

**East Midlands Gateway
Phase 2 (EMG2)**

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ENVIRONMENTAL STATEMENT

Volume 2 Technical Appendices

Appendix 7B

Construction Data

July 2025

07

The East Midlands Gateway Phase 2
and Highway Order 202X and The East Midlands Gateway
Rail Freight and Highway (Amendment) Order 202X

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Appendix 7B

Construction data

Modelling methodology

- The construction plant used for each works activity is listed in the following tables, together with relevant noise levels and other relevant information including quantity and % on-time;
- The different source noise levels listed for each activity have been summed to calculate a single activity source noise level;
- Each activity source has been modelled in a suitable location representing a reasonable worst-case in terms of distance from each relevant receptor based on the locations/extent of the relevant activity;
- The activity source has been modelled at a height of 1.5 m above local ground level, except in the case of the building construction activity, which has been modelled 3 m below the maximum ridge height as stated on the parameters plan;
- The model takes into account topography, ground type, screening and distance;
- It has been assumed that main site earthworks are complete (e.g., bunding is in place etc) for all activities except "On Site Infrastructure – Earthworks" and "On Site Infrastructure – Estate Roads);
- No development buildings have been assumed to be in place for any of the results (which may provide additional screening of the construction sources); and
- The ground factor is set to 0.5.

Construction plant data

Activity	Start	Finish	Plant Item	Quantity	On-time %	BS 5228-1 Ref.	L _{pA} at 10 m
On Site Infrastructure – Earthworks	08/03/2027	11/08/2028	70T tracked excavator	2	90	C2.14	79
			40T tracked excavator	3	90	C2.14	79
			30T tracked excavator	5	90	C2.16	75
			30T articulated dumper	15	90	C4.1	81
			18T tracked dozer	8	90	C2.12	81
			20T single drum roller	6	90	C2.37	79
			Tractor	2	40	C4.04 + 10 dB	86
			Road paver	1	60	C5.31	77
			Tractor and bowser	1	50	C4.04 + 10 dB	86
On Site Infrastructure – Estate Roads	30/08/2027 (Phase 1)	02/06/2028 (Phase 1)	30T excavator	4	80	C6.8	80
	05/06/2028 (Phase 2)	09/03/2029 (Phase 2)	20T excavator	2	75	C2.3	78
			5t excavator	2	50	C4.67	74
			3t excavator	1	59	C3.20	68
			30T dump truck	2	50	C8.16	81
			5T dumper	2	75	C4.7	78
			3t dumper	3	50	C4.9	77

Activity	Start	Finish	Plant Item	Quantity	On-time %	BS 5228-1 Ref.	L _{PA} at 10 m
			Self-propelled roller	1	25	C5.26	77
			Self-propelled roller	2	35	C5.27	67
			Dozer	1	25	C8.7	75
			Tractor	1	25	C4.74	80
			Road roller	2	25	C5.29	82
			Road paver	1	25	C5.33	75
			Asphalt spreader	1	25	C5.31	77
			Road sweeper	1	50	C4.90	76
Building Units - Unit Earthworks	24/01/2028 (Unit 1)	06/03/2028 (Unit 1)	40T excavator	3	90	C2.14	79
	02/10/2028 (Units 2, 3)	13/11/2028 (Units 2, 3)	20T excavator	3	75	C2.3	78
	01/10/2029 (Units 4, 5)	12/11/2029 (Units 4, 5)	5T excavator	1	25	C4.67	74
	30/09/2030 (Units 6, 7, 8)	11/11/2030 (Units 6, 7, 8)	29T dump truck	13	90	C2.30	79
	29/09/2031 (Units 9, 10, 11)	10/11/2031 (Units 9, 10, 11)	Self-propelled roller	7	90	C5.26	77
	24/01/2028 (EMG Unit 16 & Misc)	06/03/2028 (EMG Unit 16 & Misc)	Dozer	7	75	C8.7	75
			Tractor	4	25	C4.74	80
			Road sweeper	1	50	C4.90	76
Building Units - Unit Foundations	24/02/2028 (Unit 1)	20/04/2028 (Unit 1)	Excavator	1	50	C4.10	66
	02/11/2028 (Units 2, 3)	28/12/2028 (Units 2, 3)	Truck mixer with pump	1	30	C4.28	75
	01/11/2029 (Units 4, 5)	27/12/2029 (Units 4, 5)	Compressor	1	60	C5.5	66
	31/10/2030 (Units 6, 7, 8)	26/12/2030 (Units 6, 7, 8)	Poker Vibrator	2	30	C4.34	69
	30/10/2031 (Units 9, 10, 11)	25/12/2031 (Units 9, 10, 11)	Dump truck	1	40	C4.4	76
	24/02/2028 (EMG Unit 16 & Misc)	20/04/2028 (EMG Unit 16 & Misc)	Vibratory Compactor	1	30	C5.20	75
Building Units - Unit Construction	17/04/2028 (Unit 1)	01/01/2029 (Unit 1)	Lorry Unloading	2	10	C2.34	80
	25/12/2028 (Units 2, 3)	10/09/2029 (Units 2, 3)	Dump Truck	1	40	C4.4	76
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	25/12/2029 (Units 4, 5)	10/09/2030 (Units 4, 5)	Forklift truck	1	60	Library	68
	23/12/2030 (Units 6, 7, 8)	08/09/2031 (Units 6, 7, 8)	Concrete Pump	1	10	C3.25	78
	22/12/2031 (Units 9, 10, 11)	06/09/2032 (Units 9, 10, 11)	Mobile Crane	2	25	C3.28	67
	17/04/2028 (EMG Unit 16 & Misc)	01/01/2029 (EMG Unit 16 & Misc)	Wheeled Loader	1	40	C4.13	71

Activity	Start	Finish	Plant Item	Quantity	On-time %	BS 5228-1 Ref.	L _{pA} at 10 m
			MEWP	3	50	C4.57	67
Off Site Highways: Works No. 6	08/03/2027	24/05/2027	13T excavator	1	55	C1.17	83
			6T forward tipping dumper	1	55	C4.3	76
			Twin drum roller	1	40	C5.20	75
Off Site Highways: Works No. 8, 9, 10, 12	08/03/2027	03/07/2028	30T excavator	2	80	C5.18	80
			25T excavator	3	75	C4.64	75
			6T excavators	5	60	C4.67	74
			Tipper lorries	3	80	C2.32	74
			6T forward tipping dumpers	5	60	C4.3	76
			16t D6 dozers	3	70	C5.12	77
			Twin drum rollers	3	40	C5.20	75
			Paver	1	40	C5.30	75
Off Site Highways: Works No. 11	27/09/2027	03/07/2028	30T excavator	1	80	C5.18	80
			25T excavator	2	75	C4.64	75
			6T excavators	3	60	C4.67	74
			30T dumpers	3	80	C2.32	74
			6T forward tipping dumpers	3	60	C4.3	76
			16t D6 dozers	2	70	C5.12	77
			Twin drum rollers	2	40	C5.20	75
			Paver	1	40	C5.30	75
Off Site Highways: Works No. 14	24/05/2027	08/11/2027	13T excavator	1	55	C5.30	75
			6T forward tipping dumper	1	55	C4.3	76
			Twin drum roller	1	40	C5.20	75
Off Site Highways: Works No. 16	19/07/2027	30/08/2027	13T excavator	1	55	C1.17	83
			6T forward tipping dumper	1	55	C4.3	76
			Twin drum roller	1	40	C5.20	75

Timeslices

The assessment is based on the worst-case combination of different activities, i.e., where they overlap and take place at the same time, to provide a robust but concise assessment. Nine timeslices (activity combinations) have been identified, as follows. In general, all activities are modelled in a reasonable worst-case position relative to each receptor, but see the table footnote for further information.

Timeslice ID	Activities included (i.e., assumed to be happening simultaneously)
1	On Site Infrastructure – Earthworks Off Site Highways – Works No. 6 Off Site Highways – Works No. 8 Off Site Highways – Works No. 9 Off Site Highways – Works No. 10 Off Site Highways – Works No. 12
2	On Site Infrastructure – Earthworks Off Site Highways – Works No. 8 Off Site Highways – Works No. 9 Off Site Highways – Works No. 10 Off Site Highways – Works No. 12 Off Site Highways – Works No. 14 Off Site Highways – Works No. 16
3	On Site Infrastructure – Earthworks Off Site Highways – Works No. 8 Off Site Highways – Works No. 9 Off Site Highways – Works No. 10 Off Site Highways – Works No. 11 Off Site Highways – Works No. 12 Off Site Highways – Works No. 14 On Site Infrastructure – Estate Roads
4	On Site Infrastructure – Earthworks Off Site Highways – Works No. 8 Off Site Highways – Works No. 9 Off Site Highways – Works No. 10 Off Site Highways – Works No. 11 Off Site Highways – Works No. 12 On Site Infrastructure – Estate Roads Building Units* - Unit Earthworks EMG2 Building Units* - Unit Earthworks EMG1 Building Units* - Unit Foundations EMG2 Building Units* - Unit Foundations EMG1
5	On Site Infrastructure – Earthworks Off Site Highways – Works No. 8 Off Site Highways – Works No. 9 Off Site Highways – Works No. 10 Off Site Highways – Works No. 11 Off Site Highways – Works No. 12 On Site Infrastructure – Estate Roads Building Units* - Unit Foundations EMG2 Building Units* - Unit Foundations EMG1 Building Units* - Unit Construction EMG2 Building Units* - Unit Construction EMG1
6	On Site Infrastructure – Earthworks Off Site Highways – Works No. 8 Off Site Highways – Works No. 9 Off Site Highways – Works No. 10

	Off Site Highways – Works No. 11 Off Site Highways – Works No. 12 On Site Infrastructure – Estate Roads Building Units* - Unit Construction EMG2 Building Units* - Unit Construction EMG1
7	On Site Infrastructure – Estate Roads Building Units* - Unit Earthworks EMG2 Building Units* - Unit Foundations EMG2 Building Units* - Unit Construction EMG2 Building Units* - Unit Construction EMG1
8	On Site Infrastructure – Estate Roads Building Units* - Unit Foundations EMG2 Building Units* - Unit Construction EMG2 Building Units* - Unit Construction EMG1
9	Building Units* - Unit Foundations EMG2 Building Units* - Unit Construction EMG2 Building Units* - Unit Construction EMG1
<p><i>* Note that when both 'on site infrastructure – earthworks' and any activities relating to on-site buildings are included in the same timeslice, the <u>second closest</u> source location to each receptor for the <u>building</u> activities is included in the result. This is because the main earthworks activity occupies the same areas as the buildings (so both could not be happening at the same time) and represents a worst-case in terms of noise level.</i></p>	