Heyford – East	1.5	40	31	25	33
R30-S	Upper Heyford – South	1.5	41	32	26	34
R30-W	Upper Heyford – West	1.5	40	30	25	32
R31	Camp Road – East	1.5	41	31	25	33
R32	Heyford Grange – East	1.5	41	31	26	33
R33	42 Trenchard Close – East	1.5	42	32	26	34
R34A	Richborough Estates Development	1.5	50	41	35	43
R35-E	50 Duvall Park – East	1.5	44	34	28	36
R36	Manor Farm - North	1.5	40	30	25	32
R37-N	4 Manor Farm Cottages – North	1.5	48	39	33	41
R39-W	Dewars Farm – West	1.5	46	37	31	39
R40-W	Dewars Farm Cottages – West	1.5	43	34	28	36
Key to effect levels:			< LOAEL	Between LOAEL and SOAEL	≥ SOAEL	

Appendix 5.9 Construction Noise Predictions

Table 4 Predicted construction noise levels from Middleton Stoney Relief Road

Receptor		Height (m)	Predicted Construction Noise Level from activity $L_{Aeq,12hr}$ (dB) free field; Levels are when works are in relatively close proximity to receptor			
			R1) Enabling Works	R2) Road Construction - Part 1	R3) Road Construction - Part 2 Kerbing	R4) Road Construction - Part 3 Surfacing
R37-N	4 Manor Farm Cottages – North	1.5	50	41	35	43
R39-W	Dewars Farm – West	1.5	49	40	34	42
R40-E	Dewars Farm Cottages – East	1.5	45	36	30	38
R41-W	Bucknell Lodge – West	1.5	51	42	36	44
R46-E	Holly Tree House – East	1.5	45	36	30	38
R47-E	Chapel Cottage - East	1.5	50	41	35	43
R48	Gaygle Brook Cottage - North	1.5	57	49	42	50
Key to effect levels:						
		< LOAEL	Between LOAEL and SOAEL		≥ SOAEL	

Appendix 5.9 Construction Noise Predictions

Table 5 Predicted construction noise levels from M40 Junction 10 Highways works

Receptor		Height (m)	Predicted Construction Noise Level from activity $L_{Aeq,12hr}$ (dB) free field; Levels are when works are in relatively close proximity to receptor				
			R1) Enabling Works	R2) Road Construction - Part 1	R3) Road Construction - Part 2 Kerbing	R4) Road Construction - Part 3 Surfacing	R5) Bridges
R9-S	The Cottages	1.5	51	42	36	44	36
R10-E	28 Ardley Rd	1.5	50	40	35	42	37
R50-E	56 Ardley Road	1.5	51	42	36	44	43
R51-N	Travelodge	1.5	48	39	33	41	39
O3	Ardley Playing Fields	1.5	48	37	33	39	38
Key to effect levels:			< LOAEL	Between LOAEL and SOAEL	≥ SOAEL		

Appendix 5.9 Construction Noise Predictions

Table 6 Predicted construction noise levels from all activities for each works and a sum of all works taking place concurrently

Receptor		Height (m)	Construction Noise Level from all construction activities taking place for each works and estimation of all construction Works associated with the Proposed Development taking place simultaneously, $L_{Aeq,12hr}$ (dB) free field					
			Main Site Works	Ardley Bypass Works	Heyford Park Link Road Works	Middleton Stoney Relief Road Works	M40 Junction 10 Highways works	All activities from all works taking place concurrently
R00	Property in Woods	1.5	70	51	-	-	-	70
R5-S	Crossroads Farm - South	1.5	58	-	-	-	-	58
R6-S	Quarry Cottages - South	1.5	66	-	-	-	-	66
R9-S	The Cottages	1.5	-	-	-	-	47	47
R10-E	28 Ardley Rd	1.5	-	-	-	-	45	45
R11-E	2/4 Ardley Road - East	1.5	51	-	-	-	-	51
R12	Castle Fields - South	1.5	58	-	-	-	-	58
R13-S	Manor Farm Ardley - South	1.5	54	-	-	-	-	54
R14-W	Church Road - West	1.5	57	44	-	-	-	57
R15	Orchard Cottage - South	1.5	60	44	-	-	-	60
R19-E	Grooms Cottage - East	1.5	-	52	-	-	-	52
R20-W	Barnhouse Kennels – West	1.5	-	61	-	-	-	61
R24-W	3 Station Road – West	1.5	57	-	-	-	-	57
R24-E	3 Station Road – East	1.5	-	49	-	-	-	49
R27-S	Upland Cottage – South	1.5	62	56	-	-	-	63
R28-W	Ardley Field Farm Cottages – West	1.5	73	60	-	-	-	73
R30-E	Upper Heyford – East	1.5	71	-	41	-	-	71
R30-S	Upper Heyford – South	1.5	70	-	42	-	-	70
R30-W	Upper Heyford – West	1.5	67	-	41	-	-	67
R31	Camp Road – East	1.5	55	-	42	-	-	56
R32	Heyford Grange – East	1.5	56	-	42	-	-	56
R33	42 Trenchard Close – East	1.5	57	-	43	-	-	57
R34A	Richborough Estates Development	1.5	69	-	51	-	-	69
R35-E	50 Duvall Park – East	1.5	56	-	45	-	-	57
R36	Manor Farm - North	1.5	52	-	41	-	-	52

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Receptor		Height (m)	Construction Noise Level from all construction activities taking place for each works and estimation of all construction Works associated with the Proposed Development taking place simultaneously, L _{Aeq,12hr} (dB) free field					
			Main Site Works	Ardley Bypass Works	Heyford Park Link Road Works	Middleton Stoney Relief Road Works	M40 Junction 10 Highways works	All activities from all works taking place concurrently
R37-N	4 Manor Farm Cottages – North	1.5	60	-	49	51	-	61
R39-W	Dewars Farm – West	1.5	58	-	47	50	-	59
R40-W	Dewars Farm Cottages – West	1.5	55	-	44	46	-	56
R41-W	Bucknell Lodge – West	1.5	-	-	-	52	-	52
R46-E	Holly Tree House – East	1.5	-	-	-	46	-	46
R47-E	Chapel Cottage - East	1.5	-	-	-	51	-	51
R48	Gaygle Brook Cottage - North	1.5	-	-	-	58	-	58
R50-E	56 Ardley Road	1.5	-	-	-	-	48	48
R51-N	Travelodge	1.5	-	-	-	-	45	45
O1	St Marys Church	1.5	-	48	-	-	-	48
O2	Ardley Village Hall	1.5	-	54	-	-	-	54
O3	Ardley Playing Fields	1.5	-	50	-	-	43	51
O4	Ardley Woods	1.5	64	42	-	-	-	64
O5	Ardley Fields Quarry LWS	1.5	72	44	-	-	-	72
O6	Ardley Fields Ponds West LWS	1.5	72	50	-	-	-	72
O7	The Heath (pDWS)	1.5	65	-	-	-	-	65
O8	Upper Heyford Airfield LWS	1.5	66	-	-	-	-	66
Key to Effect Levels:			< LOAEL	Between LOAEL and SOAEL		≥ SOAEL		