

M25 junction 28 improvement scheme

TR010029

9.43 Environmental Statement: Appendix 6.2 Construction Noise and Vibration (Tracked)

Regulation 5(2)(q)

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9.43 ENVIRONMENTAL STATEMENT APPENDIX 6.2 CONSTRUCTION NOISE AND VIBRATION (TRACKED)

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Appendix 6.2

Construction noise and vibration

6. Construction noise and vibration

6.1 Introduction

- 6.1.1 This document presents the data used to predict the daytime and night-time construction noise levels for the Scheme that are presented in the Noise and Vibration chapter (Chapter 6) of ES (application document TR010029/APP/6.1) and monthly breakdown of highest daily daytime and night-time construction noise levels month with and without mitigation.
- 6.1.2 Information relating to the proposed construction activities, plant lists, on-times, and construction phasing was provided by the buildability contractor, along with an indicative construction programme. Noise data from BS 5228:2009 + A1:2014 has been assigned to the named items of plant in order to calculate the activity noise level. Other data sources, such as measurement data, have been used where a similar item of plant could not be found in BS 5228.
- 6.1.3 For further information regarding the assessment methodology and assumptions, please refer to Noise and Vibration chapter (Chapter 6) of ES (application document TR010029/APP/6.1).

6.2 Construction noise

- 6.2.1 Table 6.1 shows the construction activity considered for the study and the associated plant list and the respective noise levels, quantity percentage on-time and corrections.

Table 6.1: Construction equipment list per activity

Construction Activity	Plant	Total L _{Aeq} at 10m (dB)	Quantity	Percentage on-time (%)	Correction (dB)	L _{Aeq} corrected (dB)
Site enabling works	Tracked excavator (14T)	69	1	85	-0.7	68.3
	4 axled tipper wagon	80	2	85	-0.7	82.3
Utilities diversion	Tracked excavator (14T)	69	1	85	-0.7	68.3
	Dumper (6T)	79	1	85	-0.7	78.3
	Water pump	68	2	100	0.0	71.0
Site compound set-up	Tracked excavator (25T)	77	2	85	-0.7	79.3
	Tracked dozer D6 (20T)	83	2	85	-0.7	85.3
	Articulated dump truck	81	4	85	-0.7	86.3
	4 axled tipper wagon	80	2	85	-0.7	82.3
	Dumper (6T)	79	2	85	-0.7	81.3
	Roller (12T)	84	2	40	-4.0	83.0
	Concrete mixer truck	80	1	40	-4.0	76.0
	Poker vibrator	78	1	85	-0.7	77.3
	Road roller	80	2	85	-0.7	82.3
	Asphalt paver	77	1	85	-0.7	76.3
Site compounds maintenance	4 axled tipper wagon	80	10	85	-10.0	80.0
	Tracked excavator (25T)	77	3	85	-10.0	71.8
	Diesel generator	66	2	100	0.0	69.0
	Road sweeper	76	1	40	-10.0	66.0
	Wheeled loader	79	2	20	-10.0	72.0
	Telescopic handler	79	2	85	-10.0	72.0

Construction Activity	Plant	Total L _{Aeq} at 10m (dB)	Quantity	Percentage on-time (%)	Correction (dB)	L _{Aeq} corrected (dB)
	Fuel tanker lorry	76	1	20	-10.0	66.0
Cadent and UKPN gas diversion works	Tracked excavator (14T)	69	1	85	-0.7	68.3
	Wheeled mobile telescopic crane (400T)	78	2	40	-4.0	77.0
	Large lorry	80	2	85	-0.7	82.3
	Angle grinder	80	1	20	-7.0	73.0
	Dumper (6T)	79	2	85	-0.7	81.3
	Water pump	68	2	100	0.0	71.0
	Traffic management	Lorry	80	2	20	-7.0
Earthworks	Tracked excavator (25T)	77	3	85	-0.7	81.1
	Tracked dozer D6 (20T)	83	1	85	-0.7	82.3
	Articulated dump truck	81	2	85	-0.7	83.3
	4 axled tipper wagon	80	2	85	-0.7	82.3
	Roller (12T)	84	2	40	-4.0	83.0
Drainage	Tracked excavator (14T)	69	1	85	-0.7	68.3
	Roller (1.5T)	77	1	40	-4.0	73.0
	Dumper (6T)	79	2	85	-0.7	81.3
	4 axled tipper wagon	80	2	85	-0.7	82.3
Retaining walls	Water pump	68	1	100	0.0	68.0
	Piling rig	77	1	85	-0.7	76.3
	Concrete mixer truck	80	1	40	-4.0	76.0
	Tracked excavator (14T)	69	2	85	-0.7	71.3
	Dumper (6T)	79	1	85	-0.7	78.3

Construction Activity	Plant	Total L _{Aeq} at 10m (dB)	Quantity	Percentage on-time (%)	Correction (dB)	L _{Aeq} corrected (dB)
	Poker vibrator	78	1	40	-4.0	74.0
	Concrete pump	80	1	20	-7.0	73.0
Road formation level	Tracked excavator (25T)	77	3	85	-0.7	81.1
	Tracked dozer D6 (20T)	83	1	85	-0.7	82.3
	Grader	81	2	85	-0.7	83.3
	Articulated dump truck	81	2	85	-0.7	83.3
	4 axled tipper wagon	80	2	85	-0.7	82.3
	Roller (12T)	84	2	40	-4.0	83.0
Paving and surface course	Road planer	82	1	85	-0.7	81.3
	Power for lighting	65	2	75	-1.2	66.8
	Road roller	80	2	85	-0.7	82.3
	Asphalt paver	77	1	85	-0.7	76.3
	4 axled tipper wagon	80	2	85	-0.7	82.3
Ground stabilisation	Piling rig	77	1	85	-0.7	76.3
	Concrete mixer truck	80	1	40	-4.0	76.0
	Tracked excavator (14T)	69	1	85	-0.7	68.3
	Poker vibrator	78	1	40	-4.0	74.0
	Concrete pump	80	1	20	-7.0	73.0
Abutments and bridges / Piled walls	Water pump	68	1	100	0.0	68.0
	Piling rig	77	1	85	-0.7	76.3
	Concrete mixer truck	80	1	40	-4.0	76.0
	Tracked excavator (14T)	69	2	85	-0.7	71.3

Construction Activity	Plant	Total L _{Aeq} at 10m (dB)	Quantity	Percentage on-time (%)	Correction (dB)	L _{Aeq} corrected (dB)
	Dumper (6T)	79	1	85	-0.7	78.3
	Poker vibrator	78	1	40	-4.0	74.0
	Concrete pump	80	1	20	-7.0	73.0
<u>Create piling mats for contig wall</u>	<u>Tracked excavator (25T)</u>	<u>77</u>	<u>1</u>	<u>85</u>	<u>-0.7</u>	<u>76.3</u>
	<u>Articulated Dump Truck</u>	<u>81</u>	<u>2</u>	<u>85</u>	<u>-0.7</u>	<u>83.3</u>
	<u>Poker Vibrator</u>	<u>78</u>	<u>1</u>	<u>20</u>	<u>-7.0</u>	<u>71.0</u>
	<u>Concrete pump</u>	<u>80</u>	<u>1</u>	<u>10</u>	<u>-10.0</u>	<u>70.0</u>
	<u>Concrete Mixer Truck</u>	<u>80</u>	<u>1</u>	<u>10</u>	<u>-10.0</u>	<u>70.0</u>
<u>Trim piles</u>	<u>Breaker mounted on wheeled backhoe</u>	<u>92</u>	<u>1</u>	<u>40</u>	<u>-4.0</u>	<u>88.0</u>
	<u>Hydraulic breaker power pack</u>	<u>74</u>	<u>1</u>	<u>40</u>	<u>-4.0</u>	<u>70.0</u>
	<u>Gas cutter</u>	<u>79</u>	<u>1</u>	<u>10</u>	<u>-10.0</u>	<u>69.0</u>
	<u>Tracked Excavator (14T)</u>	<u>69</u>	<u>1</u>	<u>40</u>	<u>-4.0</u>	<u>65.0</u>
	<u>Dumper (6T)</u>	<u>79</u>	<u>1</u>	<u>85</u>	<u>-0.7</u>	<u>78.3</u>
<u>Capping beam / RECO walls</u>	<u>Wheeled mobile telescopic crane 400t</u>	<u>78</u>	<u>2</u>	<u>40</u>	<u>-4.0</u>	<u>74.8</u>
	<u>large Lorry</u>	<u>80</u>	<u>2</u>	<u>85</u>	<u>-0.7</u>	<u>79.4</u>
	<u>Water Pump</u>	<u>68</u>	<u>1</u>	<u>100</u>	<u>0.0</u>	<u>64.5</u>
	<u>Poker Vibrator</u>	<u>78</u>	<u>1</u>	<u>40</u>	<u>-4.0</u>	<u>69.9</u>
	<u>Concrete pump</u>	<u>80</u>	<u>1</u>	<u>20</u>	<u>-7.0</u>	<u>68.4</u>
	<u>Concrete Mixer Truck</u>	<u>80</u>	<u>1</u>	<u>40</u>	<u>-4.0</u>	<u>70.9</u>
<u>Abutment diaphragm walls</u>	<u>Poker Vibrator</u>	<u>78</u>	<u>1</u>	<u>40</u>	<u>-4.0</u>	<u>74.0</u>
	<u>Concrete pump</u>	<u>80</u>	<u>1</u>	<u>20</u>	<u>-7.0</u>	<u>73.0</u>

Construction Activity	Plant	Total L _{Aeq} at 10m (dB)	Quantity	Percentage on-time (%)	Correction (dB)	L _{Aeq} corrected (dB)
String course	Concrete Mixer Truck	80	1	40	-4.0	76.0
	Lorry with lifting boom	77	2	40	-4.0	76.0
	Diesel scissor lift	78	2	85	-0.7	80.3
	Air gun	83	2	10	-10.0	76.0
	compressor for air gun	65	2	10	-10.0	58.0
Embankments	Tracked excavator (25T)	77	3	85	-0.7	81.1
	Tracked dozer D6 (20T)	83	1	85	-0.7	82.3
	Articulated dump truck	81	2	85	-0.7	83.3
	4 axled tipper wagon	80	2	85	-0.7	82.3
	Roller (12T)	84	2	40	-4.0	83.0
Watercourse realignment	Tracked excavator (25T)	77	3	85	-0.7	81.1
	Tracked dozer D6 (20T)	83	1	85	-0.7	82.3
	Articulated dump truck	81	2	85	-0.7	83.3
	4 axled tipper wagon	80	2	85	-0.7	82.3
	Roller (12T)	84	2	40	-4.0	83.0
Install culvert	Tracked excavator (25T)	77	3	85	-0.7	81.1
	Tracked dozer D6 (20T)	83	1	85	-0.7	82.3
	Articulated dump truck	81	2	85	-0.7	83.3
	4 axled tipper wagon	80	2	85	-0.7	82.3
	Roller (12T)	84	2	40	-4.0	83.0
Assembly of beams and construction of bridge deck	Wheeled mobile telescopic crane (400T)	78	2	40	-4.0	77.0
	Large lorry	80	2	85	-0.7	82.3

Construction Activity	Plant	Total L _{Aeq} at 10m (dB)	Quantity	Percentage on-time (%)	Correction (dB)	L _{Aeq} corrected (dB)
	Air gun	83	2	10	-10.0	76.0
	Compressor for air gun	65	2	10	-10.0	58.0
Road construction	Road planer	82	1	85	-0.7	81.3
	Tracked excavator (25T)	77	3	85	-0.7	81.1
	Grader	81	2	85	-0.7	83.3
	Articulated dump truck	81	2	85	-0.7	83.3
	Power for lighting	65	2	75	-1.2	66.8
	Dumper (6T)	79	2	85	-0.7	81.3
	Road roller	80	2	85	-0.7	82.3
	Asphalt paver	77	1	85	-0.7	76.3
	4 axled tipper wagon	80	2	85	-0.7	82.3
	Install road restraint system	Mini piling rig	75	2	60	-2.2
Mini tracked excavator (3T)		68	2	85	-0.7	70.3
Impact wrench		83	2	30	-5.2	80.8
Compressor		75	2	30	-5.2	72.8
Lorry mounted crane		70	2	20	-7.0	66.0
Installation of ancillary infrastructure	Tracked excavator (14T)	69	1	85	-0.7	68.3
	Dumper (6T)	79	2	85	-0.7	81.3
	Piling rig	77	1	85	-0.7	76.3
	Road roller	80	2	85	-0.7	82.3
Road remarking	Lorry	80	2	75	-1.2	81.8
Disassemble gantry structure	Wheeled mobile telescopic crane (400T)	78	2	40	-4.0	77.0

Construction Activity	Plant	Total L _{Aeq} at 10m (dB)	Quantity	Percentage on-time (%)	Correction (dB)	L _{Aeq} corrected (dB)
	Large lorry	80	2	85	-0.7	82.3
	Impact wrench	83	2	30	-5.2	80.8
	Compressor	75	2	30	-5.2	72.8
	Angle grinder	80	1	20	-7.0	73.0
	Telescopic handler	79	2	85	-10.0	72.0
	Diesel scissor lift	78	1	40	-4.0	74.0
Demolish gantry base	Tracked excavator (25T)	77	3	85	-0.7	81.1
	Tracked dozer D6 (20T)	83	1	85	-0.7	82.3
	Articulated dump truck	81	2	85	-0.7	83.3
	4 axled tipper wagon	80	2	85	-0.7	82.3
	Roller (12T)	84	2	40	-4.0	83.0
	Hand held circular saw - petrol	84	1	20	-7.0	77.0
	Angle grinder	80	1	20	-7.0	73.0
	Pneumatic breaker	80	1	40	-4.0	76.0
	Wheeled loader	79	2	20	-10.0	72.0
Construct piled foundation	Tracked excavator (14T)	69	1	85	-0.7	68.3
	Dumper (6T)	79	2	85	-0.7	81.3
	Piling rig	77	1	85	-0.7	76.3
	Road roller	80	2	85	-0.7	82.3
Construct gantry base	Water pump	68	1	100	0.0	68.0
	Concrete mixer truck	80	1	40	-4.0	76.0
	Concrete pump	80	1	20	-7.0	73.0

Construction Activity	Plant	Total L _{Aeq} at 10m (dB)	Quantity	Percentage on-time (%)	Correction (dB)	L _{Aeq} corrected (dB)
	Poker vibrator	78	1	40	-4.0	74.0
	Tracked excavator (14T)	69	1	85	-0.7	68.3
	Dumper (6T)	79	2	85	-0.7	81.3
Install steel works	Wheeled mobile telescopic crane (400T)	78	2	40	-4.0	77.0
	Large lorry	80	2	85	-0.7	82.3
	Impact wrench	83	2	30	-5.2	80.8
	Compressor	75	2	30	-5.2	72.8
	Angle grinder	80	1	20	-7.0	73.0
	Telescopic handler	79	2	85	-10.0	72.0
	Diesel scissor lift	78	1	40	-4.0	74.0
Install/Remove sign plates and equipment	Impact wrench	83	2	30	-5.2	80.8
	Compressor	75	2	30	-5.2	72.8
	Angle grinder	80	1	20	-7.0	73.0
	Telescopic handler	79	2	85	-10.0	72.0
	Diesel scissor lift	78	1	40	-4.0	74.0
Landscaping	Tracked excavator (17T)	73	1	85	-0.7	72.3
	Dumper (6T)	79	2	85	-0.7	81.3

6.2.2 Table 6.2 shows the predicted highest daily daytime (L_{Aeq} , dB) construction noise levels without mitigation at selected representative sensitive receptors in the study area.

Table 6.2: Predicted highest daily daytime construction noise levels at selected location – No mitigation

Sensitive Receptor	Construction noise levels (L_{Aeq} ,dB)																																
	2021/2022											2023										2024											
	Feb	Sep	Mar	Oct	Apr	Nov	May	Dec	Jun	Jan	Jul	Aug	Mar	Oct	Apr	Nov	May	Dec	Jun	Jan	Jul	Aug	Mar	Oct	Apr	Nov	May	Dec	Jun	Jan	Jul	Aug	Mar
Grove Farm, CM14 5NG	67	67	57/72	78	78	78	72/73	72/74	72/73	74/74	73/75	73	74	74/73	69/72	76/72	74/70	78/76	78/73	70/78	76/78	78/77	77/78	77/79	74/78	74/76	74/73	70/73	53/68	68	68		
Maylands Cottages, RM3 0AZ	61	61/74	75/74	63	64	64	64	63/64	64/65	63/64	63/64	63	63	63/64	63/64	64	66/64	66/64	66	65/67	65/68	63/66	63/65	63/64	63/64	63/64	63	62/63	62/63	63			
Caravan Park, RM3 0AW	64	64	56/67	72/67	72/67	72/67	73/67	70/68	75/74	73	72/73	72/74	71/69	71/68	71/71	72/70	72/69	72/72	68/73	68/72	70/71	70/72	71/70	70/70	70/73	67/71	67/71	62/71	61/66	62/64	63/64	63	
17 Colchester Road, RM3 0AW	61/63	61/74	72/74	60/65	63/66	65/66	63/65	63/66	63/67	60/66	61/66	60/66	60/63	60/63	60/64	69/64	72/64	64	64/73	63/67	63/68	60/66	59/65	59/64	60/64	59/64	59/64	59/63	58/63	58/63	63		
12, Craven Gardens, RM3 0DF	51	51	61	54	56	56	57	56	58	56	57	56	55	55	55	55	57	60	57	57	56	56	55	54	54	55	54	52	52	52	51		
Gardens of Peace Muslim Cemetery	55	55	61	58	60	60	62	60	62	61	62	62	60	60	60	59	59	61	62	62	61	61	58	57	57	57	57	54	54	53	53		

Sensitive Receptor	Construction noise levels (L _{Aeq} ,dB)																															
	2021/2022											2023										2024										
	Feb-Sep	Mar-Oct	Apr-Nov	May-Dec	Jun-Jan	Jul-Feb	Aug-Mar	Sep-Apr	Oct-May	Nov-Jun	Dec-Jan	Jan-Aug	Feb-Sep	Mar-Oct	Apr-Nov	May-Dec	Jun-Jan	Jul-Feb	Aug-Mar	Sep-Apr	Oct-May	Nov-Jun	Dec-Jan	Jan-Aug	Feb-Sep	Mar-Oct	Apr-Nov	May-Dec	Jun-Jan	Jul-Feb	Aug-Mar	Apr
10, Woodstock Avenue, RM3 9NF	48	48	58	52	53	53	54	53	55	54	54	54	52	53	53	53	54	55	55	54	55	53	52	52	53	52	51	50	50	49		
42, Woodstock Avenue, RM3 9NF	49	49	58	52	54	54	54	53	55	54	54	53	52	53	53	53	54	56	56	55	55	53	52	52	53	52	51	50	50	49		
63 Brook Street, CM14 5NA	46	46 49	49 53	55 54	55	55	56 54	55 54	57 54	56 54	56 54	56 57	55	56 57	56 58	54 58	54 56	55 57	55	56 55	52 58	56 60	58	56 59	57 59	58 59	56 58	56	54 55	44 54	49 54	53
60 Brook Street, CM14 5ND	48	48 50	49 54	56 56	57 56	56	57 55	56 55	58 56	57 55	57 55	57 58	56	57	57	55 58	54 56	56 57	57	57 55	53 59	57 60	59 60	58 60	58 64	59 64	57 60	57 58	54 57	46 53	48 54	50
13 Nag's Head Lane, CM14 5NJ	30	30 34	34 39	40	41 40	40	42 40	41 40	43 44	43 44	43 44	42 43	41 40	42 44	42	41 42	39 41	40 44	41	41 40	39 44	42 45	43 44	42 44	43 45	43 45	41 44	40 42	38 44	32 38	36 38	38
31, Wingrave Crescent, CM14 5PA	36	36	43	47	47	47	49	48	50	49	49	49	48	49	49	48	46	48	47	48	45	48	50	48	49	50	48	48	46	39	42	
7, Leonard Way, CM14 5PD	35	35	42	45	46	46	48	47	49	48	48	47	47	48	48	47	45	47	46	46	44	47	48	47	48	49	47	46	44	38	40	

Sensitive Receptor	Construction noise levels (L _{Aeq} ,dB)																																
	2022												2023								2024												
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Apr	
12, Talbrook, CM14 4PY	32	32	39	43	44	44	45	44	46	46	45	45	44	45	44	43	44	43	44	42	44	46	44	45	46	44	45	46	44	43	42	36	38
Weald Hall, Wigley Bush Lane, CM14 5QP	35	35	42	46	47	46	49	47	49	49	49	48	48	48	48	46	47	46	47	44	48	48	47	48	49	47	47	46	44	38	40		

Legend

SOAEL exceedance	LOAEL exceedance
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6.2.3 Table 6.3 shows the predicted highest daily night-time (L_{Aeq}, dB) construction noise levels without mitigation at selected representative sensitive receptors in the study area.

Table 6.3: Predicted highest daily night-time construction noise levels at selected location – No mitigation

Sensitive Receptor	Construction noise levels (L _{Aeq} ,dB)																															
	2022												2023								2024											
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Apr
Grove Farm, CM14 5NG	0	0	10	62	58	54	52	54	54	42	40	37	39	41	41	39	53	53	39	39	48	75	72	65	65	65	68	66	66	47	65	65

Sensitive Receptor	Construction noise levels (L _{Aeq} ,dB)																															
	2022/23											2023											2024									
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
Maylands Cottages, RM3 0AZ	0	0	10	50	51	51	51	50	49	49	49	49	49	49	52	52	49	49	60	60	50	50	51	54	52	52	52	50	51	54		
Caravan Park, RM3 0AW	0	0	10	61	56	55	53	57	59	55	49	35	48	51	51	48	56	56	48	48	60	61	52	50	52	61	58	54	54	46	61	64
17 Colchester Road, RM3 0AW	0	0	10	47	53	55	53	53	53	45	45	45	45	45	59	59	45	45	60	60	47	47	49	64	50	50	50	47	49	54	54	
12, Craven Gardens, RM3 0DF	0	0	10	41	44	45	43	42	42	39	38	37	37	38	38	37	46	46	37	37	52	53	43	43	45	52	47	47	47	43	46	
Gardens of Peace Muslim Cemetery	0	0	10	44	48	48	47	45	45	41	39	38	39	39	38	46	46	38	38	58	59	45	45	47	54	50	49	49	44	48		
10, Woodstock Avenue, RM3 9NF	0	0	10	38	40	40	39	38	38	37	36	35	35	36	36	35	41	41	35	35	50	51	42	42	44	46	46	46	46	42	45	
42, Woodstock Avenue, RM3 9NF	0	0	10	39	41	41	40	39	39	36	36	35	35	35	35	39	39	35	35	52	53	42	42	44	49	46	46	46	42	45		

Sensitive Receptor	Construction noise levels (L _{Aeq} ,dB)																														
	2022/23											2023											2024								
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun		
63 Brook Street, CM14 5NA	0	0	10	44	39	39	37	38	37	34	32	30	28	30	30	29	39	39	29	42	54	51	52	53	56	54	56	56	49	48	50
60 Brook Street, CM14 5ND	0	0	10	61	40	39	38	38	37	35	33	30	30	32	32	30	40	40	30	44	56	52	51	52	50	55	55	55	59	46	47
13 Nag's Head Lane, CM14 5NJ	0	0	10	32	26	25	24	24	23	22	20	18	18	19	19	18	23	23	18	31	39	35	34	37	35	39	39	40	36	34	
31, Wingrave Crescent, CM14 5PA	0	0	10	33	32	31	30	30	29	28	26	25	23	24	24	23	31	31	23	37	46	42	43	45	44	46	47	47	42	44	
7, Leonard Way, CM14 5PD	0	0	10	32	30	30	29	29	28	27	25	24	22	23	23	22	29	29	22	36	44	41	42	44	43	45	46	46	41	43	
12, Talbrook, CM14 4PY	0	0	10	35	28	27	26	26	25	25	23	22	20	22	22	20	27	27	20	34	42	38	39	41	40	42	43	44	39	41	
Weald Hall, Wigley Bush Lane, CM14 5QP	0	0	10	38	31	30	29	30	28	27	26	25	22	24	24	22	29	29	22	36	45	41	41	45	43	46	47	47	42	45	

Legend	
 SOAEL exceedance	 LOAEL exceedance

6.2.4 Table 6.4 shows the predicted highest daily daytime (L_{Aeq} , dB) construction noise levels with the recommended mitigation as outlined in the chapter (Chapter 6) of ES (application document TR010029/APP/6.1) at selected representative sensitive receptors in the study area.

Table 6.4: Predicted highest daily daytime construction noise levels at selected location – With mitigation

Sensitive Receptor	Construction noise levels (L_{Aeq} ,dB)																															
	2022-2024											2023										2024										
	FebSep	MarOct	AprNov	MayDec	JunJan	JulFeb	AugMar	SepApr	OctMay	NovJun	DecJul	JanAug	FebSep	MarOct	AprNov	MayDec	JunJan	JulFeb	AugMar	SepApr	OctMay	NovJun	DecJul	JanAug	FebSep	MarOct	AprNov	MayDec	JunJan	JulFeb	AugMar	Apr
Grove Farm, CM14 5NG	67 57	67 57	57 62	68	68	68	62 63	62 64	62 63	64 64	63 64	63 65	63	64	64 63	59 62	66 62	64 60	68 66	68 63	60 68	66 68	68 67	67 68	64 68	64 66	64 63	60 63	43 58	58	58	
Maylands Cottages, RM3 0AZ	61 54	61 74	75 74	53 54	54	54	55 54	54	55	55 54	54	54	54	55 53	55 54	57 54	57 54	58 53	56 54	56	57	57 58	57 56	55	55 54	56 54	56 54	55 53	55 53	54 53	53	53
Caravan Park, RM3 0AW	64	64	56 67	68 67	69 67	69 67	71 67	70 68	75 74	73 73	72 73	72 74	71 69	71 68	71	72 70	72 69	72	68 73	68 72	70 74	70 72	71 70	70	70 73	67 74	67 74	62 74	61 66	62 64	63 64	63
17 Colchester Road, RM3 0AW	61 63	61 74	72 74	60 65	63 66	65 66	63 65	63 66	63 67	60 66	61 66	60 66	60 63	60 64	60 64	69 64	72 63	64	64 73	63 67	63 68	60 66	59 65	59 64	60 64	59 64	59 64	59 63	58 63	58 63	58	63
12, Craven Gardens, RM3 0DF	51	51	61	54	56	56	57	56	58	56	57	56	55	55	55	55	57	60	57	57	56	56	55	54	54	55	54	52	52	52	51	
Gardens of Peace Muslim Cemetery	55	55	61	58	60	60	62	60	62	61	62	62	60	60	60	59	59	61	62	62	61	61	58	57	57	57	57	54	54	53	53	
10, Woodstock Avenue, RM3 9NF	48	48	58	52	53	53	54	53	55	54	54	54	52	53	53	53	54	55	55	55	54	55	53	52	52	53	52	51	50	50	49	

Sensitive Receptor	Construction noise levels (L _{Aeq} ,dB)																															
	2022/2021											2023										2024										
	FebSep	MarOct	AprNov	MayDec	JunJan	JulFeb	AugMar	SepApr	OctMay	NovJun	DecJul	JanAug	FebSep	MarOct	AprNov	MayDec	JunJan	JulFeb	AugMar	SepApr	OctMay	NovJun	DecJul	JanAug	FebSep	MarOct	AprNov	MayDec	JunJan	JulFeb	AugMar	Apr
42, Woodstock Avenue, RM3 9NF	49	49	58	52	54	54	54	53	55	54	54	53	52	53	53	53	54	56	56	55	55	53	52	52	53	52	51	50	50	49		
63 Brook Street, CM14 5NA	46	46 49	49 53	55 54	55	55	56 54	55 54	57 54	56 54	56 54	56 57	55	56 57	56 58	54 58	54 56	55	55	56 55	52 58	56 60	58	56 59	57 59	58 59	56 58	56 56	54 55	44 54	49 54	53
60 Brook Street, CM14 5ND	48	48 50	49 54	56	57 56	56 56	57 55	56 55	58 56	57 55	57 55	57 58	56 56	57	57	55 58	54 56	56	57	57 55	53 59	57 60	59 60	58 60	58 64	59 64	57 60	57 58	54 57	46 53	48 54	50
13 Nag's Head Lane, CM14 5NJ	30	30 34	34 39	40	41 40	40	42 40	41 40	43 41	43 44	43 41	42 43	41 40	42 44	42	41 42	39 41	40 44	41 41	41 40	39 44	42 45	43 44	42 44	43 45	43 45	41 44	40 42	38 44	32 38	36 38	38
31, Wingrave Crescent, CM14 5PA	36	36	43	47	47	47	49	48	50	49	49	49	48	49	49	48	46	48	47	48	45	48	50	48	49	50	48	48	46	39	42	
7, Leonard Way, CM14 5PD	35	35	42	45	46	46	48	47	49	48	48	47	47	48	48	47	45	47	46	46	44	47	48	47	48	49	47	46	44	38	40	
12, Talbrook, CM14 4PY	32	32	39	43	44	44	45	44	46	46	45	45	44	45	45	44	43	44	43	44	42	44	46	44	45	46	44	43	42	36	38	
Weald Hall, Wigley Bush Lane, CM14 5QP	35	35	42	46	47	46	49	47	49	49	49	48	48	48	48	46	47	46	47	44	48	48	47	48	49	47	46	44	38	40		

Legend

Sensitive Receptor	Construction noise levels (L _{Aeq} ,dB)																														
	2022											2023										2024									
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
	SOAEL exceedance																		LOAEL exceedance												

6.2.5 Table 6.5 shows the predicted highest daily daytime (L_{Aeq}, dB) construction noise levels with the recommended mitigation as outlined in the Noise and Vibration chapter in Volume 1 at selected representative sensitive receptors in the study area.

Table 6.5: Predicted highest daily night-time construction noise levels at selected location – With mitigation

Sensitive Receptor	Construction noise levels (L _{Aeq} ,dB)																															
	2022											2023										2024										
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Apr
Grove Farm, CM14 5NG	0	0	10	52	48	44	42	44	44	33	30	27	29	31	31	29	43	43	29	29	38	65	62	55	55	55	58	56	56	37	55	55
Maylands Cottages, RM3 0AZ	0	0	10	40	41	41	41	41	40	40	39	39	39	39	39	42	42	39	39	50	51	43	45	47	52	48	49	49	45	48	44	
Caravan Park, RM3 0AW	0	0	10	61	56	55	53	57	59	55	49	35	48	51	51	48	56	56	48	48	60	61	52	50	52	61	58	54	54	46	61	64
17 Colchester Road, RM3 0AW	0	0	10	47	53	55	53	53	53	45	45	45	45	45	59	59	45	45	60	60	47	47	49	64	50	50	50	47	49	54	54	
12, Craven Gardens, RM3 0DF	0	0	10	41	44	45	43	42	42	39	38	37	37	38	38	37	46	46	37	37	52	53	43	43	45	52	47	47	47	43	46	

Sensitive Receptor	Construction noise levels (L _{Aeq} ,dB)																															
	2022											2023											2024									
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
Gardens of Peace Muslim Cemetery	0	0	10	44	48	48	47	45	45	41	39	38	39	39	39	39	38	46	46	38	38	58	59	45	45	47	55	50	49	49	44	48
10, Woodstock Avenue, RM3 9NF	0	0	10	38	40	40	39	38	38	37	36	35	35	36	36	35	41	41	35	35	50	51	42	42	44	46	46	46	46	42	45	
42, Woodstock Avenue, RM3 9NF	0	0	10	39	41	41	40	39	39	36	36	35	35	35	35	39	39	35	35	52	53	42	42	44	49	46	46	46	42	45		
63 Brook Street, CM14 5NA	0	0	10	44	39	39	37	38	37	34	32	30	28	30	29	39	39	29	29	42	54	51	52	53	56	54	56	56	56	49	48	50
60 Brook Street, CM14 5ND	0	0	10	61	40	39	38	38	37	35	33	30	30	32	32	40	40	30	30	44	56	52	51	52	50	55	55	55	59	46	47	
13 Nag's Head Lane, CM14 5NJ	0	0	10	32	26	25	24	24	23	22	20	18	18	19	19	23	23	18	18	31	39	35	34	37	35	39	39	39	40	36	34	
31, Wingrave Crescent, CM14 5PA	0	0	10	33	32	31	30	30	29	28	26	25	23	24	24	23	31	31	23	23	37	46	42	43	45	44	46	47	47	42	44	
7, Leonard Way, CM14 5PD	0	0	10	32	30	30	29	29	28	27	25	24	22	23	23	29	29	22	22	36	44	41	42	44	43	45	46	46	41	43		

Sensitive Receptor	Construction noise levels (L _{Aeq} ,dB)																														
	2022											2023											2024								
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
12, Talbrook, CM14 4PY	0	0	10	35	28	27	26	26	25	25	23	22	20	22	22	20	27	27	20	20	34	42	38	39	41	40	42	43	44	39	41
Weald Hall, Wigley Bush Lane, CM14 5QP	0	0	10	38	31	30	29	29	28	27	26	25	22	24	24	22	29	29	22	22	36	45	41	41	45	43	46	47	47	42	45
Legend																															
SOAEL exceedance											LOAEL exceedance																				

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