

East Midlands Gateway Phase 2 (EMG2)

Document DCO 6.7B/MCO 6.7B

ENVIRONMENTAL STATEMENT

Technical Appendices

Appendix 7B

Construction Data

October 2025

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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.

The start and finish dates as stated are indicative and are based on the preliminary information and construction programme provided in **Chapter 3: Project Description (Document DCO 6.3/MCO 6.3)** and **Appendix 3A: Construction Environmental Management Plan (CEMP) (Document DCO 6.3A)** of this ES to allow the worst-case groups of overlapping works used for the assessment, referred to as timeslices, to be identified.

Construction plant data

Activity	Start Date*	Finish Date*	Plant Item	Quantity	On-time %	BS 5228-1 Ref.	L_{pA} at 10 m
On Site Infrastructure – Earthworks; Community Park (DCO Works No. 21); Highway Works (DCO Works No. 17)	Q3 2027	Q4 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	Q1 2028	Q3 2029	30T excavator	4	80	C6.8	80
			20T excavator	2	75	C2.3	78
			5t excavator	2	50	C4.67	74

Activity	Start Date*	Finish Date*	Plant Item	Quantity	On-time %	BS 5228-1 Ref.	L _{pA} at 10 m
			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
			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 - Earthworks	Q1 2028 (Unit 1)	Q1 2028 (Unit 1)	40T excavator	3	90	C2.14	79
	Q3 2028 (Units 2, 3)	Q3 2028 (Units 2, 3)	20T excavator	3	75	C2.3	78
	Q2 2029 (Units 4, 5)	Q2 2029 (Units 4, 5)	5T excavator	1	25	C4.67	74
	Q4 2029 (Units 6, 7)	Q4 2029 (Units 6, 7)	29T dump truck	13	90	C2.30	79
	Q2 2030 (Unit 8)	Q2 2030 (Unit 8)	Self-propelled roller	7	90	C5.26	77
	Q3 2030 (Unit 9, 10, 11)	Q4 2030 (Unit 9, 10, 11)	Dozer	7	75	C8.7	75
	Q1 2028 (Unit 16 & misc)	Q1 2028 (Unit 16 & misc)	Tractor	4	25	C4.74	80
			Road sweeper	1	50	C4.90	76
Building Units - Foundations	Q1 2028 (Unit 1)	Q2 2028 (Unit 1)	Excavator	1	50	C4.10	66
	Q3 2028 (Units 2, 3)	Q3 2028 (Units 2, 3)	Truck mixer with pump	1	30	C4.28	75
	Q2 2029 (Units 4, 5)	Q3 2029 (Units 4, 5)	Compressor	1	60	C5.5	66
	Q4 2029 (Units 6, 7)	Q1 2030 (Units 6, 7)	Poker Vibrator	2	30	C4.34	69
	Q2 2030 (Unit 8)	Q3 2030 (Unit 8)	Dump truck	1	40	C4.4	76
	Q4 2030 (Unit 9, 10, 11)	Q4 2030 (Unit 9, 10, 11)	Vibratory Compactor	1	30	C5.20	75
	Q1 2028 (Unit 16 & misc)	Q2 2028 (Unit 16 & misc)					
Building Units - Construction	Q2 2028 (Unit 1)	Q2 2029 (Unit 1)	Lorry Unloading	2	10	C2.34	80
	Q3 2028 (Units 2, 3)	Q3 2029 (Units 2, 3)	Dump Truck	1	40	C4.4	76
	Q3 2029 (Units 4, 5)	Q2 2030 (Units 4, 5)	Forklift truck	1	60	Vanguardia Library	68

Activity	Start Date*	Finish Date*	Plant Item	Quantity	On-time %	BS 5228-1 Ref.	L _{pA} at 10 m
	Q1 2030 (Units 6, 7)	Q3 2030 (Units 6, 7)	Concrete Pump	1	10	C3.25	78
	Q3 2030 (Unit 8)	Q2 2031 (Unit 8)	Mobile Crane	2	25	C3.28	67
	Q4 2030 (Unit 9, 10, 11)	Q3 2031 (Unit 9, 10, 11)	Wheeled Loader	1	40	C4.13	71
	Q2 2028 (Unit 16 & misc)	Q1 2029 (Unit 16 & misc)	MEWP	3	50	C4.57	67
Off Site Highways: Works No. 6, 7, 15	Q3 2027	Q3 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, 10, 12a/b, 13	Q3 2027	Q1 2029	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. 9	Q3 2027	Q1 2029	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
			CFA Rotary Piling Rig (38t)	2	75	C3.21	79
			20t excavator inserting cage	2	10	C3.24	74
			Concrete pump	2	15	C3.26	75
			Hydraulic pile cropper mounted on excavator	2	10	C3.24	74
Off Site Highways: Works No. 11	Q3 2027	Q1 2029	30T excavator	1	80	C5.18	80
			25T excavator	2	75	C4.64	75
			6T excavators	3	60	C4.67	74

Activity	Start Date*	Finish Date*	Plant Item	Quantity	On-time %	BS 5228-1 Ref.	L _{pA} at 10 m
			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	Q3 2027	Q1 2028	13T excavator	1	55	C5.30	75
			6T forward tipping dumper	1	55	C4.3	76
			Twin drum roller	1	40	C5.20	75

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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 (see table above for dates), to provide a robust but concise assessment. Seven of these activity combinations, referred to as timeslices, have been identified, as listed in the following table. 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. 7 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. 13 Off Site Highways – Works No. 14 Off Site Highways – Works No. 15
2	On Site Infrastructure – Earthworks On Site Infrastructure – Estate Roads 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. 13 Off Site Highways – Works No. 14 Building Units* - Earthworks Unit 1 Building Units* - Earthworks Unit 16 Building Units* - Foundations Unit 1 Building Units* - Foundations Unit 16
3	On Site Infrastructure – Earthworks On Site Infrastructure – Estate Roads 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. 13 Building Units* - Earthworks Unit 2 Building Units* - Earthworks Unit 3 Building Units* - Foundations Unit 2 Building Units* - Foundations Unit 3 Building Units* - Construction Unit 1 Building Units* - Construction Unit 16
4	On Site Infrastructure – Estate Roads Building Units* - Earthworks Unit 4 Building Units* - Earthworks Unit 5 Building Units* - Foundations Unit 4 Building Units* - Foundations Unit 5 Building Units* - Construction Unit 2 Building Units* - Construction Unit 3
5	Building Units* - Earthworks Unit 6 Building Units* - Earthworks Unit 7

Timeslice ID	Activities included (i.e., assumed to be happening simultaneously)
	Building Units* - Foundations Unit 6 Building Units* - Foundations Unit 7 Building Units* - Construction Unit 4 Building Units* - Construction Unit 5
6	Building Units* - Earthworks Unit 8 Building Units* - Construction Unit 4 Building Units* - Construction Unit 5 Building Units* - Construction Unit 6 Building Units* - Construction Unit 7
7	Building Units* - Earthworks Unit 9 Building Units* - Earthworks Unit 10 Building Units* - Earthworks Unit 11 Building Units* - Foundations Unit 9 Building Units* - Foundations Unit 10 Building Units* - Foundations Unit 11 Building Units* - Construction Unit 6 Building Units* - Construction Unit 7 Building Units* - Construction Unit 8
<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>	