

M25 junction 28 improvement scheme

TR010029

**10.10 Environmental Statement:
Appendix 6.2 Construction noise and
vibration Changes 1-4**

Regulation 5(2)(q)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure)
Regulations 2009

Volume 10

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Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

M25 junction 28 scheme Development Consent Order 202[x]

10.10 ENVIRONMENTAL STATEMENT: APPENDIX 6.2 CONSTRUCTION NOISE AND VIBRATION CHANGES 1-4

Regulation Number:	Regulation 5(2)(q)
Planning Inspectorate Scheme Reference:	TR010029
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Author:	M25 junction 28 scheme, Project Team, Highways England

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Table of contents

Chapter	Pages
6. Construction noise and vibration	5
6.1 Introduction	5
6.2 Construction noise	5

Tables

Table 6.1: Construction equipment list per activity	6
Table 6.2: Predicted highest daily daytime construction noise levels at selected location – No mitigation	14
Table 6.3: Predicted highest daily night-time construction noise levels at selected location – No mitigation	16
Table 6.4: Predicted highest daily daytime construction noise levels at selected location – With mitigation	19
Table 6.5: Predicted highest daily night-time construction noise levels at selected location – With mitigation	21

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
<u>Environmental Bund / Earthworks</u>	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 / <u>Piled walls</u>	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)
Stringcourse	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										
	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	67	57 72	78	78	78	72 73	72 74	73	74	73 74	73	74	69 72	76 72	74 70	78	78	70	76	78	77	77	74	74	74	70	53 68	68	6	6		
Maylands Cottages, RM3 0AZ	61	61 74	75 74	65 64	66 64	66 64	66 64	65 66	66	65 64	66 64	65 64	65 63	65 63	65 64	66 64	67 64	67	67	66 67	66	65 66	65	65 64	65 64	65 64	65 63	62 63	62 63	6	6		
Caravan Park, RM3 0AW	64	64	56 67	76 67	76 67	76 67	77 67	71 68	75 74	73	72 73	72 74	71 69	72 68	72 70	73 69	72	69 73	69	70	70	71 70	70	70 73	68 74	67 74	64 74	63 66	62 64	63 64	6	6	
17 Colchester Road, RM3 0AW	61 63	61 74	72 74	64 65	65 66	67 66	66 65	65 66	66 67	64 66	64 66	64 66	64 63	64 63	64	64	69 64	73 64	66 64	66 73	65 67	65 68	64 66	63 65	63 64	64	63 64	63 64	63	58 63	58 63	6	6
12, Craven Gardens, RM3 0DF	51	51	61	58	59	59	59	58	60	59	59	59	58	58	58	59	61	59	59	59	59	58	58	58	58	58	57	57	52	51			
Gardens of Peace Muslim Cemetery	55	55	61	61	62	62	64	62	64	63	64	64	62	62	62	61	62	63	64	65	64	63	61	61	61	61	61	60	60	53	53		
10, Woodstock	48	48	58	55	56	56	56	55	57	56	56	56	55	56	56	56	56	57	57	57	56	57	56	55	55	56	55	55	54	50	49		

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					
<u>Avenue, RM3 9NF</u>																																
<u>42, Woodstock Avenue, RM3 9NF</u>	49	49	58	56	57	57	57	56	57	57	57	56	56	56	56	56	57	58	58	57	58	56	56	56	56	56	55	50	49			
63 Brook Street, CM14 5NA	46	46 49	49 53	55 54	55	55	56 54	56 54	57 54	57 54	56 54	56 57	56 55	56 57	56 58	54 58	54 56	56 57	55	56 55	53 58	56 60	58	57 59	57 59	58 59	56 58	57 56	55	44 54	49 54	5 3
60 Brook Street, CM14 5ND	48	48 50	49 54	56	57 56	57 56	57 55	57 55	58 56	58 55	57 55	57 58	57 56	57	57	55 58	55 56	56 57	57	58 55	54 59	57 60	59 60	58 60	59 64	59 64	57 60	57 58	54 57	46 53	48 54	5 0
13 Nag's Head Lane, CM14 5NJ	30	30 34	34 39	40	41 40	41 40	42 40	42 40	44 41	43 41	43 41	42 43	42 40	42 41	42	41 42	40 44	41	41	42 40	40 44	42 45	44	43 44	43 45	44 45	42 44	41 42	39 44	32 38	36 38	3 8
<u>31, Wingrave Crescent, CM14 5PA</u>	36	36	43	47	48	48	49	48	50	50	49	49	48	49	49	48	47	48	48	48	46	49	50	49	49	50	48	48	46	39	42	
<u>7, Leonard Way, CM14 5PD</u>	35	35	42	46	47	47	48	47	49	49	48	48	47	48	48	47	46	47	46	47	45	47	49	48	48	49	47	47	45	38	40	
<u>12, Talbrook, CM14 4PY</u>	32	32	39	43	44	44	45	45	46	46	46	45	45	45	45	45	43	44	44	44	43	45	46	45	45	47	44	44	44	42	36	38
<u>Weald Hall, Wigley Bush</u>	35	35	42	47	47	47	49	48	50	49	49	48	48	48	48	46	48	47	47	45	48	48	47	48	49	47	47	46	45	38	40	

Sensitive Receptor	Construction noise levels (L _{Aeq} ,dB)																														
	2022											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
Lane, CM14 5QP																															
Legend																															
	SOAEL exceedance																	LOAEL exceedance													

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									
	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	0	0 40	10 68	62 58	58 64	54 64	52 58	54 64	54 58	42 40	40	37 42	39 44	41 53	41 67	39 66	53 67	53 53	39 55	39 62	48 70	75 70	72 36	65 50	65 76	65 70	68 70	66 70	66 70	47 65	65 5	6 5
Maylands Cottages, RM3 0AZ	0	0 40	10 52	50 54	51 53	51 53	51	50 53	50 52	49 54	49 54	49 54	49 50	49 54	49 54	49 54	52 54	52 50	49 50	49 54	60 54	60 54	50	50 60	51 52	54 52	52 54	52 54	52 54	50 52	51	5 4
Caravan Park, RM3 0AW	0	0 40	10 54	61 48	56 54	55 54	53 48	57 54	59 58	55 58	49 58	35 58	48 54	51 50	51 53	48 53	56 52	56 50	48 47	48 57	60 54	61 54	52 34	50 60	52 55	61 54	58 50	54 59	54 64	46 57	61	6 4

Sensitive Receptor	Construction noise levels (L _{Aeq} ,dB)																																
	2022										2023										2024												
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
17 Colchester Road, RM3 0AW	0	0	10	47	53	55	53	53	53	45	45	45	45	45	45	45	45	59	59	45	45	60	60	47	47	49	64	50	50	50	47	49	5
<u>12, Craven Gardens, RM3 0DF</u>	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		
<u>Gardens of Peace Muslim Cemetery</u>	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			
<u>10, Woodstock Avenue, RM3 9NF</u>	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		
<u>42, Woodstock Avenue, RM3 9NF</u>	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	30	29	39	39	29	29	42	54	51	52	53	54	56	56	56	49	48	5	
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	4		

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
13 Nag's Head Lane, CM14 5NJ	0	0	10	32	26	25	24	24	23	22	20	18	18	19	18	23	23	18	18	31	39	35	34	37	35	39	39	39	40	36	3
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	22	29	29	22	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	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	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	67/67	67/67	57/62	68	68	68	62/63	62/64	63	64/64	63/64	63/65	63	64	64/63	59/62	66	64/60	68/66	68/63	60/68	66/68	68/67	67/68	67/69	64/68	64/66	64/63	60/63	43/58	58	5/8	
Maylands Cottages, RM3 0AZ	61/64	61/74	75/74	56/64	56/64	56/64	57/64	56/64	56/65	56/64	56/64	56/64	56/63	56/63	56/64	58/64	58/63	59/63	58/64	58/66	58/67	58	58/66	57/65	57/64	58/64	58/64	56/64	56/63	54/63	53	5/3	
Caravan Park, RM3 0AW	64	64	56/67	70/67	70/67	70/67	72/67	71/68	75/74	73	72/73	72/74	71/69	72/68	72/71	72/70	73/69	72	69/73	69/72	70/71	70/72	71/70	70	70/73	68/71	67/71	64/71	63/66	62/64	63/64	6/3	
17 Colchester Road, RM3 0AW	61/63	61/74	72/74	64/65	65/66	67/66	66/65	65/66	66/67	64/66	64/66	64/66	64/63	64/63	64	64	69/64	73/63	66/64	66/73	65/67	65/68	64/66	63/65	63/64	64	63/64	63/64	63	58/63	58/63	6/3	
12, Craven Gardens, RM3 0DF	51	51	61	58	59	59	59	58	60	59	59	59	58	58	58	58	59	61	59	59	59	59	58	58	58	58	58	57	57	52	51		
Gardens of Peace Muslim Cemetery	55	55	61	61	62	62	64	62	64	63	64	64	62	62	62	61	62	63	64	64	63	63	61	61	61	61	61	60	60	53	53		
10, Woodstock Avenue, RM3 9NF	48	48	58	55	56	56	56	55	57	56	56	56	55	56	56	56	56	57	57	57	56	57	56	55	55	56	55	55	55	54	50	49	
42, Woodstock Avenue, RM3 9NF	49	49	58	56	57	57	57	56	57	57	57	57	56	56	56	56	56	57	58	58	57	58	56	56	56	56	56	56	55	50	49		
63 Brook Street, CM14 5NA	46	46/49	49/53	55/54	55	55	56/54	56/54	57/54	57/54	56/54	56/57	56/55	56/57	56/58	54/58	54/56	56/55	55	56/55	53/58	56/60	58	57/59	57/59	58/59	56/58	57/56	55	44/54	49/54	5/3	

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
60 Brook Street, CM14 5ND	48	48/50	49/54	56	57/56	57/56	57/55	57/55	58/56	58/55	57/55	57/58	57/56	57	57	55/58	55/56	56	57	58/55	54/59	57/60	59/60	58/60	59/64	59/64	57/60	57/58	54/57	46/53	48/54	5/0
13 Nag's Head Lane, CM14 5NJ	30	30/34	34/39	40	41/40	41/40	42/40	42/40	44/44	43/41	43/41	42/43	42/40	42/41	42	41/42	40/41	41	41	42/40	40/44	42/45	44	43/44	43/45	44/45	42/44	41/42	39/41	32/38	36/38	3/8
31, Wingrave Crescent, CM14 5PA	36	36	43	47	48	48	49	48	50	50	49	49	48	49	49	48	47	48	48	48	46	49	50	49	49	50	48	48	46	39	42	
7, Leonard Way, CM14 5PD	35	35	42	46	47	47	48	47	49	49	48	48	47	48	48	47	46	47	46	47	45	47	49	48	48	49	47	47	45	38	40	
12, Talbrook, CM14 4PY	32	32	39	43	44	44	45	45	46	46	46	45	45	45	45	45	43	44	44	44	43	45	46	45	45	47	44	44	42	36	38	
Weald Hall, Wigley Bush Lane, CM14 5QP	35	35	42	47	47	47	49	48	50	49	49	48	48	48	48	46	48	47	47	45	48	48	47	48	49	47	46	45	38	40		

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	
Grove Farm, CM14 5NG	00	04	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	00	04	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	00	04	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	00	04	10	47	53	55	53	53	53	45	45	45	45	45	45	59	59	45	45	60	60	47	47	49	64	50	50	50	47	49	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	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	46	42	45	

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	
63 Brook Street, CM14 5NA	00	04	10	44	39	39	37	38	37	34	32	30	28	30	30	30	29	39	39	29	42	54	51	52	53	56	54	56	56	49	48	50
60 Brook Street, CM14 5ND	00	04	10	61	40	39	38	38	37	35	33	30	30	32	32	30	40	40	30	30	44	56	52	51	52	50	55	55	55	59	46	47
13 Nag's Head Lane, CM14 5NJ	00	04	10	32	26	25	24	24	23	22	20	18	18	19	19	18	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	22	29	29	22	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	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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