

**A57 Link Roads
TR010034**

**6.5 Environmental Statement
Appendix 11.2 Construction Noise Plant
Lists**

APFP Regulation 5(2)(a)

Planning Act 2008 Infrastructure Planning (Applications: Prescribed
Forms and Procedure) Regulations 2009

June 2021

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11. Construction Noise Plant Lists

11.1 Introduction

- 11.1.1 This section presents the data used to predict the daytime and night-time construction noise levels for the Scheme that are presented in Chapter 11 Noise and Vibration of the Environmental Statement (ES) (TR010034/APP/6.3). This section presents information on construction traffic data supplied by the principal contractor.
- 11.1.2 Information relating to the proposed construction activities, plant lists, on-times, and construction phasing was provided by the construction 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 similar items of plant could not be found in BS 5228.
- 11.1.3 For further information relating to the assessment methodology, please refer to Chapter 11 Noise and Vibration of the ES.

11.2 Plant lists

Table 11.2.1: General activities

Construction activity	Plant	dB L _{Aeq} at 10m	BS 5228 reference	Quantity	On-time	Adjusted dB L _{Aeq} at 10m	Activity noise level at 10m (dB L _{Aeq})
Compound running	4 Axled tipper wagon	80	C.2.34	5	75	86	88
	Tracked excavator	77	C.2.2	3	75	81	
	Diesel generator	66	C.4.78	2	100	69	
	Road sweeper	76	C.4.90	1	50	73	
	Wheeled loader	79	D.10.91	2	25	76	
	Telescopic handler	79	C.4.54	2	75	81	
	Fuel tanker lorry	76	C.4.15	1	25	70	

Table 11.2.2: Phase 1

Construction Activity	Plant	dB L _{Aeq} at 10m	BS 5228 reference	Quantity	On-time	Adjusted dB L _{Aeq} at 10m	Activity noise level at 10m (dB L _{Aeq})
Site clearance	Chainsaw	86	D.2:13	4	75	91	91
	Tracked excavator (inserting cage)	74	C.3-24	1	25	68	
	Tracked excavator	77	C.2-2	1	50	74	
	8t Excavator	71	C.4.17	2	25	68	
Demolition	Stihl Saw	91	C.4.70	6	25	96	96
	16t Excavator and hydraulic breaker	88	C.5.1	1	50	87	
	8t Excavator	71	C.4.17	1	50	70	
	Lorry	79	C.8.20	2	50	79	
Construction compound set-up	25t Tracked excavator	77	C.2.19	2	75	79	92
	24t Bulldozer	83	C.5.15	2	75	85	
	Articulated dump truck	81	C.5.16	4	75	86	
	4 Axled tipper wagon	80	C.2.34	2	75	82	
	6t Dumper	79	C.4.6	2	75	81	
	12t Roller	84	C.5.24	2	50	84	
	Concrete mixer truck	80	C.4.20	1	50	77	
	Poker vibrator	78	C.4.33	1	75	77	
	Road roller	80	C.5.19	2	75	82	
	Asphalt paver	77	C.5.31	1	75	76	
	Concrete mixer truck & pump	75	C.4-28	1	50	72	86
	Hydraulic hammer rig	89	C.3-1	1	50	86	

Construction Activity	Plant	dB L _{Aeq} at 10m	BS 5228 reference	Quantity	On-time	Adjusted dB L _{Aeq} at 10m	Activity noise level at 10m (dB L _{Aeq})
Pre-cast concrete piling near the River Etherow	Tracked mobile crane	70	C3.29	1	50	67	
	Poker vibrator	69	C.4-34	3	25	68	
	Compressor	72	D.6-18	1	100	72	
Enabling works	Tracked excavator (14t)	69	C.2.25	1	75	68	82
	4 Axled tipper wagon	80	C.2.34	2	75	82	
Traffic management for Mottram Underpass	Drilling for fixings	78	D.6.52	1	25	72	77
	Hand tools	76	Measured	2	25	73	
	Road marking vehicle	74	Measured	1	50	71	
	Traffic management vehicles	70	D.7.121	2	25	67	

Table 11.2.3: Phase 2

Construction activity	Plant	dB L _{Aeq} at 10m	BS 5228 reference	Quantity	On-time	Adjusted dB L _{Aeq} at 10m	Activity noise level at 10m (dB L _{Aeq})
Earthworks	40t Excavator	77	C.4.63	2	50	77	85
	20t Excavator	74	C.3.24	4	50	77	
	9t Dumper	76	C.4.4	4	25	76	
	Roller (Bomag 120)	80	C.5.21	6	25	82	
	Vibratory roller (Ramax)	77	C.5.28	2	25	74	
Mottram Underpass piling	Hydraulic hammer rig	89	C.3-1	1	50	86	87
	Tracked excavator (Inserting cage)	74	C.3-24	1	25	68	
	Concrete pump	78	C.3-25	1	50	75	
	Lorry with lifting boom	77	C.4-53	1	25	71	
Transport of excavated material	ADT 20t	81	C.2.33	20	50	91	91
Carrhouse Lane underpass	Rotary bored piling	83	C.3.14	2	50	83	85
	80t Crawler service crane	70	C.3.30	2	50	70	
	Concrete mixer trucks	80	C.4.20	1	50	77	
	32m Concrete boom pump	75	C.4.28	6	25	77	
Old Mill underpass	Rotary bored piling	83	C.3.14	2	50	83	85
	80t Crawler service crane	70	C.3.30	2	50	70	
	Concrete mixer trucks	80	C.4.20	1	50	77	
	32m Concrete boom pump	75	C.4.28	6	25	77	
Watercourse works	13t Excavator	74	C.6.12	1	25	68	82

Construction activity	Plant	dB L _{Aeq} at 10m	BS 5228 reference	Quantity	On-time	Adjusted dB L _{Aeq} at 10m	Activity noise level at 10m (dB L _{Aeq})
	8t Excavator	71	C.4.17	1	25	65	
	Slip form mounted vehicle	81	D.8:19	1	25	75	
	De-watering pump	81	C.11:0	1	75	80	
	Concrete mixer and pump	75	C.4.25	1	25	69	
Traffic management at Mottram Moor	Drilling for fixings	78	D.6.52	1	25	72	77
	Hand tools	76	Measured	2	25	73	
	Road marking vehicle	74	Measured	1	50	71	
	Traffic management vehicles	70	D.7.121	2	25	67	

Table 11.2.4: Phase 3

Construction activity	Plant	dB L _{Aeq} at 10m	BS 5228 reference	Quantity	On-time	Adjusted dB L _{Aeq} at 10m	Activity noise level at 10m (dB L _{Aeq})
Mottram Underpass structure	800t Mobile crane	67	C.3.28	1	75	66	85
	80t Crawler service crane	70	C.3.30	2	75	72	
	32m Concrete boom pump	75	C.4.28	1	25	69	
	Concrete mixer trucks	80	C.4.20	6	50	85	
Temporary road realignment	30t Tracked excavator	75	C.2.16	2	75	77	89
	Tracked dozer	75	C.2.12	2	75	77	
	40t Dump truck	79	C.6.26	4	75	84	
	Artic dump truck	79	C.6.26	4	75	84	
	16t Roller	79	C.2.37	4	75	84	
Road construction	20t Tracked excavator	78	C.2.3	2	75	80	91
	Motor grader	86	C.6.31	2	75	88	
	D6 Dozer	81	C.2.12	2	75	83	
	Vibrating roller	75	C.5.20	2	75	77	
	Artic dump truck	79	C.6.26	2	75	81	
	Telescopic handler	79	C.2.53	2	75	81	
Landscaping	D6 Tracked dozer	81	C.2.12	2	50	81	92
	40t Dump truck	79	C.6.26	2	50	79	
	Chainsaw	91	C.4.70	2	50	91	
	20t Road lorry (full)	80	C.6.21	1	25	74	
Watercourse works	13t Excavator	74	C.6.12	1	25	68	82

Construction activity	Plant	dB L _{Aeq} at 10m	BS 5228 reference	Quantity	On-time	Adjusted dB L _{Aeq} at 10m	Activity noise level at 10m (dB L _{Aeq})
	8t Excavator	71	C.4.17	1	25	65	
	Slip form mounted vehicle	81	D.8:19	1	25	75	
	De-watering pump	81	C.11:0	1	75	80	
	Concrete mixer and pump	75	C.4.25	1	25	69	
Traffic management at M67	Drilling for fixings	78	D.6.52	1	25	72	77
	Hand tools	76	Measured	2	25	73	
	Road marking vehicle	74	Measured	1	50	71	
	Traffic management vehicles	70	D.7.121	2	25	67	

Table 11.2.5: Phase 4

Construction activity	Plant	dB L _{Aeq} at 10m	BS 5228 reference	Quantity	On-time	Adjusted dB L _{Aeq} at 10m	Activity noise level at 10m (dB L _{Aeq})
Transport of excavated material	ADT 20t	81	C.2.33	20	50	91	91
Road construction	20t Tracked excavator	78	C.2.3	2	75	80	91
	Motor grader	86	C.6.31	2	75	88	
	D6 Dozer	81	C.2.12	2	75	83	
	Vibrating roller	75	C.5.20	2	75	77	
	Artic dump truck	79	C.6.26	2	75	81	
	Telescopic handler	79	C.2.53	2	75	81	
Landscaping	D6 Tracked dozer	81	C.2.12	2	50	81	92
	40t Dump truck	79	C.6.26	2	50	79	
	Chainsaw	91	C.4.70	2	50	91	
	20T Road lorry (full)	80	C.6.21	1	25	74	
Road surfacing	Asphalt paver (+tipper lorry)	75	C.5.33	1	75	74	91
	Road wagons 20t	80	C.2.34	10	50	87	
	Roller (Bomag 120)	80	C.5.21	2	25	77	
	Vibratory roller (Ramax)	77	C.5.28	2	25	74	
	16t Excavator and hydraulic breaker	88	C.5.1	2	25	85	
	W200 Hi cold milling machine (Planer)	82	C.5.7	2	50	82	
	Vibratory roller	77	C.5.28	2	50	77	
Excavation	40t Excavator	77	C.4.63	2	50	77	82

Construction activity	Plant	dB L _{Aeq} at 10m	BS 5228 reference	Quantity	On-time	Adjusted dB L _{Aeq} at 10m	Activity noise level at 10m (dB L _{Aeq})
	20t Excavator	74	C.3.24	4	50	77	
	9t Dumper	76	C.4.4	4	25	76	
Street furniture	Hand-held saw (petrol-cutting concrete)	79	C.4.72	1	25	73	81
	Generator	64	C.4.79	1	75	63	
	Core drill	85	C.4.69	1	25	79	
	Mobile telescopic crane	71	C.4.40	1	50	68	
	Tracked excavator	68	C.4.23	1	50	65	
	Hand tools	63	C.4.57	2	25	60	
Traffic management at Woolley Bridge	Drilling for fixings	78	D.6.52	1	25	72	77
	Hand tools	76	Measured	2	25	73	
	Road marking vehicle	74	Measured	1	50	71	
	Traffic management vehicles	70	D.7.121	2	25	67	

Table 11.2.6: Phase 5

Construction activity	Plant	dB L _{Aeq} at 10m	BS 5228 reference	Quantity	On-time	Adjusted dB L _{Aeq} at 10m	Activity noise level at 10m (dB L _{Aeq})
Landscaping	D6 Tracked dozer	81	C.2.12	2	50	81	92
	40T Dump truck	79	C.6.26	2	50	79	
	Chainsaw	91	C.4.70	2	50	91	
	20t Road lorry (full)	80	C.6.21	1	25	74	
Road construction (detrunking)	Hand-held saw (petrol-cutting concrete)	79	C.4.72	1	25	73	84
	Generator	64	C.4.79	1	75	63	
	Core drill	85	C.4.69	1	25	79	
	Mobile telescopic crane	71	C.4.40	1	25	65	
	Tracked excavator	68	C.4.23	1	25	62	
	Hand tools	63	C.4.57	2	75	65	
	Asphalt paver (+tipper lorry)	75	C.5.33	1	25	69	
	20t Road wagons	80	C.2.34	2	50	80	
	Roller Bomag 120	80	C.5.21	2	25	77	

Table 11.2.7: Construction traffic data supplied by the Principal Contractor

Item	Description	Quantity m ³	HDV Single Movements	Routing	Vehicle Type	Dist.	Electric Possible	Sample Vehicles	Plan/Duration (A57 Work Areas Programme R3)
1	Cut from Show Ground to fill west of River Etherow	210,000	15,000	Number of full loads from Show Ground moving east, return journey empty. On site movement using haul road	ADT	1.0 km	Yes	ADT - CAT 725 artic dump truck	Phase 2 Mar 2023 to late Sept 2023 moving material from area 1 to area 2
2	Cut from Underpass moving west to fill area M67 to Underpass	150,000	10,714	Number of full loads from underpass to fill area east of M67 roundabout, return journey empty. On site movement using haul road	ADT	0.5 km	Yes		Phase 4 Mar 2024 to Oct 2024, moving material from the underpass to area 1
3	Concrete delivery to site	18,000	2,250	From Ashbury or Bredbury area (6km) via M67	Mixer Truck	6.0 km	Yes	Liebherr 8m ³ concrete truck mixer	From Mar 2023 to Dec 2024, majority of concrete from Mar 2023 to Mar 2024
4	Import stone (capping/subbase) Option 1 using quarry	40,000	2,857	From local quarry Harrop Edge to site using site haul road	ADT	1.0 km	Yes		From Quarry using haul road along centre line on new road, duration from Mar 2023 to Dec 2024
5	Import stone (capping/subbase) Option 2 using Ashbury rail head	40,000	5,000	From Ashbury Rail Head via M67	8 Wheel Road	6.0 km	Yes	Volvo FMX dump truck	Mar 2023 to Dec 2024
6	Road pavement import	21,000	2,625	From Ashbury or Bredbury plant via M67	8 Wheel Road	6.0 km	Yes		Majority of material from Mar 2024 to Dec 2024

Item	Description	Quantity m ³	HDV Single Movements	Routing	Vehicle Type	Dist.	Electric Possible	Sample Vehicles	Plan/Duration (A57 Work Areas Programme R3)
7	General deliveries - artic flat bed	-	1,460	Delivery of precast concrete products, office units, reinforcement, plant, etc via M67	8m artic flat bed	Varies	Yes		Throughout duration of scheme
8	General deliveries - 6 wheel	-	2,920	Office consumables, skips, etc via M67	Box van, or flat bed	Varies	Yes		Throughout duration of scheme

**NB Only one of Item 4 or 5 will be used. Item 5 is assumed for the construction traffic assessment.*

11.3 Indicative construction timescales

- 11.3.1 This section presents the indicative data supplied by the Principal Contractor that shows the planned durations and pace of works to be carried out during the build.
- 11.3.2 This information, combined with mapping showing the extent of planned works, and professional judgement was used to denote significance of effect at several of the construction assessment locations.
- 11.3.3 For further information relating to the assessment methodology, please refer to Chapter 11 Noise and Vibration.

Table 11.3.1: Indicative construction timescales supplied by the Principal Contractor

Phase	Activity	Total duration of activity	>= 10 days or nights in 15 consecutive days/nights	>= any 40 days within a 6 month period	If works are transient, what rate of progression is expected? E.g. 50 metres per day?
1	Site clearance	4 Weeks	20 days continuous work	-	3 gangs working at 100m day each
1	Demolition	2 Weeks	10 days work	-	2 teams working at 1 house per day each. Only in Mottram Underpass area
1	Compound set-up	12 weeks	60 days	60 days	In one location
1	Enabling works	12 weeks	60 days	60 days	Various locations, stats diversions, and Archaeology
2,3	Watercourse works	6 months	5 days	5 days	1 week per month
2	Earthworks (excavation, embankment)	6 Months	Working all days	Working all days	Area as shown on plan progressing from Sth to Nth at around 10m per day but his rate will slow as the excavation gets deeper in the north
2	Mottram underpass piling	3 months	Working all days	Working all days	4 piles per day, using two rigs
2	Transport of fill material (east)	6 months	Working all days	Working all days	Transport follows earthworks location but will all use the plant crossing over Mottram Moor road
2	Traffic Management Mottram Moor	6 months	Working all days, operation of the plant crossing. 1 day week, maintenance of the TM		
3, 4, 5	Landscaping	12 months	15 days	15 days	3 weeks Autumn, 3 weeks spring, 3 weeks summer cut

Phase	Activity	Total duration of activity	>= 10 days or nights in 15 consecutive days/nights	>= any 40 days within a 6 month period	If works are transient, what rate of progression is expected? E.g. 50 metres per day?
3	Mottram underpass structure	6 months	Working all days	Working all days	Working only in underpass area, will be working below the level of the existing houses, starts 2m below existing ground level before full excavation which we see most of the work undertaken 8m below existing ground level
3	Temp Road realignment	2 weeks	10 days	10 days	
3	Road construction	4 weeks	Working all days	Working all days	Laying 5 layers but each should move around 300m day
4	Transport of fill material (west)	4 months	Working all days	Working all days	
4	Road construction	3 months	Working all days	Working all days	50m per day
4	Road surfacing	2 months	Working all days	Working all days	300m day
4	Excavation	4 months	Working all days	Working all days	Excavation from within the underpass box below ground and with underpass roof in place
4	Street furniture	4 months	5 days	5 days	Assumed 1 week work each months
5	Road construction (detrunking)	8 weeks	40 days	40 days	Assume 1 week work moving along old A57 at 150m week

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