

# High Speed Rail (Crewe – Manchester) Environmental Statement

## Volume 5: Appendix SV-002-0MA02

### **Sound, noise and vibration**

MA02: Wimboldsley to Lostock Gralam

Baseline and construction sound, noise and vibration report

## **High Speed Rail (Crewe – Manchester) Environmental Statement**

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## Department for Transport

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# 1 Introduction

- 1.1.1 This report is an appendix to the sound, noise and vibration assessment relating to the Wimboldsley to Lostock Gralam area (MA02). This appendix presents baseline and predicted construction sound, noise and vibration levels.
- 1.1.2 This appendix should be read in conjunction with:
- Volume 2, Community Area reports;
  - Volume 3, Route-wide effects;
  - Volume 4, Off-route effects; and
  - Volume 5, Appendices.
- 1.1.3 There are three sound, noise and vibration appendices relevant to each community area, of which this should be considered the second. The first appendix contains an introduction to policy relevant to sound, noise and vibration and the assessment methodology, and can be found as Volume 5, Appendix SV-001-00000. This relates to all community areas. As the second appendix of the series, this report for MA02 provides the baseline and predicted levels as described above.
- 1.1.4 The third appendix is also specific to MA02, and provides detailed operational sound, noise and vibration levels, see Volume 5, Appendix SV-003-0MA02. This report should be read in conjunction with Map Series SV-03 in the Volume 5, Sound, noise and vibration Map Book.

## 2 Scope, assumptions and limitations

### 2.1 Regional and local policy guidance

2.1.1 The policy framework for sound, noise and vibration is set out in Volume 1, Section 8, and in Volume 5, Appendix SV-001-00000. As part of the engagement with local authorities where the Proposed Scheme would operate, information regarding any specific local planning guidance in respect of noise and vibration was requested. For MA02, the guidance within the following documents has been considered when applying the impact and significance criteria set out in the Environmental Impact Assessment Scope and Methodology Report (SMR), (see Volume 5: Appendix CT-001-00001):

- the adopted Cheshire East Local Plan, which consists of a number of key documents which form part of the statutory development plan including: the Local Plan Strategy 2010 – 2030 (2017)<sup>1</sup>;
- the saved policies from the previous local plans including the Congleton Borough Local Plan 1986 – 2001<sup>2</sup> and the Borough of Crewe and Nantwich Replacement Local Plan 2011<sup>3</sup>;
- the adopted Cheshire West and Chester Local Plan (Part One) Strategic Policies<sup>4</sup>;
- the adopted Cheshire West and Chester Local Plan Local Development Scheme<sup>5</sup>; and
- the saved policies from the previous Local Plans including Chester District Local Plan<sup>6</sup> and Vale Royal<sup>7</sup>.

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<sup>1</sup> Cheshire East Council (2017), *Local Plan Strategy 2010-2030 (Adopted 2017)*. Available online at: <https://www.cheshireeast.gov.uk/pdf/planning/local-plan/local-plan-strategy-web-version-1.pdf>.

<sup>2</sup> Congleton Borough (2005), *Congleton Borough Local Plan First Review*. Available online at: [https://www.cheshireeast.gov.uk/pdf/planning/spatial-planning/local-plan-consultations/cbc\\_local\\_plan\\_first\\_review\\_written\\_statement.pdf](https://www.cheshireeast.gov.uk/pdf/planning/spatial-planning/local-plan-consultations/cbc_local_plan_first_review_written_statement.pdf).

<sup>3</sup> Borough of Crewe and Nantwich (2005), *Borough of Crewe and Nantwich Replacement Local Plan 2011*. Available online at: <https://www.cheshireeast.gov.uk/pdf/planning/spatial-planning/strategic-planning/en-ldf-cnbclocalplan.pdf>.

<sup>4</sup> Cheshire West and Chester Council (2015), *Cheshire West and Chester Council Local Plan (Part One) Strategic Policies (Adopted 2015)*. Available online at: [https://inside.cheshirewestandchester.gov.uk/policies\\_plans\\_and\\_strategies/planning\\_policy/local\\_plan/local\\_plan\\_part\\_one](https://inside.cheshirewestandchester.gov.uk/policies_plans_and_strategies/planning_policy/local_plan/local_plan_part_one).

<sup>5</sup> Cheshire West and Chester Council (2017), *Cheshire West and Chester Council Local Development Scheme 2017*. Available online at: [https://consult.cheshirewestandchester.gov.uk/events/32023/4717276\\_accessible.pdf](https://consult.cheshirewestandchester.gov.uk/events/32023/4717276_accessible.pdf).

<sup>6</sup> Cheshire West and Chester Council (2015), *Chester District Local Plan – Policies saved after 29 January 2015*. Available online at: [http://consult.cheshirewestandchester.gov.uk/events/24923/2535030\\_accessible.pdf](http://consult.cheshirewestandchester.gov.uk/events/24923/2535030_accessible.pdf).

<sup>7</sup> Cheshire West and Chester Council (2015), *Vale Royal Borough Local Plan – Policies saved after 29 January 2015*. Available online at: [http://consult.cheshirewestandchester.gov.uk/events/24925/2535161\\_accessible.pdf](http://consult.cheshirewestandchester.gov.uk/events/24925/2535161_accessible.pdf).

## 2.2 Engagement

- 2.2.1 Details of engagement on a route-wide basis with the local and county authorities' Environmental Health Practitioners are set out in Volume 1.
- 2.2.2 Meetings have been held with representatives of Cheshire East Council (CEC) and Cheshire West Council and Chester Council (CWCC)<sup>8</sup> regarding the approach taken to baseline monitoring within this area, the identification of noise and vibration sensitive receptors, the selection of assessment locations and the development of the mitigation to be included in the Proposed Scheme.
- 2.2.3 Changes suggested during these meetings have influenced the assessment locations used and the monitoring undertaken and are reported in this appendix. CEC and CWCC officers were also invited to attend baseline sound measurements in this area and witness the measurement procedures used.
- 2.2.4 Local engagement, prior to and through the working draft Environmental Statement report consultation provided opportunities for local stakeholders to suggest appropriate baseline sound monitoring locations, to confirm building uses and to review the draft list of non-residential properties to be considered in the assessment.

## 2.3 Methodology

- 2.3.1 The methodology used for the assessment of airborne sound, ground-borne sound and vibration impacts and the determination of significant effects is defined in the SMR. Further information is contained in Volume 5, Appendix SV-001-00000.

## 2.4 Assumptions

- 2.4.1 Route-wide assumptions are outlined in Volume 1, Section 8, and are further detailed in Volume 5, Appendix SV-001-00000. Local assumptions that apply to the assessment of construction sound noise and vibration within this area are set out in Volume 2, Community Area report: Wimboldsley to Lostock Gralam (MA02), Section 13.

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<sup>8</sup> Meetings held on 26 June 2018 with CWCC, 6 July 2018 with CEC, 28 June 2018 with TMBC and on 7 February 2018, 16 May 2018, 20 February 2019, 5 June 2019, 22 October 2020 and 7 July 2021 with the local and county authorities' Environmental Health Practitioners on a route wide basis.

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## **2.5 Limitations**

- 2.5.1 The route-wide limitations and the approach adopted to ensure that they will not compromise the robust assessment of sound, noise and vibration are presented in Volume 5, Appendix SV-001-00000 and Volume 2.



## 3 Baseline

### 3.1 Existing acoustic environment

- 3.1.1 The Wimboldsley to Lostock Gralam area is characterised by a mix of small towns, villages, hamlets and isolated residential properties in a predominantly semi-rural setting. There are also some urban environments in the larger settlements of Northwich, Winsford and Middlewich.
- 3.1.2 The sound environment is generally dominated by local and distant road traffic, with trains, aircraft, local neighbourhood sources, natural and agricultural sounds also contributing.
- 3.1.3 There are several main roads within the Wimboldsley to Lostock Gralam area, including the A530 Nantwich Road that runs through Wimboldsley, Middlewich and Rudheath; the A54 Middlewich Road that runs through Winsford and Middlewich; the A533 Northwich Road/Bostock Road that runs through Middlewich, Bostock, Moulton, Davenham and Northwich; the A556 Chester Road/Shurlach Road that runs through Davenham, Northwich, Rudheath and Lostock Gralam; and the A559 Manchester Road that runs through Northwich, Lostock Gralam, Wincham and Marston and the M6 that runs east of Byley.
- 3.1.4 There are also a number of railways contributing to the sound environment in the Wimboldsley to Lostock Gralam area, including the West Coast Main Line (WCML) running in a south to north direction, the Sandbach to Northwich Line running in a south-east to north-west direction and the Mid-Cheshire Line running in a south-west to north-east direction.
- 3.1.5 Sound levels close to these main transport routes are high during the daytime and are generally lower during the night-time. Sound levels decrease with increasing distance from the main transportation routes. Manchester Airport restricts the operations permitted at night so that the aircraft noise levels are lower than during the daytime.
- 3.1.6 The communities of Wimboldsley and Occlestone Green are characterised by sound from the A530 Nantwich Road, local minor roads and to a lesser degree by the WCML to the west. Properties close to the A530 Nantwich Road typically experience daytime sound levels of 60dB – 70dB and 55dB – 65dB during the night-time. The properties set further back from the A530 Nantwich Road typically experience daytime sound levels of 45dB – 55dB and 35dB – 45dB during the night-time.
- 3.1.7 The community of Minshull Vernon is characterised by sound from the A530 Middlewich Road and the WCML. Properties close to the A530 Middlewich Road typically experience daytime sound levels of 60dB – 70dB and 55dB – 65dB at night-time. The properties set further back from the A530 Middlewich Road typically experience daytime sound levels of 50dB – 55dB and 45dB – 50dB during the night-time. Properties close to the WCML typically experience daytime and night-time sound levels of 60dB – 65dB. The properties set further back from the WCML typically experience daytime and night-time sound levels of 40dB – 50dB.

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- 3.1.8 The area between Wimboldsley and Stanthorne is generally of a rural nature to the south with an increasing build-up of both residential and commercial areas towards Winsford to the north-west and Middlewich to the north-east.
- 3.1.9 The communities of Clive, Stanthorne and the Newton Bank area to the west of Middlewich are characterised by sound from the A54 Middlewich Road, the A533 Northwich Road and the A530 Nantwich Road. The properties close to the A54 Middlewich Road, A533 Northwich Road and A530 Nantwich Road typically experience daytime sound levels of 55dB – 70dB and 50dB – 65dB during the night-time. Properties set further back from these road sources experience daytime sound levels of 45dB – 55dB and 40dB – 45dB during the night-time.
- 3.1.10 The communities of Bostock and Whatcroft are characterised by sound from the A533 Bostock Road, the A530 King Street and local roads. Properties close to the A533 Bostock Road and A530 King Street typically experience daytime sound levels of 55dB – 65dB and 50dB – 60dB during the night-time, depending on proximity. Properties set further back from these road sources experience daytime sound levels of 45dB – 55dB and 40dB – 45dB during the night-time.
- 3.1.11 The communities of Rudheath, Higher Shurlach and Broken Cross are characterised by sound from the A556 Chester Road, A530 King Street and local roads. Properties close to the A556 Chester Road and A530 King Street typically experience daytime sound levels of up to 65dB and up to 60dB during the night-time. The properties set further back from the A556 Chester Road typically experience daytime sound levels of 50dB – 55dB and 45dB – 50dB during the night-time.
- 3.1.12 The community of Lostock Green is characterised by sound from the A556 Chester Road to the west and Birches Lane. Properties close to the A556 Chester Road typically experience sound levels of up to 75dB during the daytime and 70dB during the night-time. The properties set further back from the A556 Chester Road typically experience daytime sound levels of 45dB – 55dB and 40dB – 55dB during the night-time.
- 3.1.13 The community of Lostock Gralam is characterised by sound from the A556 Chester Road to the east, the A559 Manchester Road running centrally through the area, the Mid-Cheshire Line and local roads. Properties close to the A556 Chester Road typically experience daytime sound levels of up to 65dB and 60dB during the night-time. The properties close to the Mid-Cheshire Line typically experience daytime sound levels of up to 55dB and up to 50dB during the night-time. Properties set further back from major transportation sources experience daytime sound levels of 45dB – 60dB and 40dB – 55dB during the night-time.
- 3.1.14 The community of properties on Ascol Drive is characterised by sound from the A556 Chester Road and A559 Manchester Road to the north-west. The properties facing the route of the Proposed Scheme typically experience sound levels of 55dB – 70dB both during the daytime and during the night-time.

## 3.2 Existing baseline data collection methodology

3.2.1 The overall approach to baseline data collection for sound, noise and vibration is described in Volume 5, Appendix SV-001-00000. In summary, the approach to defining baseline levels includes a combination of sound monitoring and – where existing sound levels at assessment locations are dominated by transport sources which can be reliably modelled – sound modelling, verified using results from sound monitoring.

## 3.3 Existing baseline sound measurement locations

- 3.3.1 The assessment of impacts has been undertaken at assessment locations that are representative of a number of dwellings or other sensitive receptors. Baseline monitoring locations have been defined in order to provide representative sound levels at assessment locations within the study area as well as to verify the baseline sound model.
- 3.3.2 Baseline information has been gathered incrementally through successive rounds of field surveys focused on locations where likely significant effects are forecast.
- 3.3.3 Where measured baseline data are required to provide representative sound levels at assessment locations, areas have been defined within which the sound climate is influenced by the same sound sources. Within each of these areas, monitoring has been undertaken together with attended observations to assist in identifying the contributing sources to the sound climate at the measurement locations.
- 3.3.4 Where measurements, carried out at or close to assessment locations, have been used to assist in verifying the baseline sound model, they are identified in Table 1 along with the modelled baseline for the relevant assessment location.
- 3.3.5 Within MA02, 13 baseline measurement locations have been defined. The measurement locations are shown on the detailed maps in Volume 5, Sound, noise and vibration Map Book: Map Series SV-02 and SV-03. These measurement locations have been classified as follows:
- twelve long-term measurements – unattended measurements of several days' duration; and
  - one short-term measurements – unattended measurements typically of 24 hours' duration and attended measurements typically of several hours.
- 3.3.6 An additional 33 verification measurements have been carried out, typically close to modelled sound sources and over durations of three hours (attended) or 24 hours (unattended), to assist in verifying the baseline sound model.

## 3.4 Existing baseline sound modelling

- 3.4.1 Baseline sound levels have been modelled where existing sound levels at assessment locations are dominated by transport sources which can be reliably modelled. Methodologies from the Calculation of Road Traffic Noise<sup>9</sup> and the Calculation of Railway Noise<sup>10</sup> have been used to predict baseline levels of airborne sound from road traffic and railways respectively. The methods use input data such as traffic flows and speed to predict sound levels. As described previously, verification measurements have been carried out to assist in verifying the baseline sound model.
- 3.4.2 Within the Wimboldsley to Lostock Gralam area, noise from all major roads including the A530 Nantwich Road, the A54 Middlewich Road, the A533 Bostock Road, the A556 Chester Road and the A559 Manchester Road, approximately 20 other roads, the WCML, the Sandbach to Northwich Line and the Mid-Cheshire Line have been modelled.

## 3.5 Future baseline methodology

### Construction

- 3.5.1 The assessment of noise from construction activities assumes a future construction baseline year of 2025, which represents the period immediately prior to the start of the construction period. As a reasonable worst case, it has been assumed that no change in baseline sound levels will occur between the existing baseline year of 2018 and the future construction baseline year of 2025.

### Operation

- 3.5.2 Changes in road and rail traffic between 2018 and 2038 may result in changes in baseline sound levels at receptors. For modelled transportation sources, future baseline sound levels for operation (2038) have been predicted, based on, for example, expected changes in road traffic flow, composition, speed, and in some cases road surface using the methodology from the Calculation of Road Traffic Noise.
- 3.5.3 Changes in noise level as a result of changes in road traffic flow, composition and speed are normally small. Roads in Important Areas identified in Department for Environment, Food &

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<sup>9</sup> Department of Transport Welsh Office (1988), *Calculation of Road Traffic Noise*.

<sup>10</sup> Department of Transport (1995), *Calculation of Railway Noise*.

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Rural Affairs' (Defra) Noise Action Plans<sup>11</sup> and trunk roads, which are likely to be resurfaced under future routine maintenance programmes, have been assumed to have a low noise surface in 2038. Assuming a low noise surface will result in a lower baseline sound level compared with other road surface types. This is conservative as a lower baseline will have the effect of increasing predicted adverse airborne noise effects during operation.

- 3.5.4 For 2038, airborne noise levels from railways in Important Areas identified in Defra's Noise Action Plans are assumed, on a precautionary basis, to be controlled to a level of 65dB  $L_{Aeq,18hour}$ , where they are predicted to exceed this level. This is the lowest level of airborne railway noise where further mitigation would be considered within an Important Area.

## 3.6 Baseline sound levels

- 3.6.1 Baseline sound levels have been ascertained for each assessment location within this area. In some cases, they include adjustments to account for changes in baseline sound sources between the date of the existing baseline sound levels and the year of opening of the Proposed Scheme (2038). Further detail regarding the future baseline methodology is provided in Section 3.5. Baseline sound levels are presented in terms of the following key sound indicators:

- baseline levels used for the operational sound assessment:
  - $L_{pAeq,16hour}$  daytime (07:00 – 23:00) sound pressure level;
  - $L_{pAeq,8hour}$  night-time (23:00 – 07:00) sound pressure level;
  - arithmetic average of  $L_{pAFmax,5min}$  night-time sound pressure level; and
  - highest  $L_{pAFmax,5min}$  night-time sound pressure level.
- baseline levels used for the construction sound assessment:
  - daytime  $L_{pAeq}$  sound pressure level (Monday to Friday 07:00 – 19:00; Saturday 07:00 – 13:00);
  - evening/weekend  $L_{pAeq}$  sound pressure level (Monday to Friday 19:00 – 23:00, Saturday 13:00 – 23:00 and Sunday 07:00 – 23:00); and
  - night-time  $L_{pAeq}$  sound pressure level (Monday to Sunday 23:00 – 07:00).

- 3.6.2 These values are presented in Table 1. All values are free-field. The data source coding included within this table details how the baseline sound levels allocated to each assessment

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<sup>11</sup> Department for Environment, Food & Rural Affairs (2019), *Noise Action Plan: Roads*. Available online at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/813666/noise-action-plan-2019-roads.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/813666/noise-action-plan-2019-roads.pdf) and

Department for Environment, Food & Rural Affairs (2019), *Noise Action Plan: Agglomerations (Urban Areas)*. Available online at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/813663/noise-action-plan-2019-agglomerations.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/813663/noise-action-plan-2019-agglomerations.pdf).

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location have been derived. This coding is summarised in Table 2 and explained in detail in Volume 5, Appendix SV-001-00000. Codes contained within brackets relate to the derivation of night-time baseline noise levels where they are different to the daytime derivation method.

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**Table 1: Baseline sound levels**

Assessment location		Measurement location	Baseline sound levels (dB)							Data source coding
Reference	Area represented		For construction sound assessment (2025)			For operational sound assessment (2038)				
			Daytime L <sub>pAeq</sub>	Evening / weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	
610165	Verdin Arms, Nantwich Road, Minshull Vernon		74	69	67	73	67	72	77	3,A,i,b
610168	Nantwich Road, Minshull Vernon		44	41	39	43	38	39	66	5,A,i,b
610169	Wimboldsley Hall, Wimboldsley		52	50	48	51	48	50	77	5,A,i,b
610171	Manor Cottage, Wimboldsley		66	62	59	63	57	61	73	3,A,i,b
610173	Rose Cottage, Wimboldsley		73	69	66	70	63	68	73	3,A,i,b
610174	New Farm, Occleston		58	54	50	59	52	57	62	3,A,i,b
610176	Holly Croft, Occleston		57	53	49	58	51	56	61	3,A,i,b
610177	Smithy Farm, Occleston		61	57	53	62	55	60	65	3,A,i,b
610178	Hopley House, Nantwich Road, Wimboldsley		65	60	58	64	58	63	68	3,A,i,b
610180	Nantwich Road, Wimboldsley		52	48	45	52	46	50	65	3,A,i,b
610181	Occleston Green Farm, Occleston	ML710023	53	49	45	52	45	54	75	1,A,i,a
610182	Wimboldsley Grange, Nantwich Road, Wimboldsley		48	48	46	48	46	49	76	5,A,i,b
610183	Lea Drive, Wimboldsley		61	56	54	60	54	59	64	3,A,i,b
610184	Saunders Field, Wimboldsley	ML710023	53	49	45	52	45	54	75	1,A,i,a
610185	Wimboldsley Community Primary School, Nantwich Road, Wimboldsley		74	69	67	73	67	72	77	3,A,i,b
610186	Nantwich Road, Wimboldsley		59	54	52	58	52	57	62	3,A,i,b
610188	Newfield Farm, Occleston		45	41	38	44	38	43	55	3,A,i,b
610189	Nantwich Road, Wimboldsley		44	41	40	43	40	41	68	5,A,i,b

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Assessment location		Measurement location	Baseline sound levels (dB)							Data source coding
Reference	Area represented		For construction sound assessment (2025)			For operational sound assessment (2038)				
			Daytime L <sub>pAeq</sub>	Evening / weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	
610191	Leahead Farm, Nantwich Road, Wimboldsley		51	46	44	50	44	49	61	3,A,i,b
610192	Lea House Farm, Nantwich Road, Wimboldsley		64	59	57	63	57	62	67	3,A,i,b
610193	Nantwich Road, Stanthorne		56	51	49	55	49	54	60	3,A,i,b
610194	Clive Green Lane, Stanthorne		46	42	39	45	39	43	63	3,A,i,b
610196	Clive Back Lane, Winsford		53	53	51	53	51	54	81	5,A,i,b
610197	Norcroft Farm, Nantwich Road, Stanthorne	ML710025	52	47	46	51	46	52	86	1,A,i,a
610198	Clive Back Lane, Winsford		50	46	44	49	43	46	69	5,A,i,b
610199	Clive Green Lane, Winsford		67	62	60	66	60	65	70	3,A,i,b
610200	Willow Court, Clive Green Lane, Winsford		56	51	49	54	48	53	65	3,A,i,b
610201	Pear Tree Farm, Clive Back Lane, Winsford		50	48	46	49	46	48	75	5,A,i,b
610202	2 Wharf Cottage, Clive Green Lane, Stanthorne		63	59	56	62	56	61	66	3,A,i,b
610203	Clive Back Lane, Winsford		56	56	54	56	54	57	84	4,A,i,b
610204	Chapel End Cottage, Clive Green Lane, Winsford		69	64	61	67	61	66	72	3,A,i,b
610205	Oak Lea House, Nantwich Road, Stanthorne		60	55	53	60	53	58	63	3,A,i,b
610206	Clive Green Lane, Stanthorne		46	42	39	45	39	44	56	3,A,i,b



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Assessment location		Measurement location	Baseline sound levels (dB)							Data source coding
Reference	Area represented		For construction sound assessment (2025)			For operational sound assessment (2038)				
			Daytime L <sub>pAeq</sub>	Evening / weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	
610207	Unit I - M (Lower Sensitivity Offices), Sheriff House, Nantwich Road, Stanthorne, Middlewich		47	42	40	47	41	46	51	3,A,i,b
610209	Coalpit Lane, Stanthorne		44	39	37	44	37	42	52	3,A,i,b
610216	Middlewich Road, Winsford		61	56	54	60	54	59	65	3,A,i,b
610217	Seaton Street, Winsford and committed development (Map Book ref.: MA02/335)		47	43	41	47	41	45	62	3,A,i,b
610218	Middlewich Road, Winsford		65	61	58	64	58	63	68	3,A,i,b
610219	Middlewich Road, Winsford		55	50	48	54	48	53	59	3,A,i,b
610220	Coalpit Lane, Stanthorne		42	38	35	42	35	40	48	3,A,i,b
610221	Coalpit Lane, Stanthorne		43	38	36	42	36	41	46	3,A,i,b
610222	Middlewich Road, Winsford		55	50	48	55	48	53	58	3,A,i,b
610224	Earl's Cottage, Birch Lane, Stanthorne		44	39	37	43	37	42	47	3,A,i,b
610225	Mill Farm, Birch Lane, Stanthorne		41	36	34	40	34	39	45	3,A,i,b
610226	Birch Lane, Stanthorne		43	39	36	43	37	41	46	3,A,i,b
610228	Stanthorne Hall, Middlewich Road, Stanthorne		48	43	41	47	41	46	51	3,A,i,b
610229	Goodwood Rise, Middlewich		53	48	46	52	46	51	56	3,A,i,b
610230	Birch Lane, Stanthorne		48	43	41	47	41	46	51	3,A,i,b
610231	Stanthorne Lodge, Middlewich Road, Stanthorne		59	54	52	59	52	57	62	3,A,i,b
610232	Middlewich Road, Stanthorne		61	57	54	61	54	59	64	3,A,i,b

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610233	Sundown, Birch Lane, Stanthorne		62	57	55	61	55	60	65	3,A,i,b
610234	Bostock House Farm, Northwich Road, Stanthorne		70	65	63	69	63	68	73	3,A,i,b
610235	Beechfield Drive, Middlewich		50	46	43	50	43	48	53	3,A,i,b
610238	Heyescroft, Northwich Road, Stanthorne		65	61	58	64	58	63	68	3,A,i,b
610239	Bank Farm, Northwich Road, Stanthorne		62	57	55	61	54	59	64	3,A,i,b
610240	Bostock Road, Bostock		43	38	36	42	36	41	47	3,A,i,b
610241	South Lodge, Bostock Road, Bostock		64	59	56	63	56	61	66	3,A,i,b
610242	Croxton Lane, Byley		68	63	61	67	61	66	71	3,A,i,b
610243	Bostock Road, Bostock		59	54	51	58	51	56	61	3,A,i,b
610244	Bostock Road, Bostock		64	59	57	63	57	62	67	3,A,i,b
610246	Dairyhouse Farm, Croxton Lane, Byley	ML710033	52	47	37	51	37	48	64	1,A,i,b
610248	The Courtyard, Bostock Road, Bostock	ML710035	49	48	44	49	44	49	80	1,A,i,a
610249	Bostock Road, Bostock	ML710035	49	48	44	49	44	49	80	1,A,i,a
610250	Middle Lodge, Bostock Road, Bostock		57	53	50	57	50	55	60	3,A,i,b
610251	North Lodge, Bostock Road, Bostock		56	51	49	55	48	53	58	3,A,i,b
610255	Whatcroft Hall Lane, Rudheath		<40	<35	30	<40	30	43	70	5,C,i,b
610256	Whatcroft Hall Lane, Whatcroft	ML710038	46	41	40	45	40	46	70	1,A,i,a
610257	Halfway House, King Street, Byley		75	71	68	72	66	71	76	3,A,i,b

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610258	Whatcroft Hall Lane, Whatcroft	ML710038	46	41	40	45	40	46	70	1,A,i,a
610259	Manor Lane, Whatcroft	ML710038	46	41	40	45	40	46	70	1,A,i,a
610260	Drakelow Farm, Whatcroft Hall Lane, Rudheath		49	45	42	49	43	48	54	3,A,i,b
610261	Whatcroft Hall Lane, Rudheath		50	46	43	50	44	49	58	3,A,i,b
610262	Brook Farm Cottage, Old Lane, Whatcroft	ML710039	51	48	45	50	45	54	71	1,A,i,b
610263	Old Lane, Whatcroft	ML710039	51	48	45	50	45	54	71	1,A,i,b
610265	Manor Farm, Old Lane, Whatcroft	ML710039	51	48	45	50	45	54	71	1,A,i,b
610266	Shipbrook Hill Farm, Davenham Road, Whatcroft		45	41	38	48	41	46	55	3,A,i,b
610267	Shipbrook Hill Farm, Davenham Road, Whatcroft		59	55	52	65	59	64	69	3,A,i,b
610269	Yew Tree Farm, Davenham Road, Whatford		59	55	52	61	54	59	64	3,A,i,b
610387	Environment Agency (Offices), Road Three, Winsford		47	42	40	46	40	45	59	3,A,i,b
610388	The Cottage Cattery (Lower Sensitivity Offices), Occleston, Middlewich		48	43	40	48	41	46	57	3,A,i,b
610398	Oakwood Marina (Lower Sensitivity Offices), Davenham Road, Rudheath	ML712503	47	44	42	47	42	48	69	1,A,i,b
610399	Firthfield Kennels (Lower Sensitivity Offices), Whatcroft Hall Lane, Rudheath		48	43	41	48	41	46	57	3,A,i,b
610402	Beckett Avenue, Winsford		44	39	37	43	37	41	56	3,A,i,b

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610403	Middlewich Road, Winsford		49	45	42	49	43	47	57	3,A,i,b
610406	Clive Green Lane, Stanthorne		47	43	40	46	40	44	65	5,A,i,b
610408	Birch Lane, Stanthorne		52	47	45	51	45	50	55	3,A,i,b
610409	Steam House, Middlewich Road		61	57	54	61	54	59	64	3,A,i,b
610544	Yew-Tree Farm (Livestock), Coalpit Lane, Stanthorne		41	36	34	40	34	39	54	3,A,i,b
610546	Dairy Farm (Livestock), Whatcroft Hall Lane, Whatcroft	ML710038	46	41	40	45	40	46	70	1,A,i,a
610713	Byley Primary School (School), Moss Lane, Byley		43	40	38	44	38	43	48	3,A,i,b
610714	Moss Lane, Byley		43	39	37	43	38	43	48	3,A,i,b
610715	Middlewich Road, Byley		46	42	40	46	41	46	51	3,A,i,b
610716	Middlewich Road, Byley		43	40	38	43	38	43	48	3,A,i,b
610717	Middlewich Road, Byley		59	56	53	59	54	59	64	3,A,i,b
610718	Middlewich Road, Byley		53	49	47	53	48	53	58	3,A,i,b
610719	Middlewich Road, Byley		62	59	57	63	58	63	68	3,A,i,b
610720	Sandy Lane, Middlewich		55	51	49	55	50	55	60	3,A,i,b
610721	Northwich Road, Rudheath Woods		57	53	51	57	52	57	62	3,A,i,b
610722	Middlewich Road, Winsford		42	38	36	42	36	40	57	3,A,i,b
610723	KC Auto (Offices), Road Three, Winsford		45	40	38	44	38	43	53	3,A,i,b
610724	Kinderton Accident Management (Offices), Road Three, Winsford		43	39	37	43	37	41	57	3,A,i,b

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610725	Car Transplant (Offices), Road Three, Winsford		40	<35	33	39	33	38	55	3,A,i,b	
610726	Go Furniture (Offices), Road Three, Winsford		43	38	36	42	36	40	58	3,A,i,b	
610727	Bam Nuttall Signs (Offices), Road Three, Winsford		42	38	35	42	36	40	54	3,A,i,b	
610728	Antalis (Offices), Road One, Winsford		62	57	55	61	54	59	64	3,A,i,b	
610729	RPC (Offices), Road One, Winsford		59	54	52	58	51	56	61	3,A,i,b	
610730	Mitras Paint Operations (Offices), Road One, Winsford		54	49	46	53	46	51	56	3,A,i,b	
610731	Graphite Packaging International (Offices), Road Three, Winsford		<40	<35	32	<40	32	37	58	3,C,i,b	
610732	Coalpit Lane, Stanthorne		42	38	35	42	35	40	45	3,A,i,b	
610733	Northwich Road, Bostock and committed development (Map Book ref.: MA02/062)		55	50	48	54	47	52	57	3,A,i,b	
610734	Road One, Winsford and committed development (Map Book ref.: MA02/247)		59	54	52	58	52	57	62	3,A,i,b	
610735	Road One, Winsford		52	48	45	52	46	51	56	3,A,i,b	
610736	Whatcroft Hall Lane, Whatcroft		<40	<35	31	<40	31	36	54	3,C,i,b	
610746	Wimboldsley, Middlewich		72	67	65	68	62	67	72	3,A,i,b	
610760	Northwich Road, Rudheath Woods		54	51	48	54	49	54	59	3,A,i,b	
610761	Byley Road, Byley		49	46	43	49	44	49	54	3,A,i,b	
610762	Byley Road, Byley		50	46	44	49	44	49	54	3,A,i,b	

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610806	St John the Evangelist (Church), Moss Lane, Byley		48	44	42	48	43	48	53	3,A,i,b
610807	FoxHound Recording Studio, Moss Lane, Byley		45	41	39	45	40	45	50	3,A,i,b
610808	Byley Road, Byley		64	60	58	63	58	63	68	3,A,i,b
610809	Williams Design and Print (Offices), Byley Road, Byley		69	66	63	68	63	68	73	3,A,i,b
610875	Middlewich Road, Winsford and committed development (Map Book ref.: MA02/217)		66	61	59	66	59	64	69	3,A,i,b
610876	Middlewich Road, Winsford and committed development (Map Book ref.: MA02/217)		53	48	45	52	46	51	59	3,A,i,b
610877	Wimboldsley Community Primary School, Nantwich Road, Wimboldsley and committed development (Map Book ref.: MA02/328)		55	50	48	54	48	53	58	3,A,i,b
610880	Manor Farm, Old Lane, Whatcroft and committed development (Planning ref.: 18/1073N)	ML710039	51	48	45	50	45	54	71	1,A,i,b
612500	King Street, Lach Dennis		70	65	62	69	63	68	73	3,A,i,b
612503	Billinge Green Barn, Davenham Road, Billenge Green		55	51	47	56	49	54	74	5,A,i,b
612504	Little Grebe Cottage, Davenham Road, Billenge Green		51	46	43	52	45	50	65	3,A,i,b
612505	Pear Tree Farm cottages, Davenham Road, Billenge Green	ML712505	53	47	46	52	46	53	71	1,A,i,a

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612506	Park Farm, Whatcroft		46	45	35	46	36	42	69	5,A,i,b
612507	Gadbrook Park (Offices), Gadbrook Business Centre, Rudheath	ML712501	51	48	47	50	47	53	90	1,A,i,a
612508	Langdale House and Century House (Offices), Gadbrook Business Centre, Rudheath	ML712501	51	48	47	50	47	53	90	1,A,i,a
612509	Orchard Marina (Office), School Road, Rudheath	ML712501	51	48	47	50	47	53	90	1,A,i,a
612510	Ashbrook House, Penny's Lane, Lach Dennis		56	51	49	55	48	53	58	3,A,i,b
612511	Sherwood House (Offices), Gadbrook Business Centre, Rudheath	ML712501	51	48	47	50	47	53	90	1,A,i,a
612512	Chrysalis Day Nursery, Gadbrook Business Centre, Rudheath	ML712501	51	48	47	50	47	53	90	1,A,i,a
612513	School Road, Rudheath	ML712501	51	48	47	50	47	53	90	1,A,i,a
612514	Unit 12-13 Brunel Court (Offices), Rudheath	ML712501	51	48	47	50	47	53	90	1,A,i,a
612515	1 Gadbrook Park (Offices), Rudheath	ML712501	51	48	47	50	47	53	90	1,A,i,a
612516	Penny's Lane, Lach Dennis		63	59	56	62	56	61	66	3,A,i,b
612519	Melvin Holme Farm, Penny's Lane, Lach Dennis		52	47	45	51	45	50	55	3,A,i,b
612522	Rudheath Youth Centre, Gadbrook Road, Rudheath		64	60	57	64	57	62	67	3,A,i,b
612523	Tudor Close, Rudheath		65	60	58	64	58	63	68	3,A,i,b
612524	School Road, Rudheath		62	57	55	61	55	60	65	3,A,i,b

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612525	Rudheath Primary Academy and Little Owls Pre-School Nursery, Gadbrook Road, Rudheath		59	54	51	58	52	57	62	3,A,i,b
612526	Tudor Close, Rudheath		54	49	47	53	47	52	57	3,A,i,b
612527	King Street, Rudheath		62	57	55	61	55	60	65	3,A,i,b
612528	Mulberry Close, Rudheath		66	61	59	64	58	63	68	3,A,i,b
612529	Cookes Lane, Rudheath		56	51	49	55	49	54	59	3,A,i,b
612530	Central Road, Rudheath		51	46	43	50	44	49	54	3,A,i,b
612531	Penny's Lane, Rudheath		54	50	47	54	47	52	57	3,A,i,b
612532	Waterside View, Rudheath	ML712502	52	48	47	51	47	54	73	1,A,i,a
612533	King Street, Rudheath		67	63	60	67	60	65	70	3,A,i,b
612534	East Avenue, Rudheath		57	52	49	55	49	54	59	3,A,i,b
612535	Wyche Close, Rudheath	ML712502	52	48	47	51	47	54	73	1,A,i,a
612537	Waterside View, Rudheath	ML712502	52	48	47	51	47	54	73	1,A,i,a
612538	Penny's Lane, Rudheath		48	43	41	47	41	46	51	3,A,i,b
612539	Lavender Drive, Rudheath	ML712502	52	48	47	51	47	54	73	1,A,i,a
612540	East Avenue, Rudheath		48	43	41	47	41	46	52	3,A,i,b
612541	Hangmans Lane, Lostock Green		43	38	36	45	39	44	49	3,A,i,b
612542	East Avenue, Rudheath		59	54	52	58	52	57	62	3,A,i,b
612543	Middlewich Road, Rudheath		64	59	57	63	57	62	67	3,A,i,b
612544	West Avenue, Rudheath		56	52	50	53	46	51	56	3,A,i,b
612546	St Andrews Close, Rudheath		55	50	48	55	48	53	58	3,A,i,b



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612547	Rudheath Dental Health Centre (Office), Middlewich Road, Rudheath		54	49	47	53	47	52	57	3,A,i,b
612548	Birches Lane, Lostock Green		45	40	38	46	40	45	50	3,A,i,a
612549	Birch Grove, Lostock Green		50	45	42	49	43	48	53	3,A,i,a
612550	Farm Road, Rudheath		59	55	52	58	51	56	61	3,A,i,b
612551	Birches Lane, Lostock Green		51	46	44	52	45	50	55	3,A,i,a
612552	Cottage Close, Rudheath		60	56	53	60	54	59	64	3,A,i,b
612553	Lostock Green Methodist Church, Birches Lane, Lostock Green		55	50	49	60	53 <sup>12</sup>	58	63	3,A,i,a
612554	Cinder Lane, Lostock Green		59	54	51	58	52	57	62	3,A,i,b
612555	Village Close, Lostock Green		72	67	65	72	65	70	75	3,A,i,b
612556	Greenside Drive, Lostock Green		50	45	43	50	44	49	54	3,A,i,b
612557	Birches Lane, Lostock Green		65	60	57	65	59	64	69	3,A,i,b
612558	Birches Lane, Lostock Green		74	69	67	74	67	72	77	3,A,i,b
612561	Birches Lane, Lostock Green		63	59	56	62	56	61	66	3,A,i,b
612562	Birches Lane, Lostock Green		63	59	56	62	56	61	66	3,A,i,b
612563	Moss Lane, Lostock Green	ML712515	55	44	47	54	47	48	78	1,A,i,a
612564	Ineos Chlor (Office), Griffiths Road, Lostock Gram		60	56	53	60	54	59	64	3,A,i,b
612565	Birches Lane, Lostock Green		50	46	43	50	43	48	59	3,A,i,b

<sup>12</sup> Increase in predicted baseline sound levels from 2025 to 2038 due to forecast increases in road traffic flow.

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			Daytime L <sub>pAeq</sub>	Evening / weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	
612566	Fields Farm, Lostock Gramam		52	48	45	52	45	50	58	3,A,i,b
612567	Hame Farm, Moss Lane, Lostock Gramam	ML712515	55	44	47	54	47	48	78	1,A,i,a
612568	North West Trucks (Offices), Griffiths Road, Lostock Gramam		54	54	48	54	48	52	79	5,A,i,b
612569	Paulden Road, Lostock Gramam		56	54	49	55	49	57	84	5,A,i,b
612570	Harris Road, Lostock Gramam		67	63	60	66	60	64	87	5,A,i,b
612571	Parish of Lostock Gramam Church Hall, Station Road, Lostock Gramam		48	44	41	48	41	47	74	5,A,i,b
612572	Lostock Tiny Tots Pre-School, Station Road, Lostock Gramam		61	56	53	60	53	58	73	3,A,i,b
612573	Harris Road, Lostock Gramam		59	55	52	58	52	56	79	5,A,i,b
612574	Arthur Street, Lostock Gramam		59	54	52	58	52	57	70	3,A,i,b
612575	Pack Horse Close, Lostock Gramam		59	54	51	58	52	57	72	3,A,i,b
612576	Bateman Road, Lostock Gramam		51	46	44	50	44	49	70	3,A,i,b
612577	Manchester Road, Lostock Gramam		50	46	43	49	43	47	66	5,A,i,b
612578	St John The Evangelist Church, School Lane, Lostock Gramam		53	48	46	52	45	50	67	3,A,i,b
612579	Lostock Gramam Church of England Primary School, School Lane, Lostock Gramam		48	43	40	47	41	46	66	3,A,i,b
612580	Manchester Road, Lostock Gramam		49	45	42	48	42	46	65	5,A,i,b
612581	Stubbs Lane, Lostock Gramam		58	52	51	58	52	57	67	3,A,i,b

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Assessment location		Measurement location	Baseline sound levels (dB)							Data source coding
Reference	Area represented		For construction sound assessment (2025)			For operational sound assessment (2038)				
			Daytime L <sub>pAeq</sub>	Evening / weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	
612582	Crossways Care Home, Station Road, Lostock Gramam		56	51	48	53	46	51	63	3,A,i,b
612583	Silverlea Road, Lostock Gramam		50	45	43	50	43	48	64	3,A,i,b
612584	Broseley Way, Lostock Gramam		64	59	57	64	57	62	67	3,A,i,b
612585	Lodge Lane, Lostock Gramam		56	50	48	56	49	54	63	3,A,i,b
612586	Wells Avenue, Lostock Gramam		53	49	46	53	47	52	63	3,A,i,b
612587	Slow & Easy Hotel, Manchester Road, Lostock Gramam		63	59	56	62	56	61	66	3,A,i,b
612588	Lodge Lane, Lostock Gramam		57	52	50	57	51	56	61	3,A,i,b
612589	Acorn Hollow and Avandale Lodge Care Home, Manchester Road, Lostock Gramam		60	56	53	60	53	58	63	3,A,i,b
612590	Children's Centre, School Lane, Lostock Gramam		52	47	45	52	46	51	60	3,A,i,b
612591	Travelodge (Hotel), Wells Avenue, Lostock Gramam		67	62	60	67	60	65	70	3,A,i,b
612592	Cheshire Business Park (Offices), Lostock Gramam		51	47	44	51	45	50	58	3,A,i,b
612593	Holford Avenue, Lostock Gramam	ML712509	53	53	50	53	50	56	78	1,A,i,a
612594	Highfield Avenue, Lostock Gramam		52	47	45	51	45	50	57	3,A,i,b
612595	Lostock Lodge Care Home, Cheshire Business Park Roundabout		68	63	61	68	61	66	71	3,A,i,b
612596	Townshend Road, Lostock Gramam		60	55	52	60	53	58	63	3,A,i,b
612597	Wilson Crescent, Lostock Gramam		63	58	56	62	56	61	66	3,A,i,b

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Assessment location		Measurement location	Baseline sound levels (dB)							Data source coding
Reference	Area represented		For construction sound assessment (2025)			For operational sound assessment (2038)				
			Daytime L <sub>pAeq</sub>	Evening / weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	
612598	Townshend Road, Lostock Gramam		62	57	54	60	52	57	62	3,A,i,b
612599	Ascol Drive, Plumley		57	52	50	57	50	55	60	3,A,i,b
612600	Holford Hall (Wedding Venue), Chester Road, Plumley	ML712516	49	46	45	49	45	49	78	1,A,i,a
612601	Manchester Road, Plumley		72	67	65	72	65	70	75	3,A,i,b
612602	Holford Mill House (Holiday Let), Plumley		62	58	55	62	56	61	66	3,A,i,b
612603	Plumley Moor Road, Plumley		51	48	46	51	45	50	55	3,A,i,b
612604	Chester Road, Plumley		78	74	72	77	72	77	82	3,A,i,b
612606	Plumley Moor Road, Plumley		57	53	51	56	51	56	61	3,A,i,b
612607	Linnards Lane, Wincham		46	41	39	46	40	45	50	3,A,i,b
612608	Keats Lane, Wincham		45	41	38	45	39	44	49	3,A,i,b
612863	Sovereign Close, Rudheath		49	44	41	48	41	46	51	3,A,i,b
612864	Sovereign Close, Rudheath		49	44	42	48	42	47	52	3,A,i,b
612865	Village Close, Lostock Green		72	67	65	72	65	70	75	3,A,i,b
612867	Greenside Drive, Lostock Green		57	52	50	57	50	55	60	3,A,i,b
612868	Salary Row, Lostock Gramam		64	60	57	64	58	63	68	3,A,i,b
612869	Silverlea Road, Lostock Gramam		54	50	47	54	48	53	65	3,A,i,b
612870	Silverlea Road, Lostock Gramam		53	48	45	52	46	51	66	3,A,i,b
612871	Harris Road, Lostock Gramam		48	43	41	48	41	46	71	3,A,i,b
612872	Sweet Water Court, Lostock Gramam		45	40	38	45	38	43	63	3,A,i,b
612873	Thornley Green, Lostock Gramam		50	46	43	50	44	49	60	3,A,i,b

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Assessment location		Measurement location	Baseline sound levels (dB)							Data source coding
Reference	Area represented		For construction sound assessment (2025)			For operational sound assessment (2038)				
			Daytime L <sub>pAeq</sub>	Evening / weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	
612874	Ascol Drive, Plumley		62	57	55	62	56	61	66	3,A,i,b
612875	Foxglove Way, Rudheath		66	61	59	63	57	62	67	3,A,i,b
612876	Foxglove Way, Rudheath		66	62	59	64	57	62	67	3,A,i,b
612877	Foxglove Way, Rudheath		57	52	50	55	48	53	58	3,A,i,b
612878	Park Farm Marina (Office), Davenham Road, Rudheath		44	41	35	44	36	41	65	5,A,i,b
612879	Harris Road, Lostock Gram		62	61	56	62	56	61	88	5,A,i,b
612882	Pavillion Way, Lostock Gram		53	49	46	53	46	51	61	3,A,i,b
612884	School Road, Rudheath	ML712501	51	48	47	50	47	53	90	1,A,i,a
612885	Mallard Court (Offices), Canal Walk, Rudheath		54	49	47	53	47	52	57	3,A,i,b
612886	St Thomas House, King Street, Rudheath		67	63	60	67	61	66	71	3,A,i,b
612888	Shurlach Road, Rudheath		67	63	60	67	60	65	70	3,A,i,b
612889	Rudheath Community High School (School), Shipbrook Road, Rudheath		48	43	41	47	41	46	51	3,A,i,b
613004	Dalby Court (Offices), Gadbrook Road, Rudheath	ML712501	51	48	47	50	47	53	90	1,A,i,a
613038	Plumley Lime Beds SSSI <sup>13</sup>		47	44	40	47	41	45	63	5,A,i,b
613039	Plumley Lime Beds SSSI		47	43	41	47	41	46	58	3,A,i,b
613040	Plumley Lime Beds SSSI		49	48	42	49	43	44	71	5,A,i,b

<sup>13</sup> Site of Special Scientific Interest.

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Reference	Area represented		For construction sound assessment (2025)			For operational sound assessment (2038)				
			Daytime L <sub>pAeq</sub>	Evening / weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	
613041	Plumley Lime Beds SSSI		46	43	40	46	40	43	64	5,A,i,b
613051	Linnards Lane, Wincham		53	49	46	53	47	52	57	3,A,i,b
613053	Sovereign Close, Rudheath		48	43	41	47	41	46	51	3,A,i,b
613054	Foxglove Way, Rudheath		64	60	57	62	55	60	65	3,A,i,b
613055	Sovereign Close, Rudheath		48	44	41	47	41	46	51	3,A,i,b
613056	Foxglove Way, Rudheath		56	51	48	53	47	52	57	3,A,i,b
613057	Mulberry Close, Rudheath		58	53	51	57	51	56	61	3,A,i,b
613058	Birches Lane, Lostock Green		66	61	59	65	58	63	68	3,A,i,b
613060	Harris Road, Lostock Gram		47	42	39	46	40	46	73	3,A,i,b
613062	Penny's Lane, Northwich		66	61	59	65	58	63	68	3,A,i,b
613067	Birches Lane, Lostock Green		61	56	54	64	57	62	67	3,A,i,b
613069	Harris Road, Lostock Gram		51	47	44	50	44	49	76	5,A,i,b
613070	Cheshire Business Park (Offices), Lostock Gram		48	44	41	48	41	46	59	3,A,i,b
613071	Cheshire Business Park (Offices), Lostock Gram		50	46	43	50	44	49	59	3,A,i,b
613073	Chester Road, Plumley		72	68	66	71	66	71	76	3,A,i,b
613092	Cheshire Business Park (Offices), Lostock Gram		56	52	49	56	50	55	60	3,A,i,b
613203	Morrisons Gadbrook, Rudheath		46	42	39	46	39	44	53	3,A,i,b
613204	Gadbrook Produce, Rudheath		52	47	45	51	45	50	55	3,A,i,b
613206	Birches Lane, Lostock Green		59	54	52	60	53	58	63	3,A,i,b

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Reference	Area represented		For construction sound assessment (2025)			For operational sound assessment (2038)				
			Daytime L <sub>pAeq</sub>	Evening / weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	
613207	Birches Lane, Lostock Green		67	63	60	68	61	66	71	3,A,i,b
613208	Birches Lane, Lostock Green		62	57	55	66	59	64	69	3,A,i,b
613209	Birches Lane, Lostock Green		62	57	55	65	59	64	69	3,A,i,b
613210	Greenside Drive, Lostock Green		59	54	52	62	55	60	65	3,A,i,b
613212	Griffiths Road, Lostock Gralam and committed development (Map Book ref.: MA02/262)		68	64	61	68	62	67	72	3,A,i,b
613213	411 Manchester Road, Lostock Gralam and committed development (Map Book ref.: MA02/277)		64	60	57	63	57	62	67	3,A,i,b
613214	Unit 5, 469 Manchester Road, Lostock Gralam and committed development (Map Book ref.: MA02/269)		61	56	54	60	54	59	64	3,A,i,b
613215	162 Middlewich Road Care Home, Rudheath and committed development (Map Book ref.: MA02/342)		64	60	57	63	57	62	67	3,A,i,b
613216	Gadbrook Park (Office), Rudheath and committed development (Map Book ref.: MA02/347)	ML712501	51	48	47	50	47	53	90	1,A,i,a

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**Table 2: Data source coding key**

<b>Code</b>	<b>Data source type</b>
1	Long-term measurement location (typically seven days).
2	Short-term (typically unattended 24 hours or attended measurements of several hours).
3	Specific road traffic validated prediction.
4	Specific rail traffic validated prediction.
5	Specific combined road and rail traffic validated prediction.
6	Levels adopted from nearby assessment location.
7	Predictions from other sources (e.g. Defra noise maps).
<b>Code</b>	<b>Corrections applied</b>
A	Data from above source applied directly.
B	Correction applied based upon location of assessment location.
C	Minimum level cut-off applied.
<b>Code</b>	<b>Distance from measurement</b>
i	Data applied from a measurement / prediction at or very close to the assessment location.
ii	Data applied from a local measurement location at a greater distance but noted to have equivalent acoustic climate.
iii	Data applied from a distant measurement location where sound levels would be expected to be similar.
<b>Code</b>	<b>Uncertainty</b>
a	Data are considered highly representative of the prevailing sound climate.
b	Data are considered representative of the prevailing sound climate, but uncertainties and/or variations in measured levels indicate that there may be a higher degree of uncertainty than for (a).
c	Data are considered to be an estimate of the sound climate due to assumptions made.



## 4 Construction

### 4.1 Evaluation of impacts and effects

- 4.1.1 This appendix provides a quantitative assessment of construction noise and vibration impacts/effects and a qualitative assessment of likely significant effects, based on the impacts/effects identified and other local context information consistent with the scope and methodology defined for the Proposed Scheme.
- 4.1.2 Indirect effects arising from temporary changes in traffic patterns on the existing road network as a consequence of constructing the Proposed Scheme are reported where they are likely to occur within the study area as defined in Volume 5, Appendix SV-001-00000.
- 4.1.3 In undertaking the assessment of sound, noise and vibration, consistent with the Environmental Impact Assessment Directive<sup>14</sup> and planning practice on noise<sup>15</sup> a differentiation between impacts, effects, adverse effects and significant effects is made. Further information is provided in Volume 5, Appendix SV-001-00000.
- 4.1.4 The assessment of impacts and effects has been undertaken at assessment locations that are representative of a number of dwellings or other sensitive receptors. The construction assessment locations employed in this assessment are presented on Volume 5, Sound, noise and vibration Map Book: Map Series SV-03.
- 4.1.5 Baseline sound level data have been collected at locations representative of the airborne sound-sensitive receptors and presented in Table 1.

### 4.2 Effects during construction

#### Introduction

- 4.2.1 The assessment is reported first for ground-borne sound and vibration and then for airborne sound. Under each of these headings, the results of the identification of impacts, effects and significant effects are presented. The significant effects and the evidence used to support these conclusions are presented in Volume 2, Community Area report: Wimboldsley to Lostock Gralam (MA02), Section 13.

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<sup>14</sup> Directive 85/337/EEC, as amended by 97/11/EC, 2003/35/EC, 2011/92/EC and 2014/52/EU ('the EIA Directive') of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment. Strasbourg, European Parliament and European Council.

<sup>15</sup> Ministry of Housing, Communities & Local Government (2019), *National Planning Practice Guidance – Noise*. Available online at: <https://www.gov.uk/guidance/noise--2>.

## Avoidance and mitigation measures

4.2.2 These are set out in, Volume 2, Community Area report: Wimboldsley to Lostock Gralam (MA02), Section 13.

## Identification of impacts and effects

4.2.3 Assessment locations defined for the quantitative assessment of impacts are shown on Volume 5, Sound, noise and vibration Map Book: Map Series SV-03.

4.2.4 For each assessment location, the assessment results are presented in Table 4. Explanation of the information in Table 4 to Table 6 is provided in Volume 5: Appendix SV-001-00000, with the following additional notes in Table 3.

**Table 3: Explanatory notes for assessment results – direct construction effects**

Symbol	Explanation
	Where the significant effect column is highlighted in pink, then a significant effect is identified at the referenced residential community area.
	For residential receptors yellow denotes a minor ground-borne vibration impact.
	For residential receptors orange denotes a moderate ground-borne vibration impact.
	For residential receptors red denotes a major ground-borne vibration impact.
*	For residential receptors this indicates a potentially significant effect where the quantitative impact methodology has identified an impact at this receptor which, based upon further qualitative receptor information, (see assessment text) does not give rise to a significant effect. For non-residential receptors this indicates the predicted noise levels are above screening criteria which, based upon further qualitative receptor information, (see assessment text) does not give rise to a significant effect.
~	When considered under the significance criteria set out in Volume 5: Appendix SV-001-00000, Annex A, Section 1.3, these adverse effects are not considered to be significant on a community basis.
A	For residential Assessment Locations (AL) - Construction sound or vibration levels from the Proposed Scheme exceed Lowest Observed Adverse Effect Level (LOAEL): the significance criteria set out in Volume 5: Appendix SV-001-00000, Annex A, Section 1.3 are considered when establishing significant effects. For non-residential AL and external amenity spaces - Construction sound or vibration levels from the Proposed Scheme exceed the screening criteria in the SMR Section 18.
S	Sound levels from the Proposed Scheme exceed Significant Observed Adverse Effect Level (SOAEL): noise insulation (or temporary rehousing at higher noise levels) therefore provided.
NA	Sound or vibration levels from the Proposed Scheme do not exceed LOAEL, therefore generally no adverse effect.
R	Type of receptor – residential.
A1 – A4	Type of receptor (airborne sound) - (A1) large and small auditoria; concert halls, sound recording and broadcast studios and theatres, (A2) places of meeting for religious worship, courts, cinemas, lecture theatres, museums and small auditoria or halls, (A3) schools; colleges; hospitals, hotels and libraries, (A4) offices and amenity spaces.
V1 – V4	Type of receptor (ground-borne vibration) – (V1) vibration sensitive research and manufacturing; hospitals with vibration sensitive equipment/operations; universities with vibration sensitive

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Symbol	Explanation
	research equipment/operations, (V2) hotels, hospital wards and education dormitories, (V3) offices, schools and places of worship, (V4) workshops.
T	Receptor design – typical.
SP	Receptor design – special.
+	The use and sensitivity of this non-residential receptor or land use is very sensitive to noise and has been included in the detailed assessment (presented in Volume 2) where there is a change less than 3dB. In each case specific information is presented in an associated footnote.
\$	The impact methodology for non-residential receptors includes a screening criterion for A2 building use of 50dB <sub>L<sub>pAeq,07:00 – 23:00</sub></sub> , A3 building use of 50dB <sub>L<sub>pAeq,07:00 – 23:00</sub></sub> , and 45dB <sub>L<sub>pAeq,23:00 – 07:00</sub></sub> and for A4 building use 55dB <sub>L<sub>pAeq,07:00 – 23:00</sub></sub> (except for A4 buildings containing lower sensitivity offices, in which case the relevant A and B categories from the BS5228 ABC method will be used to assess the noise impact). At the receptor denoted, the screening criteria is met but a change of 3dB or greater has not been identified and therefore no impact is identified. Further information is provided in Volume 5: Appendix SV-001-00000.
H	Existing environment – high existing airborne ambient noise levels, day >75dB, evening >65dB or night >55dB <sub>L<sub>pAeq</sub></sub> at the façade.
L	Existing environment – low existing airborne ambient noise levels, day and evening ≤45dB, or night ≤35dB <sub>L<sub>pAeq</sub></sub> at the façade.
D,E,N	Impact duration (months) – duration of impact during the day (D), evening (E) or night (N).
O, CT, V	Combined Impact: If noise or vibration impacts from other construction activities occur at this location: onsite activities (O), off-site construction traffic activities (CT), or construction vibration (V).
NI	Mitigation effect - identified as likely to qualify for noise insulation under the draft Code of Construction Practice (CoCP) Volume 5: Appendix CT-002-00000.
TR	Mitigation effect - identified as likely to qualify for temporary rehousing under the draft CoCP.

## Ground-borne sound and vibration

4.2.5 Activities associated with the construction phases of the Proposed Scheme will generate ground-borne sound and vibration. The assessment of the likely impacts and significant effects as a result of the construction noise has considered the effects on:

- residential receptors, both as individual dwellings and communities; and
- non-residential receptors.

4.2.6 The results, impact criteria and significance criteria for the assessment of the Proposed Scheme at residential and non-residential receptors are presented in Table 4. Explanation of the information within Table 4 is provided in Volume 5, Appendix SV-001-00000, with the additional notes presented in Table 3.

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**Table 4: Assessment of construction induced ground-borne vibration at residential and non-residential receptors**

Assessment location		Impact criteria Peak particle velocity (PPV) [mm/s] on foundation	Significance criteria										Significant effect
Reference	Area represented		Typical/highest monthly indoor vibration dose value (VDV) [m/s <sup>1.75</sup> ]	Construction activity resulting in highest forecast vibration	Type of effect	Number of properties represented	Type of receptor	Receptor design	Unique feature	Combined impact	Impact duration [m]		
												Day 07:00 - 23:00	
610165	Verdin Arms, Nantwich Road, Minshull Vernon	2	-/ < 0.8 <sup>16</sup>	-/-	Site set up (vibratory roller)	A	1	R	T	-	O	D < 1	<sup>17</sup>
610173	Rose Cottage, Wimboldsley	2	-/ < 0.8 <sup>16</sup>	-/-	Road embankment works (vibratory roller)	A	1	R	T	-	O	D 4	~
610178	Hopley House, Nantwich Road, Wimboldsley	0.3	0.08/0.20	-/-	Site set up (vibratory roller)	NA	1	R	T	-	-		
610191	Leahead Farm, Nantwich Road, Wimboldsley	0.3	-/0.20	-/-	Foundation treatment works (vibratory roller)	NA	1	R	T	-	-		
610194	Clive Green Lane, Stanthorne	0.2	0.04/0.12	-/-	Road embankment works (vibratory roller)	NA	11	R	T	-	-		

<sup>16</sup> Construction methods will be selected to ensure that on a monthly basis the significant adverse effect level is not exceeded.

<sup>17</sup> Impacts with durations of less than one month are not generally considered significant.

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Assessment location		Impact criteria	Significance criteria										Significant effect
Reference	Area represented	Peak particle velocity (PPV) [mm/s] on foundation	Typical/highest monthly indoor vibration dose value (VDV) [m/s <sup>1.75</sup> ]		Construction activity resulting in highest forecast vibration	Type of effect	Number of properties represented	Type of receptor	Receptor design	Unique feature	Combined impact	Impact duration [m]	
			Day 07:00 – 23:00	Night 23:00 – 07:00									
610199	Clive Green Lane, Winsford	2	-/ <0.8 <sup>16</sup>	-/-	Road embankment works (vibratory roller)	A	2	R	T	-	O	D 5	MA02-C-C1
610200	Willow Court, Clive Green Lane, Winsford	0.5	-/0.19	-/-	Road embankment works (vibratory roller)	NA	1	R	T	-	-		
610202	2 Wharf Cottage, Clive Green Lane, Stanthorne	0.3	-/0.16	-/-	Road embankment works (vibratory roller)	NA	1	R	T	-	-		
610206	Clive Green Lane, Stanthorne	0.4	0.04/0.24	-/-	Finishing works (vibratory roller)	A	2	R	T	-	O	D 2	MA02-C-C1
610233	Sundown, Birch Lane, Stanthorne	0.2	0.04/0.12	-/-	Site set up (vibratory roller)	NA	7	R	T	-	-		
610238	Heyescroft, Northwich Road, Stanthorne	0.3	0.04/0.20	-/-	Site set up (vibratory roller)	NA	1	R	T	-	-		
610258	Whatcroft Hall Lane, Whatcroft	0.9	0.16/0.64	-/-	Finishing works (vibratory roller)	A	3	R	T	-	O	D 1	~
610406	Clive Green Lane, Stanthorne	0.3	0.04/0.20	-/-	Road embankment works (vibratory roller)	NA	11	R	T	-	-		

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Reference	Area represented	Peak particle velocity (PPV) [mm/s] on foundation	Typical/highest monthly indoor vibration dose value (VDV) [m/s <sup>1.75</sup> ]		Construction activity resulting in highest forecast vibration	Type of effect	Number of properties represented	Type of receptor	Receptor design	Unique feature	Combined impact	Impact duration [m]	
			Day 07:00 – 23:00	Night 23:00 – 07:00									
610409	Steam House, Middlewich Road	0.3	0.12/0.24	-/-	Site set up (vibratory roller)	A	1	R	T	-	-	D 3	~
610746	Wimboldsley, Middlewich	2	-/ < 0.8 <sup>16</sup>	-/-	Road embankment works (vibratory roller)	A	3	R	T	-	O	D 4	~
612505	Pear Tree Farm cottages, Davenham Road, Billenge Green	0.5	0.12/0.20	-/-	Finishing works (vibratory roller)	NA	10	R	T	-	-		
612519	Melvin Holme Farm, Penny's Lane, Lach Dennis	0.3	0.04/0.20	-/-	Site set up (vibratory roller)	NA	1	R	T	-	-		
612555	Village Close, Lostock Green	0.2	0.08/0.16	-/-	Embankment construction (vibratory roller)	NA	12	R	T	-	-		
612558	Birches Lane, Lostock Green	0.3	0.04/0.24	-/-	Embankment construction (vibratory roller)	A	2	R	T	-	-	D < 1	<sup>17</sup>
612561	Birches Lane, Lostock Green	0.5	0.08/0.40	-/-	Site set up (vibratory roller)	A	1	R	T	-	O	D 3	~
612562	Birches Lane, Lostock Green	0.7	0.12/0.68	-/-	Site set up (vibratory roller)	A	2	R	T	-	O	D 3	~
612570	Harris Road, Lostock Gramam	0.1	0.04/0.12	-/-	Site set up (vibratory roller)	NA	11	R	T	-	-		

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Reference	Area represented	Peak particle velocity (PPV) [mm/s] on foundation	Typical/highest monthly indoor vibration dose value (VDV) [m/s <sup>1.75</sup> ]		Construction activity resulting in highest forecast vibration	Type of effect	Number of properties represented	Type of receptor	Receptor design	Unique feature	Combined impact	Impact duration [m]	
			Day 07:00 – 23:00	Night 23:00 – 07:00									
612595	Lostock Lodge Care Home, Cheshire Business Park Roundabout	0.1	0.04/0.08	-/-	Sub-structure works (vibratory roller)	NA	1	R	T	-	-		
612865	Village Close, Lostock Green	0.2	0.04/0.16	-/-	Embankment construction (vibratory roller)	NA	9	R	T	-	-		
612875	Foxglove Way, Rudheath	0.2	0.04/0.12	-/-	Site set up (vibratory roller)	NA	7	R	T	-	-		
612876	Foxglove Way, Rudheath	0.2	0.04/0.12	-/-	Site set up (vibratory roller)	NA	4	R	T	-	-		
613054	Foxglove Way, Rudheath	0.1	0.04/0.12	-/-	Site set up (vibratory roller)	NA	17	R	T	-	-		
613207	Birches Lane, Lostock Green	0.2	0.04/0.12	-/-	Embankment construction (vibratory roller)	NA	3	R	T	-	-		

## **Airborne sound: direct impacts and effects**

- 4.2.7 Activities associated with the construction phases of the Proposed Scheme will generate airborne noise. The assessment of the likely impacts and significant effects as a result of the construction noise has considered the effects on:
- residential receptors, both as individual dwellings and communities; and
  - non-residential receptors, including quiet areas.
- 4.2.8 For each type of receptor, the typical and highest monthly  $L_{Aeq,T}$  noise levels from construction activities have been calculated at the façade of all assessment locations. This is subject to the screening distances identified and based upon supplied plant information from engineers.
- 4.2.9 The results, impact criteria and significance criteria for the assessment of the Proposed Scheme at residential and non-residential receptors are presented in Table 5 and Table 6 respectively. Explanation of the information within Table 5 and Table 6 is provided in Volume 5, Appendix SV-001-00000, with the additional notes presented in Table 3.



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**Table 5: Assessment of construction noise at residential receptors**

Assessment location		Impact criteria				Significance criteria									Significant effect
Reference	Area represented	Typical/highest monthly outdoor $L_{pAeq}$ [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (Months)	Combined impact	Mitigation effect	
		Day 07:00 - 19:00	Evening 19:00 - 23:00	Night 23:00 - 07:00											
610165	Verdin Arms, Nantwich Road, Minshull Vernon	76/81[C]	46/47[C]	46/47[C]	Day: Overbridge construction Evening: Bored tunnel works Night: Bored tunnel works	S	1	R	T	H	-	D4	-	NI	~
610168	Nantwich Road, Minshull Vernon	54/59[A]	40/40[A]	40/40[A]	Day: Highway works Evening: Bored tunnel works Night: Bored tunnel works	NA	2	R	T	-	-	-	-	-	-
610169	Wimboldsley Hall, Wimboldsley	60/67[A]	46/46[B]	46/46[C]	Day: Overbridge construction Evening: Bored tunnel works Night: Bored tunnel works	A	1	R	T	-	-	D2	-	-	~
610171	Manor Cottage, Wimboldsley	69/76[C]	47/48[C]	47/48[C]	Day: Overbridge construction Evening: Bored tunnel works Night: Bored tunnel works	S	1	R	T	H	-	D1	-	NI	~

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Assessment location		Impact criteria				Significance criteria									Significant effect
Reference	Area represented	Typical/highest monthly outdoor $L_{pAeq}$ [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (Months)	Combined impact	Mitigation effect	
		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
610173	Rose Cottage, Wimboldsley	82/84[C]	44/47[C]	44/47[C]	Day: Overbridge construction Evening: Overbridge construction Night: Overbridge construction <sup>18</sup>	S	1	R	T	H	-	D4	V	NI	~
610174	New Farm, Occleston	56/60[A]	39/39[B]	39/39[C]	Day: General site works Evening: Bored tunnel works Night: Bored tunnel works	NA	1	R	T	H	-	-	-	-	-
610176	Holly Croft, Occleston	54/58[A]	38/38[B]	38/38[C]	Day: General site works Evening: Bored tunnel works Night: Bored tunnel works	NA	1	R	T	-	-	-	-	-	-

<sup>18</sup> Activity only includes generators for site power during extended and night-time periods; all other noise generating plant associated with this activity assumed to be daytime only.

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Assessment location		Impact criteria				Significance criteria										Significant effect
Reference	Area represented	Typical/highest monthly outdoor $L_{pAeq}$ [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (Months)	Combined impact	Mitigation effect		
		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00												
610177	Smithy Farm, Occleston	55/59[B]	38/38[C]	38/38[C]	Day: General site works Evening: Bored tunnel works Night: Bored tunnel works	NA	1	R	T	H	-	-	-	-		
610178	Hopley House, Nantwich Road, Wimboldsley	67/72[C]	43/43[C]	43/43[C]	Day: Highway works Evening: Bored tunnel works Night: Bored tunnel works	NA	1	R	T	H	-	-	-	-		
610180	Nantwich Road, Wimboldsley	60/64[A]	41/41[A]	41/41[C]	Day: Borrow pit works Evening: Bored tunnel works Night: Bored tunnel works	NA	8	R	T	-	-	-	-	-		
610181	Occleston Green Farm, Occleston	55/60[A]	39/39[A]	39/39[C]	Day: Highway works Evening: Bored tunnel works Night: Bored tunnel works	NA	1	R	T	-	-	-	-	-		

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Reference	Area represented	Typical/highest monthly outdoor $L_{pAeq}$ [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (Months)	Combined impact	Mitigation effect	
		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
610182	Wimboldsley Grange, Nantwich Road, Wimboldsley	57/62[A]	45/45[A]	45/45[C]	Day: Rolling stock depot construction Evening: Bored tunnel works Night: Bored tunnel works	NA	1	R	T	-	-	-	-	-	
610183	Lea Drive, Wimboldsley	63/69[B]	38/38[C]	38/38[C]	Day: Highway works Evening: Bored tunnel works Night: Bored tunnel works	NA	12	R	T	H	-	-	-	-	
610184	Saunders Field, Wimboldsley	52/58[A]	36/36[A]	36/36[C]	Day: Borrow pit works Evening: Bored tunnel works Night: Bored tunnel works	NA	1	R	T	-	-	-	-	-	
610186	Nantwich Road, Wimboldsley	60/65[A]	38/38[B]	38/38[C]	Day: Highway works Evening: Bored tunnel works Night: Bored tunnel works	NA	6	R	T	H	-	-	-	-	

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Assessment location		Impact criteria			Significance criteria										Significant effect
Reference	Area represented	Typical/highest monthly outdoor $L_{pAeq}$ [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (Months)	Combined impact	Mitigation effect	
		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
610188	Newfield Farm, Occleston	54/60[A]	33/33[A]	33/33[A]	Day: Borrow pit works Evening: Bored tunnel works Night: Bored tunnel works	NA	1	R	T	-	-	-	-	-	
610189	Nantwich Road, Wimboldsley	62/65[A]	36/36[A]	36/36[B]	Day: General site works Evening: Bored tunnel works Night: Bored tunnel works	NA	4	R	T	-	-	-	-	-	
610191	Leahead Farm, Nantwich Road, Wimboldsley	61/66[A]	-/33[A]	-/33[B]	Day: Borrow pit works Evening: Bored tunnel works Night: Bored tunnel works	A	1	R	T	-	-	D3	-	-	~
610192	Lea House Farm, Nantwich Road, Wimboldsley	60/66[B]	-/32[C]	-/32[C]	Day: Highway works Evening: Bored tunnel works Night: Bored tunnel works	NA	1	R	T	H	-	-	-	-	
610193	Nantwich Road, Stanthorne	62/69[A]	-/[B]	-/[C]	Day: Highway works	A	2	R	T	-	-	D8	-	-	~

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Reference	Area represented	Typical/highest monthly outdoor $L_{pAeq}$ [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (Months)	Combined impact	Mitigation effect	
		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
610196	Clive Back Lane, Winsford	57/63[A]	-/[B]	-/[C]	Day: Highway works	NA	2	R	T	H	-	-	-	-	
610197	Norcroft Farm, Nantwich Road, Stanthorne	55/62[A]	-/[A]	-/[C]	Day: Highway works	NA	1	R	T	-	-	-	-	-	
610198	Clive Back Lane, Winsford	63/68[A]	-/[A]	-/[B]	Day: Highway works	A	1	R	T	-	-	D6	-	-	MA02-C-C1
610199	Clive Green Lane, Winsford	78/81[C]	36/40[C]	36/40[C]	Day: Highway works Evening: Culvert construction Night: Culvert construction <sup>18</sup>	S	2	R	T	H	-	D15	V	NI	MA02-C-C1
610200	Willow Court, Clive Green Lane, Winsford	71/74[A]	-/34[B]	-/34[C]	Day: Highway works Evening: Culvert construction Night: Culvert construction <sup>18</sup>	A	1	R	T	-	-	D13	V	-	MA02-C-C1
610201	Pear Tree Farm, Clive Back Lane, Winsford	58/64[A]	-/[A]	-/[C]	Day: Highway works	NA	1	R	T	-	-	-	-	-	
610202	2 Wharf Cottage, Clive Green Lane, Stanthorne	60/67[B]	-/[C]	-/[C]	Day: Highway works	NA	1	R	T	H	-	-	-	-	

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Reference	Area represented	Typical/highest monthly outdoor L <sub>pAeq</sub> [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (Months)	Combined impact	Mitigation effect		
		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00												
610203	Clive Back Lane, Winsford	52/58[A]	-/[C]	-/[C]	Day: General site works	NA	2	R	T	H	-	-	-	-		
610204	Chapel End Cottage, Clive Green Lane, Winsford	73/76[C]	-/[C]	-/[C]	Day: Highway works	S	1	R	T	H	-	D2	-	NI	MA02-C-C1	
610205	Oak Lea House, Nantwich Road, Stanthorne	58/65[B]	-/[C]	-/[C]	Day: Highway works	NA	1	R	T	H	-	-	-	-		
610206	Clive Green Lane, Stanthorne	63/68[A]	-/30[A]	-/30[A]	Day: Earthworks Evening: Earthworks Night: Earthworks <sup>18</sup>	A	2	R	T	-	-	D4	V	-	MA02-C-C1	
610209	Coalpit Lane, Stanthorne	57/62[A]	-/[A]	-/[A]	Day: General site works	NA	3	R	T	-	-	-	-	-		
610216	Middlewich Road, Winsford	51/55[B]	-/[C]	-/[C]	Day: Highway works	NA	17	R	T	H	-	-	-	-		
610217	Seaton Street, Winsford and committed development (Map Book ref.: MA02/335)	56/61[A]	-/[A]	-/[B]	Day: General site works	NA	17	R	T	-	-	-	-	-		
610218	Middlewich Road, Winsford	49/53[C]	-/[C]	-/[C]	Day: General site works	NA	43	R	T	H	-	-	-	-		

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Reference	Area represented	Typical/highest monthly outdoor L <sub>pAeq</sub> [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (Months)	Combined impact	Mitigation effect	
		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
610219	Middlewich Road, Winsford	56/60[A]	-/[B]	-/[C]	Day: General site works	NA	37	R	T	-	-	-	-	-	
610220	Coalpit Lane, Stanthorne	60/63[A]	-/[A]	-/[A]	Day: Borrow pit works	NA	2	R	T	-	-	-	-	-	
610221	Coalpit Lane, Stanthorne	51/54[A]	-/[A]	-/[A]	Day: Borrow pit works	NA	2	R	T	-	-	-	-	-	
610222	Middlewich Road, Winsford	72/76[A]	-/[B]	-/[C]	Day: Highway works	S	4	R	T	-	-	D2	-	NI	~ <sup>19</sup>
610224	Earl's Cottage, Birch Lane, Stanthorne	58/61[A]	-/[A]	-/[A]	Day: Borrow pit works	NA	1	R	T	-	-	-	-	-	
610225	Mill Farm, Birch Lane, Stanthorne	55/59[A]	-/[A]	-/[A]	Day: Borrow pit works	NA	1	R	T	-	-	-	-	-	
610226	Birch Lane, Stanthorne	58/61[A]	-/[A]	-/[A]	Day: General site works	NA	6	R	T	-	-	-	-	-	
610228	Stanthorne Hall, Middlewich Road, Stanthorne	60/64[A]	-/[A]	-/[B]	Day: Highway works	NA	1	R	T	-	-	-	-	-	
610229	Goodwood Rise, Middlewich	51/53[A]	-/[A]	-/[C]	Day: Earthworks	NA	6	R	T	-	-	-	-	-	
610230	Birch Lane, Stanthorne	60/63[A]	-/[A]	-/[B]	Day: Borrow pit works	NA	8	R	T	-	-	-	-	-	

<sup>19</sup> Of the four properties associated with this assessment location, two are predicted to qualify for noise insulation. For further information, refer to Volume 2, Community Area report: Wimboldsley to Lostock Gralam (MA02), Section 13.



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Reference	Area represented	Typical/highest monthly outdoor $L_{pAeq}$ [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (Months)	Combined impact	Mitigation effect		
		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00												
610231	Stanthorne Lodge, Middlewich Road, Stanthorne	60/65[A]	-/[B]	-/[C]	Day: Earthworks	NA	1	R	T	H	-	-	-	-		
610232	Middlewich Road, Stanthorne	61/65[B]	-/[C]	-/[C]	Day: Highway works	NA	2	R	T	H	-	-	-	-		
610233	Sundown, Birch Lane, Stanthorne	65/68[B]	-/[C]	-/[C]	Day: Earthworks	NA	7	R	T	H	-	-	-	-		
610234	Bostock House Farm, Northwich Road, Stanthorne	60/62[C]	-/[C]	-/[C]	Day: Highway works	NA	1	R	T	H	-	-	-	-		
610235	Beechfield Drive, Middlewich	51/54[A]	-/[A]	-/[B]	Day: Earthworks	NA	179	R	T	-	-	-	-	-		
610238	Heyescroft, Northwich Road, Stanthorne	64/70[C]	-/31[C]	-/31[C]	Day: Earthworks Evening: Earthworks Night: Earthworks <sup>18</sup>	NA	1	R	T	H	-	-	-	-		
610239	Bank Farm, Northwich Road, Stanthorne	60/65[B]	-/[C]	-/[C]	Day: Highway works	NA	1	R	T	H	-	-	-	-		
610240	Bostock Road, Bostock	54/56[A]	-/[A]	-/[A]	Day: General site works	NA	1	R	T	-	-	-	-	-		

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Reference	Area represented	Typical/highest monthly outdoor $L_{pAeq}$ [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (Months)	Combined impact	Mitigation effect	
		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
610241	South Lodge, Bostock Road, Bostock	51/54[B]	-/[C]	-/[C]	Day: Earthworks	NA	1	R	T	H	-	-	-	-	
610242	Croxton Lane, Byley	53/61[C]	-/[C]	-/[C]	Day: Viaduct construction	NA	2	R	T	H	-	-	-	-	
610243	Bostock Road, Bostock	48/52[A]	-/[B]	-/[C]	Day: Highway works	NA	3	R	T	H	-	-	-	-	
610244	Bostock Road, Bostock	45/49[B]	-/[C]	-/[C]	Day: Earthworks	NA	2	R	T	H	-	-	-	-	
610246	Dairyhouse Farm, Croxton Lane, Byley	51/56[A]	-/[A]	-/[A]	Day: Viaduct construction	NA	1	R	T	-	-	-	-	-	
610248	The Courtyard, Bostock Road, Bostock	50/53[A]	-/[A]	-/[B]	Day: General site works	NA	52	R	T	-	-	-	-	-	
610249	Bostock Road, Bostock	43/47[A]	-/[A]	-/[B]	Day: Viaduct construction	NA	15	R	T	-	-	-	-	-	
610250	Middle Lodge, Bostock Road, Bostock	45/48[A]	-/[B]	-/[C]	Day: General site works	NA	1	R	T	H	-	-	-	-	
610251	North Lodge, Bostock Road, Bostock	49/52[A]	-/[B]	-/[C]	Day: Highway works	NA	1	R	T	-	-	-	-	-	
610255	Whatcroft Hall Lane, Rudheath	53/55[A]	-/[A]	-/[A]	Day: General site works	NA	1	R	T	-	-	-	-	-	

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MA02: Wimboldsley to Lostock Gramam  
Baseline and construction sound, noise and vibration report

Assessment location		Impact criteria				Significance criteria									Significant effect
Reference	Area represented	Typical/highest monthly outdoor $L_{pAeq}$ [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (Months)	Combined impact	Mitigation effect	
		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
610256	Whatcroft Hall Lane, Whatcroft	51/57[A]	-/[A]	-/[B]	Day: Highway works	NA	9	R	T	-	-	-	-	-	
610258	Whatcroft Hall Lane, Whatcroft	79/83[A]	33/39[A]	33/39[B]	Day: Highway works Evening: Highway works Night: Highway works <sup>18</sup>	S	3	R	T	-	-	D21	V	NI	~
610259	Manor Lane, Whatcroft	53/56[A]	-/[A]	-/[B]	Day: Viaduct construction	NA	2	R	T	-	-	-	-	-	
610260	Drakelow Farm, Whatcroft Hall Lane, Rudheath	50/53[A]	-/[A]	-/[B]	Day: Earthworks	NA	1	R	T	-	-	-	-	-	
610261	Whatcroft Hall Lane, Rudheath	55/63[A]	-/[A]	-/[B]	Day: Viaduct construction	NA	2	R	T	-	-	-	-	-	
610262	Brook Farm Cottage, Old Lane, Whatcroft	54/62[A]	-/[A]	-/[C]	Day: Highway works	NA	1	R	T	-	-	-	-	-	
610263	Old Lane, Whatcroft	58/63[A]	-/[A]	-/[C]	Day: Viaduct construction	NA	2	R	T	-	-	-	-	-	
610265	Manor Farm, Old Lane, Whatcroft	54/60[A]	-/[A]	-/[C]	Day: Highway works	NA	1	R	T	-	-	-	-	-	
610266	Shipbrook Hill Farm, Davenham Road, Whatcroft	50/53[A]	-/[A]	-/[A]	Day: Highway works	NA	1	R	T	-	-	-	-	-	

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		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
610267	Shipbrook Hill Farm, Davenham Road, Whatcroft	49/53[A]	-/[C]	-/[C]	Day: Highway works	NA	1	R	T	H	-	-	-	-	
610269	Yew Tree Farm, Davenham Road, Whatford	52/56[A]	-/[C]	-/[C]	Day: Highway works	NA	1	R	T	H	-	-	-	-	
610402	Beckett Avenue, Winsford	57/61[A]	-/[A]	-/[A]	Day: General site works	NA	21	R	T	-	-	-	-	-	
610403	Middlewich Road, Winsford	56/60[A]	-/[A]	-/[B]	Day: General site works	NA	11	R	T	-	-	-	-	-	
610406	Clive Green Lane, Stanthorne	65/71[A]	-/[A]	-/[B]	Day: Highway works	A	11	R	T	-	-	D8	-	-	MA02-C-C1
610408	Birch Lane, Stanthorne	61/64[A]	-/[A]	-/[C]	Day: Earthworks	NA	7	R	T	-	-	-	-	-	
610409	Steam House, Middlewich Road	67/69[B]	-/30[C]	-/30[C]	Day: General site works Evening: General site works Night: General site works <sup>18</sup>	NA	1	R	T	H	-	-	-	-	
610714	Moss Lane, Byley	44/46[A]	-/[A]	-/[A]	Day: General site works	NA	1	R	T	-	-	-	-	-	
610715	Middlewich Road, Byley	47/50[A]	-/[A]	-/[B]	Day: General site works	NA	4	R	T	-	-	-	-	-	

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		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00												
610716	Middlewich Road, Byley	44/49[A]	-/[A]	-/[A]	Day: General site works	NA	2	R	T	-	-	-	-	-		
610717	Middlewich Road, Byley	41/42[A]	-/[C]	-/[C]	Day: Borrow pit works	NA	1	R	T	H	-	-	-	-		
610718	Middlewich Road, Byley	51/52[A]	-/[A]	-/[C]	Day: Borrow pit works	NA	2	R	T	-	-	-	-	-		
610719	Middlewich Road, Byley	46/46[B]	-/[C]	-/[C]	Day: Borrow pit works	NA	2	R	T	H	-	-	-	-		
610720	Sandy Lane, Middlewich	50/51[A]	-/[B]	-/[C]	Day: Borrow pit works	NA	1	R	T	-	-	-	-	-		
610721	Northwich Road, Rudheath Woods	47/48[A]	-/[B]	-/[C]	Day: Borrow pit works	NA	1	R	T	H	-	-	-	-		
610722	Middlewich Road, Winsford	58/64[A]	-/[A]	-/[A]	Day: Highway works	NA	8	R	T	-	-	-	-	-		
610732	Coalpit Lane, Stanthorne	50/53[A]	-/[A]	-/[A]	Day: General site works	NA	1	R	T	-	-	-	-	-		
610733	Northwich Road, Bostock and committed development (Map Book ref.: MA02/062)	57/61[A]	-/[B]	-/[C]	Day: Earthworks	NA	7	R	T	-	-	-	-	-		
610736	Whatcroft Hall Lane, Whatcroft	56/63[A]	-/[A]	-/[A]	Day: Highway works	NA	1	R	T	-	-	-	-	-		

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		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00												
610746	Wimboldsley, Middlewich	79/81[C]	44/45[C]	44/45[C]	Day: Overbridge construction Evening: Overbridge construction Night: Overbridge construction <sup>18</sup>	S	3	R	T	H	-	D3	V	NI	~	
610760	Northwich Road, Rudheath Woods	56/57[A]	-/[B]	-/[C]	Day: Borrow pit works	NA	1	R	T	-	-	-	-	-	-	
610761	Byley Road, Byley	47/51[A]	-/[A]	-/[B]	Day: General site works	NA	2	R	T	-	-	-	-	-	-	
610762	Byley Road, Byley	49/53[A]	-/[A]	-/[B]	Day: General site works	NA	6	R	T	-	-	-	-	-	-	
610808	Byley Road, Byley	48/52[B]	-/[C]	-/[C]	Day: General site works	NA	6	R	T	H	-	-	-	-	-	
610875	Middlewich Road, Winsford and committed development (Map Book ref.: MA02/217)	50/54[C]	-/[C]	-/[C]	Day: General site works	NA	5	R	T	H	-	-	-	-	-	

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		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00												
610876	Middlewich Road, Winsford and committed development (Map Book ref.: MA02/217)	51/55[A]	-/[A]	-/[C]	Day: General site works	NA	16	R	T	-	-	-	-	-		
610880	Manor Farm, Old Lane, Whatcroft and committed development (Map Book ref.: MA02/348)	53/58[A]	-/[A]	-/[C]	Day: Viaduct construction	NA	6	R	T	-	-	-	-	-		
612500	King Street, Lach Dennis	54/60[C]	-/[C]	-/[C]	Day: Earthworks	NA	7	R	T	H	-	-	-	-		
612503	Billinge Green Barn, Davenham Road, Billenge Green	53/57[A]	-/[B]	-/[C]	Day: Highway works	NA	1	R	T	-	-	-	-	-		
612504	Little Grebe Cottage, Davenham Road, Billenge Green	56/62[A]	-/[A]	-/[B]	Day: Highway works	NA	1	R	T	-	-	-	-	-		
612505	Pear Tree Farm cottages, Davenham Road, Billenge Green	63/69[A]	-/[A]	-/[C]	Day: Viaduct construction	A	10	R	T	-	-	D2	-	-	MA02-C-C2	

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		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
612506	Park Farm, Whatcroft	48/53[A]	-/[A]	-/[A]	Day: Viaduct construction	NA	1	R	T	-	-	-	-	-	
612510	Ashbrook House, Penny's Lane, Lach Dennis	51/55[A]	-/[B]	-/[C]	Day: Highway works	NA	1	R	T	-	-	-	-	-	
612513	School Road, Rudheath	45/50[A]	-/[A]	-/[C]	Day: Highway works	NA	3	R	T	-	-	-	-	-	
612516	Penny's Lane, Lach Dennis	64/68[B]	-/[C]	-/[C]	Day: Highway works	NA	4	R	T	H	-	-	-	-	
612519	Melvin Holme Farm, Penny's Lane, Lach Dennis	63/68[A]	-/[A]	-/[C]	Day: General site works	A	1	R	T	-	-	D5	-	-	~
612523	Tudor Close, Rudheath	55/60[C]	-/[C]	-/[C]	Day: General site works	NA	12	R	T	H	-	-	-	-	
612524	School Road, Rudheath	49/53[B]	-/[C]	-/[C]	Day: General site works	NA	4	R	T	H	-	-	-	-	
612526	Tudor Close, Rudheath	48/52[A]	-/[A]	-/[C]	Day: Highway works	NA	24	R	T	-	-	-	-	-	
612527	King Street, Rudheath	54/59[B]	-/[C]	-/[C]	Day: General site works	NA	12	R	T	H	-	-	-	-	
612528	Mulberry Close, Rudheath	64/71[C]	-/[C]	-/[C]	Day: Highway works	NA	7	R	T	H	-	-	-	-	
612529	Cookes Lane, Rudheath	56/61[A]	-/[B]	-/[C]	Day: Highway works	NA	13	R	T	-	-	-	-	-	



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		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
612530	Central Road, Rudheath	46/49[A]	-/[A]	-/[B]	Day: Highway works	NA	34	R	T	-	-	-	-	-	
612531	Penny's Lane, Rudheath	55/60[A]	-/[B]	-/[C]	Day: Earthworks	NA	12	R	T	-	-	-	-	-	
612532	Waterside View, Rudheath	47/50[A]	-/[A]	-/[C]	Day: Earthworks	NA	40	R	T	-	-	-	-	-	
612533	King Street, Rudheath	49/53[C]	-/[C]	-/[C]	Day: General site works	NA	25	R	T	H	-	-	-	-	
612534	East Avenue, Rudheath	44/47[A]	-/[B]	-/[C]	Day: Earthworks	NA	100	R	T	-	-	-	-	-	
612535	Wyche Close, Rudheath	47/50[A]	-/[A]	-/[C]	Day: General site works	NA	13	R	T	-	-	-	-	-	
612537	Waterside View, Rudheath	47/49[A]	-/[A]	-/[C]	Day: Earthworks	NA	29	R	T	-	-	-	-	-	
612538	Penny's Lane, Rudheath	48/51[A]	-/[A]	-/[B]	Day: Earthworks	NA	22	R	T	-	-	-	-	-	
612539	Lavender Drive, Rudheath	46/49[A]	-/[A]	-/[C]	Day: General site works	NA	54	R	T	-	-	-	-	-	
612540	East Avenue, Rudheath	45/48[A]	-/[A]	-/[B]	Day: Earthworks	NA	35	R	T	-	-	-	-	-	
612542	East Avenue, Rudheath	45/48[A]	-/[B]	-/[C]	Day: Earthworks	NA	114	R	T	H	-	-	-	-	
612543	Middlewich Road, Rudheath	48/51[B]	-/[C]	-/[C]	Day: General site works	NA	14	R	T	H	-	-	-	-	

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		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
612544	West Avenue, Rudheath	45/48[A]	-/[B]	-/[C]	Day: Earthworks	NA	24	R	T	H	-	-	-	-	
612546	St Andrews Close, Rudheath	46/49[A]	-/[B]	-/[C]	Day: Earthworks	NA	105	R	T	-	-	-	-	-	
612548	Birches Lane, Lostock Green	49/54[A]	-/[A]	-/[A]	Day: Earthworks	NA	15	R	T	-	-	-	-	-	
612549	Birch Grove, Lostock Green	50/56[A]	-/[A]	-/[B]	Day: Earthworks	NA	16	R	T	-	-	-	-	-	
612550	Farm Road, Rudheath	44/46[A]	-/[C]	-/[C]	Day: Earthworks	NA	92	R	T	H	-	-	-	-	
612551	Birches Lane, Lostock Green	51/57[A]	-/[A]	-/[B]	Day: Earthworks	NA	10	R	T	-	-	-	-	-	
612552	Cottage Close, Rudheath	48/51[B]	-/[C]	-/[C]	Day: Earthworks	NA	47	R	T	H	-	-	-	-	
612554	Cinder Lane, Lostock Green	54/61[A]	-/[B]	-/[C]	Day: Earthworks	NA	17	R	T	H	-	-	-	-	
612555	Village Close, Lostock Green	60/67[C]	-/32[C]	-/32[C]	Day: Earthworks Evening: Earthworks Night: Earthworks <sup>18</sup>	NA	12	R	T	H	-	-	-	-	
612556	Greenside Drive, Lostock Green	51/56[A]	-/[A]	-/[B]	Day: Earthworks	NA	17	R	T	-	-	-	-	-	

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		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
612557	Birches Lane, Lostock Green	66/72[B] <sup>20</sup>	-/[C]	-/[C]	Day: Highway works	A	1	R	T	H	-	D2	-	-	MA02-C-C3
612558	Birches Lane, Lostock Green	71/76[C]	31/34[C]	31/34[C]	Day: Highway works Evening: Highway works Night: Highway works <sup>18</sup>	NA	2	R	T	H	-	-	-	-	
612561	Birches Lane, Lostock Green	68/72[B]	-/32[C]	-/32[C]	Day: General site works Evening: General site works Night: General site works <sup>18</sup>	A	1	R	T	H	-	D4	V	-	~
612562	Birches Lane, Lostock Green	67/72[B]	30/32[C]	30/32[C]	Day: General site works Evening: General site works Night: General site works <sup>18</sup>	A	2	R	T	H	-	D4	V	-	~
612563	Moss Lane, Lostock Green	50/56[A]	-/[A]	-/[C]	Day: General site works	NA	2	R	T	-	-	-	-	-	

<sup>20</sup> Predicted baseline is marginally above assessment category C threshold, assessment category B used on the basis of a precautionary assessment.

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		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
612565	Birches Lane, Lostock Green	63/65[A]	-/[A]	-/[B]	Day: Earthworks	NA	1	R	T	-	-	-	-	-	
612566	Fields Farm, Lostock Gralam	58/64[A]	-/[A]	-/[C]	Day: Highway works	NA	1	R	T	-	-	-	-	-	
612567	Hame Farm, Moss Lane, Lostock Gralam	51/57[A]	-/[A]	-/[C]	Day: Earthworks	NA	1	R	T	-	-	-	-	-	
612569	Paulden Road, Lostock Gralam	55/61[A]	-/[B]	-/[C]	Day: Underbridge construction	NA	21	R	T	-	-	-	-	-	
612570	Harris Road, Lostock Gralam	66/73[C]	-/[C]	-/[C]	Day: Highway works	NA	11	R	T	H	-	-	-	-	
612573	Harris Road, Lostock Gralam	56/62[A]	-/[C]	-/[C]	Day: Highway works	NA	15	R	T	H	-	-	-	-	
612574	Arthur Street, Lostock Gralam	50/54[A]	-/[B]	-/[C]	Day: Earthworks	NA	68	R	T	H	-	-	-	-	
612575	Pack Horse Close, Lostock Gralam	57/62[A]	-/[B]	-/[C]	Day: Highway works	NA	24	R	T	H	-	-	-	-	
612576	Bateman Road, Lostock Gralam	51/56[A]	-/[A]	-/[B]	Day: Underbridge construction	NA	6	R	T	-	-	-	-	-	
612577	Manchester Road, Lostock Gralam	51/54[A]	-/[A]	-/[B]	Day: Earthworks	NA	25	R	T	-	-	-	-	-	
612580	Manchester Road, Lostock Gralam	52/55[A]	-/[A]	-/[B]	Day: Earthworks	NA	3	R	T	-	-	-	-	-	

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612581	Stubbs Lane, Lostock Gralam	49/55[A]	-/[B]	-/[C]	Day: Underbridge construction	NA	9	R	T	H	-	-	-	-	
612582	Crossways Care Home, Station Road, Lostock Gralam	45/51[A]	-/[B]	-/[C]	Day: General site works	NA	1	R	T	-	-	-	-	-	
612583	Silverlea Road, Lostock Gralam	52/57[A]	-/[A]	-/[B]	Day: Viaduct construction	NA	42	R	T	-	-	-	-	-	
612584	Broseley Way, Lostock Gralam	61/65[B]	-/[C]	-/[C]	Day: Earthworks	NA	28	R	T	H	-	-	-	-	
612585	Lodge Lane, Lostock Gralam	48/54[A]	-/[B]	-/[C]	Day: General site works	NA	14	R	T	-	-	-	-	-	
612586	Wells Avenue, Lostock Gralam	54/59[A]	-/[A]	-/[C]	Day: Viaduct construction	NA	19	R	T	-	-	-	-	-	
612588	Lodge Lane, Lostock Gralam	48/54[A]	-/[B]	-/[C]	Day: Underbridge construction	NA	83	R	T	H	-	-	-	-	
612589	Acorn Hollow and Avandale Lodge Care Home, Manchester Road, Lostock Gralam	46/51[B]	-/[C]	-/[C]	Day: Earthworks	NA	1	R	T	H	-	-	-	-	
612593	Holford Avenue, Lostock Gralam	47/52[A]	-/[B]	-/[C]	Day: Earthworks	NA	69	R	T	H	-	-	-	-	
612594	Highfield Avenue, Lostock Gralam	47/52[A]	-/[A]	-/[C]	Day: Earthworks	NA	61	R	T	-	-	-	-	-	

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Reference	Area represented	Typical/highest monthly outdoor L <sub>pAeq</sub> [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (Months)	Combined impact	Mitigation effect	
		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
612595	Lostock Lodge Care Home, Cheshire Business Park Roundabout	65/70[C]	-/[C]	-/[C]	Day: Highway works	NA	1	R	T	H	-	-	-	-	
612596	Townshend Road, Lostock Gramam	47/52[B]	-/[C]	-/[C]	Day: Highway works	NA	166	R	T	H	-	-	-	-	
612597	Wilson Crescent, Lostock Gramam	53/58[B]	-/[C]	-/[C]	Day: Highway works	NA	65	R	T	H	-	-	-	-	
612598	Townshend Road, Lostock Gramam	49/54[B]	-/[C]	-/[C]	Day: Highway works	NA	88	R	T	H	-	-	-	-	
612599	Ascol Drive, Plumley	59/64[A]	-/[B]	-/[C]	Day: Highway works	NA	11	R	T	H	-	-	-	-	
612601	Manchester Road, Plumley	63/69[C]	-/[C]	-/[C]	Day: Highway works	NA	6	R	T	H	-	-	-	-	
612603	Plumley Moor Road, Plumley	50/53[A]	-/[A]	-/[C]	Day: Earthworks	NA	3	R	T	-	-	-	-	-	
612604	Chester Road, Plumley	54/57[C]	-/[C]	-/[C]	Day: Earthworks	NA	2	R	T	H	-	-	-	-	
612606	Plumley Moor Road, Plumley	52/55[A]	-/[B]	-/[C]	Day: Earthworks	NA	2	R	T	H	-	-	-	-	
612607	Linnards Lane, Wincham	51/55[A]	-/[A]	-/[A]	Day: Highway works	NA	4	R	T	-	-	-	-	-	
612863	Sovereign Close, Rudheath	49/52[A]	-/[A]	-/[B]	Day: Highway works	NA	5	R	T	-	-	-	-	-	

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Assessment location		Impact criteria				Significance criteria									Significant effect
Reference	Area represented	Typical/highest monthly outdoor $L_{pAeq}$ [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (Months)	Combined impact	Mitigation effect	
		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
612864	Sovereign Close, Rudheath	50/55[A]	-/[A]	-/[B]	Day: Earthworks	NA	6	R	T	-	-	-	-	-	
612865	Village Close, Lostock Green	60/67[C]	-/31[C]	-/31[C]	Day: Earthworks Evening: Earthworks Night: Earthworks <sup>18</sup>	NA	9	R	T	H	-	-	-	-	
612867	Greenside Drive, Lostock Green	56/63[A]	-/[B]	-/[C]	Day: Highway works	NA	14	R	T	H	-	-	-	-	
612868	Salary Row, Lostock Gramam	60/64[B]	-/[C]	-/[C]	Day: Earthworks	NA	19	R	T	H	-	-	-	-	
612869	Silverlea Road, Lostock Gramam	54/59[A]	-/[B]	-/[C]	Day: Earthworks	NA	20	R	T	-	-	-	-	-	
612870	Silverlea Road, Lostock Gramam	52/58[A]	-/[A]	-/[C]	Day: Underbridge construction	NA	27	R	T	-	-	-	-	-	
612871	Harris Road, Lostock Gramam	49/55[A]	-/[A]	-/[B]	Day: Viaduct construction	NA	24	R	T	-	-	-	-	-	
612872	Sweet Water Court, Lostock Gramam	45/51[A]	-/[A]	-/[A]	Day: Underbridge construction	NA	32	R	T	-	-	-	-	-	
612873	Thornley Green, Lostock Gramam	52/57[A]	-/[A]	-/[B]	Day: Earthworks	NA	32	R	T	-	-	-	-	-	
612874	Ascol Drive, Plumley	60/67[B]	-/[C]	-/[C]	Day: Highway works	NA	11	R	T	H	-	-	-	-	
612875	Foxglove Way, Rudheath	64/71[C]	-/[C]	-/[C]	Day: Highway works	NA	7	R	T	H	-	-	-	-	

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Assessment location		Impact criteria			Significance criteria									Significant effect	
Reference	Area represented	Typical/highest monthly outdoor L <sub>pAeq</sub> [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (Months)	Combined impact		Mitigation effect
		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
612876	Foxglove Way, Rudheath	58/65[C]	-/[C]	-/[C]	Day: Highway works	NA	4	R	T	H	-	-	-	-	
612877	Foxglove Way, Rudheath	54/59[A]	-/[B]	-/[C]	Day: General site works	NA	21	R	T	H	-	-	-	-	
612879	Harris Road, Lostick Gramam	58/64[B]	-/[C]	-/[C]	Day: Viaduct construction	NA	15	R	T	H	-	-	-	-	
612882	Pavillion Way, Lostock Gramam	55/59[A]	-/[A]	-/[C]	Day: Earthworks	NA	19	R	T	-	-	-	-	-	
612884	School Road, Rudheath	50/55[A]	-/[A]	-/[C]	Day: Highway works	NA	2	R	T	-	-	-	-	-	
612886	St Thomas House, King Street, Rudheath	51/55[C]	-/[C]	-/[C]	Day: General site works	NA	1	R	T	H	-	-	-	-	
612888	Shurlach Road, Rudheath	44/48[C]	-/[C]	-/[C]	Day: General site works	NA	74	R	T	H	-	-	-	-	
613051	Linnards Lane, Wincham	48/52[A]	-/[A]	-/[C]	Day: Earthworks	NA	3	R	T	-	-	-	-	-	
613053	Sovereign Close, Rudheath	48/52[A]	-/[A]	-/[B]	Day: Earthworks	NA	14	R	T	-	-	-	-	-	
613054	Foxglove Way, Rudheath	57/63[B]	-/[C]	-/[C]	Day: Highway works	NA	17	R	T	H	-	-	-	-	
613055	Sovereign Close, Rudheath	49/52[A]	-/[A]	-/[B]	Day: Earthworks	NA	7	R	T	-	-	-	-	-	
613056	Foxglove Way, Rudheath	52/59[A]	-/[B]	-/[C]	Day: Highway works	NA	10	R	T	-	-	-	-	-	



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Assessment location		Impact criteria				Significance criteria									Significant effect
Reference	Area represented	Typical/highest monthly outdoor L <sub>pAeq</sub> [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (Months)	Combined impact	Mitigation effect	
		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
613057	Mulberry Close, Rudheath	55/60[A]	-/[B]	-/[C]	Day: Highway works	NA	5	R	T	H	-	-	-	-	
613058	Birches Lane, Lostock Green	60/63[C]	-/[C]	-/[C]	Day: General site works	NA	2	R	T	H	-	-	-	-	
613060	Harris Road, Lostock Gralam	47/53[A]	-/[A]	-/[A]	Day: General site works	NA	27	R	T	-	-	-	-	-	
613062	Penny's Lane, Northwich	54/59[C]	-/[C]	-/[C]	Day: Highway works	NA	3	R	T	H	-	-	-	-	
613067	Birches Lane, Lostock Green	64/71[B]	-/[C]	-/[C]	Day: Highway works	A	3	R	T	H	-	D1	-	-	MA02-C-C3
613069	Harris Road, Lostock Gralam	50/56[A]	-/[A]	-/[B]	Day: Viaduct construction	NA	21	R	T	-	-	-	-	-	
613073	Chester Road, Plumley	54/58[C]	-/[C]	-/[C]	Day: Highway works	NA	1	R	T	H	-	-	-	-	
613206	Birches Lane, Lostock Green	61/67[A]	-/[B]	-/[C]	Day: Highway works	A	5	R	T	-	-	D1	-	-	MA02-C-C3
613207	Birches Lane, Lostock Green	76/84[C]	33/35[C]	33/35[C]	Day: Highway works Evening: Highway works Night: Highway works <sup>18</sup>	S	3	R	T	H	-	D2	-	NI	MA02-C-C3
613208	Birches Lane, Lostock Green	67/75[B]	-/[C]	-/[C]	Day: Highway works	A	4	R	T	H	-	D2	-	-	MA02-C-C3

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Assessment location		Impact criteria			Significance criteria										Significant effect
Reference	Area represented	Typical/highest monthly outdoor $L_{pAeq}$ [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (Months)	Combined impact	Mitigation effect	
		Day 07:00 – 19:00	Evening 19:00 – 23:00	Night 23:00 – 07:00											
613209	Birches Lane, Lostock Green	62/69[B]	-/[C]	-/[C]	Day: Highway works	NA	2	R	T	H	-	-	-	-	
613210	Greenside Drive, Lostock Green	61/67[A]	-/[B]	-/[C]	Day: Highway works	A	4	R	T	H	-	D1	-	-	MA02-C-C3
613212	Griffiths Road, Lostock Gram and committed development (Map Book ref.: MA02/262)	44/47[C]	-/[C]	-/[C]	Day: Earthworks	NA	2	R	T	H	-	-	-	-	
613213	411 Manchester Road, Lostock Gram and committed development (Map Book ref.: MA02/277)	43/48[B]	-/[C]	-/[C]	Day: Earthworks	NA	16	R	T	H	-	-	-	-	
613215	162 Middlewich Road Care Home, Rudheath and committed development (Map Book ref.: MA02/342)	46/49[B]	-/[C]	-/[C]	Day: Earthworks	NA	1	R	T	H	-	-	-	-	

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**Table 6: Assessment of construction noise at non-residential receptors**

Assessment location		Impact criteria A				Significance criteria								Significant effect	
Reference	Area represented	Typical/highest monthly outdoor L <sub>pAeq</sub> [dB] at the façade		Change during month with highest noise level		Construction activity resulting in highest forecast noise levels	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (months)	Combined impact		Mitigation effect
		Day 07:00 – 19:00	Night 23:00 – 07:00	Day 07:00 – 19:00	Night 23:00 – 07:00										
610185	Wimboldsley Community Primary School, Nantwich Road, Wimboldsley	57/61	37/37	-	-	Day: Highway works Night: Bored tunnel works	1	A3	T	H	-	-	-	-	\$
610207	Unit I - M (Lower Sensitivity Offices), Sheriff House, Nantwich Road, Stanthorne, Middlewich	56/62	-/-	12	-	Day: Highway works	1	A4	T	-	-	-	-	-	
610387	Environment Agency (Offices), Road Three, Winsford	50/54	-/-	5	-	Day: General site works	1	A4	T	-	-	-	-	-	
610388	The Cottage Cattery (Lower Sensitivity Offices), Occleston	55/59	38/38	9	1	Day: General site works Night: Bored tunnel works	1	A4	T	-	-	-	-	-	
610398	Oakwood Marina (Lower Sensitivity Offices), Davenham Road, Rudheath	57/62	-/-	12	-	Day: Highway works	1	A4	T	-	-	-	-	-	

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Assessment location		Impact criteria A				Significance criteria							Significant effect		
Reference	Area represented	Typical/highest monthly outdoor L <sub>pAeq</sub> [dB] at the façade		Change during month with highest noise level		Construction activity resulting in highest forecast noise levels	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (months)		Combined impact	Mitigation effect
		Day 07:00 – 19:00	Night 23:00 – 07:00	Day 07:00 – 19:00	Night 23:00 – 07:00										
610399	Firthfield Kennels (Lower Sensitivity Offices), Whatcroft Hall Lane, Rudheath	53/58	-/-	8	-	Day: Viaduct construction	1	A4	T	-	-	-	-	-	
610713	Byley Primary School (School), Moss Lane, Byley	50/54	-/-	9	-	Day: General site works	1	A3	T	-	-	D2	-	-	*
610723	KC Auto (Offices), Road Three, Winsford	51/55	-/-	8	-	Day: Highway works	1	A4	T	-	-	-	-	-	
610724	Kinderton Accident Management (Offices), Road Three, Winsford	48/52	-/-	7	-	Day: Earthworks	1	A4	T	-	-	-	-	-	
610725	Car Transplant (Offices), Road Three, Winsford	49/52	-/-	10	-	Day: Highway works	1	A4	T	-	-	-	-	-	
610726	Go Furniture (Offices), Road Three, Winsford	47/51	-/-	6	-	Day: Highway works	1	A4	T	-	-	-	-	-	
610727	Bam Nuttall Signs (Offices), Road Three, Winsford	51/54	-/-	10	-	Day: Retaining walls construction	1	A4	T	-	-	-	-	-	
610728	Antalis (Offices), Road One, Winsford	44/48	-/-	-	-	Day: Highway works	1	A4	T	H	-	-	-	-	
610729	RPC (Offices), Road One, Winsford	40/43	-/-	-	-	Day: General site works	1	A4	T	H	-	-	-	-	

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Assessment location		Impact criteria A				Significance criteria							Significant effect		
Reference	Area represented	Typical/highest monthly outdoor L <sub>pAeq</sub> [dB] at the façade		Change during month with highest noise level		Construction activity resulting in highest forecast noise levels	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (months)		Combined impact	Mitigation effect
		Day 07:00 – 19:00	Night 23:00 – 07:00	Day 07:00 – 19:00	Night 23:00 – 07:00										
610730	Mitras Paint Operations (Offices), Road One, Winsford	40/43	-/-	-	-	Day: General site works	1	A4	T	-	-	-	-	-	
610731	Graphite Packaging International (Offices), Road Three, Winsford	37/41	-/-	2	-	Day: Demolitions	1	A4	T	-	-	-	-	-	
610734	Road One, Winsford and committed development (Map Book ref.: MA02/247)	38/42	-/-	-	-	Day: Overbridge construction	1	A4	T	H	-	-	-	-	
610735	Road One, Winsford	43/47	-/-	1	-	Day: Earthworks	1	A4	T	-	-	-	-	-	
610806	St John the Evangelist (Church), Moss Lane, Byley	46/49	-/-	2	-	Day: General site works	1	A2	T	-	-	-	-	-	
610807	FoxHound Recording Studio, Moss Lane, Byley	50/55	-/-	8	-	Day: General site works	1	A1	T	-	-	D2	-	-	*
610809	Williams Design and Print (Offices), Byley Road, Byley	47/51	-/-	-	-	Day: General site works	1	A4	T	H	-	-	-	-	

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Reference	Area represented	Typical/highest monthly outdoor L <sub>pAeq</sub> [dB] at the façade		Change during month with highest noise level		Construction activity resulting in highest forecast noise levels	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (months)	Combined impact		Mitigation effect
		Day 07:00 – 19:00	Night 23:00 – 07:00	Day 07:00 – 19:00	Night 23:00 – 07:00										
610877	Wimboldsley Community Primary School, Nantwich Road, Wimboldsley and committed development (Map Book ref.: MA02/328)	53/57	32/32	5	-	Day: Highway works Night: Bored tunnel works	1	A3	T	-	-	D7	-	-	\$
612507	Gadbrook Park (Offices), Gadbrook Business Centre, Rudheath	50/55	-/-	4	-	Day: Viaduct construction	1	A4	T	-	-	-	-	-	
612508	Langdale House and Century House (Offices), Gadbrook Business Centre, Rudheath	51/56	-/-	4	-	Day: Viaduct construction	1	A4	T	-	-	-	-	-	
612509	Orchard Marina (Office), School Road, Rudheath	48/53	-/-	3	-	Day: Viaduct construction	1	A4	T	-	-	-	-	-	
612511	Sherwood House (Offices), Gadbrook Business Centre, Rudheath	44/50	-/-	1	-	Day: Viaduct construction	1	A4	T	-	-	-	-	-	
612512	Chrysalis Day Nursery, Gadbrook Business Centre, Rudheath	45/50	-/-	1	-	Day: Auto transformer station GSM-R civil works	1	A3	T	-	-	-	-	-	

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Reference	Area represented	Typical/highest monthly outdoor L <sub>pAeq</sub> [dB] at the façade		Change during month with highest noise level		Construction activity resulting in highest forecast noise levels	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (months)	Combined impact		Mitigation effect
		Day 07:00 – 19:00	Night 23:00 – 07:00	Day 07:00 – 19:00	Night 23:00 – 07:00										
612514	Unit 12-13 Brunel Court (Offices), Rudheath	46/51	-/-	2	-	Day: Viaduct construction	1	A4	T	-	-	-	-	-	
612515	1 Gadbrook Park (Offices), Rudheath	43/47	-/-	1	-	Day: Viaduct construction	1	A4	T	-	-	-	-	-	
612522	Rudheath Youth Centre, Gadbrook Road, Rudheath	44/49	-/-	-	-	Day: General site works	1	A3	T	H	-	-	-	-	
612525	Rudheath Primary Academy and Little Owls Pre-School Nursery, Gadbrook Road, Rudheath	46/50	-/-	-	-	Day: General site works	1	A3	T	H	-	-	-	-	
612547	Rudheath Dental Health Centre (Office), Middlewich Road, Rudheath	44/46	-/-	-	-	Day: General site works	1	A4	T	-	-	-	-	-	
612553	Lostock Green Methodist Church, Birches Lane, Lostock Green	49/55	-/-	2	-	Day: Earthworks	1	A2	T	-	-	-	-	-	\$
612564	Ineos Chlor (Office), Griffiths Road, Lostock Gram	48/52	-/-	-	-	Day: Earthworks	1	A4	T	H	-	-	-	-	

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Reference	Area represented	Typical/highest monthly outdoor L <sub>pAeq</sub> [dB] at the façade		Change during month with highest noise level		Construction activity resulting in highest forecast noise levels	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (months)	Combined impact		Mitigation effect
		Day 07:00 – 19:00	Night 23:00 – 07:00	Day 07:00 – 19:00	Night 23:00 – 07:00										
612568	North West Trucks (Offices), Griffiths Road, Lostock Gramam	52/55	-/-	2	-	Day: Earthworks	1	A4	T	-	-	-	-	-	
612571	Parish of Lostock Gramam Church Hall, Station Road, Lostock Gramam	50/53	-/-	4	-	Day: Earthworks	1	A2	T	-	-	-	-	-	
612572	Lostock Tiny Tots Pre-School, Station Road, Lostock Gramam	52/56	-/-	1	-	Day: Earthworks	1	A3	T	H	-	-	-	-	\$
612578	St John The Evangelist Church, School Lane, Lostock Gramam	50/54	-/-	2	-	Day: Earthworks	1	A2	T	-	-	-	-	-	\$
612579	Lostock Gramam Church of England Primary School, School Lane, Lostock Gramam	48/53	-/-	4	-	Day: Earthworks	1	A3	T	-	-	-	-	-	
612582	Crossways Care Home, Station Road, Lostock Gramam	45/51	-/-	1	-	Day: General site works	1	A5	T	-	-	-	-	-	
612587	Slow & Easy Hotel, Manchester Road, Lostock Gramam	50/53	-/-	-	-	Day: Earthworks	1	A3	T	H	-	-	-	-	



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Reference	Area represented	Typical/highest monthly outdoor L <sub>pAeq</sub> [dB] at the façade		Change during month with highest noise level		Construction activity resulting in highest forecast noise levels	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (months)	Combined impact		Mitigation effect
		Day 07:00 – 19:00	Night 23:00 – 07:00	Day 07:00 – 19:00	Night 23:00 – 07:00										
612589	Acorn Hollow and Avandale Lodge Care Home, Manchester Road, Lostock Gramam	46/51	-/-	-	-	Day: Earthworks	1	A5	T	H	-	-	-	-	
612590	Children's Centre, School Lane, Lostock Gramam	46/52	-/-	2	-	Day: Earthworks	1	A3	T	-	-	-	-	-	
612591	Travelodge (Hotel), Wells Avenue, Lostock Gramam	66/72	-/-	4	-	Day: Highway works	1	A3	T	H	-	D2	-	-	*
612592	Cheshire Business Park (Offices), Lostock Gramam	52/57	-/-	5	-	Day: Highway works	1	A4	T	-	-	-	-	-	
612595	Lostock Lodge Care Home, Cheshire Business Park Roundabout	65/70	-/-	3	-	Day: Highway works	1	A5	T	H	-	-	-	-	
612600	Holford Hall (Wedding Venue), Chester Road, Plumley	51/56	-/-	5	-	Day: Highway works	1	A2	T	-	-	D14	-	-	MA02-C-N1
612602	Holford Mill House (Holiday Let), Plumley	53/58	-/-	1	-	Day: Highway works	1	A3	T	H	-	-	-	-	\$

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Reference	Area represented	Typical/highest monthly outdoor L <sub>pAeq</sub> [dB] at the façade		Change during month with highest noise level		Construction activity resulting in highest forecast noise levels	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (months)		Combined impact	Mitigation effect
		Day 07:00 – 19:00	Night 23:00 – 07:00	Day 07:00 – 19:00	Night 23:00 – 07:00										
612878	Park Farm Marina (Office), Davenham Road, Rudheath	52/57	-/-	10	-	Day: Highway works	1	A4	T	-	-	-	-	-	
612885	Mallard Court (Offices), Canal Walk, Rudheath	45/49	-/-	1	-	Day: General site works	1	A4	T	-	-	-	-	-	
612889	Rudheath Community High School (School), Shipbrook Road, Rudheath	44/48	-/-	2	-	Day: Earthworks	1	A3	T	-	-	-	-	-	
613004	Dalby Court (Offices), Gadbrook Road, Rudheath	49/54	-/-	3	-	Day: Viaduct construction	1	A4	T	-	-	-	-	-	
613070	Cheshire Business Park (Offices), Lostock Gralam	49/54	-/-	5	-	Day: Earthworks	1	A4	T	-	-	-	-	-	
613071	Cheshire Business Park (Offices), Lostock Gralam	51/56	-/-	5	-	Day: Highway works	1	A4	T	-	-	-	-	-	
613092	Cheshire Business Park (Offices), Lostock Gralam	55/60	-/-	4	-	Day: Earthworks	1	A4	T	-	-	D3	-	-	*
613203	Morrisons Gadbrook, Rudheath	59/64	-/-	15	-	Day: Viaduct construction	1	A4	T	-	-	D13	-	-	*

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Assessment location		Impact criteria A				Significance criteria								Significant effect	
Reference	Area represented	Typical/highest monthly outdoor L <sub>pAeq</sub> [dB] at the façade		Change during month with highest noise level		Construction activity resulting in highest forecast noise levels	Number of properties represented	Type of receptor	Receptor design	Existing environment	Unique feature	Impact duration (months)	Combined impact		Mitigation effect
		Day 07:00 – 19:00	Night 23:00 – 07:00	Day 07:00 – 19:00	Night 23:00 – 07:00										
613204	Gadbrook Produce, Rudheath	53/59	-/-	5	-	Day: Viaduct construction	1	A4	T	-	-	D1	-	-	*
613214	Unit 5, 469 Manchester Road, Lostock Gralam and committed development (Map Book ref.: MA02/269)	47/52	-/-	-	-	Day: Highway works	1	A4	T	H	-	-	-	-	
613215	162 Middlewich Road Care Home, Rudheath and committed development (Map Book ref.: MA02/342)	46/49	-/-	-	-	Day: Earthworks	1	A5	T	H	-	-	-	-	
613216	Gadbrook Park (Office), Rudheath and committed development (Map Book ref.: MA02/347)	43/48	-/-	1	-	Day: Viaduct construction	1	A4	T	-	-	-	-	-	

## Airborne sound: indirect effects

- 4.2.10 Construction road traffic associated with the construction phases of the Proposed Scheme would generate airborne noise. Based upon traffic information for the Proposed Scheme, the change in traffic noise level at a reference distance of 10m from the edge of the nearside carriageway for a given road has been predicted. Data have been produced for a typical month during the construction period and for a worst-case month during the construction period. The results for potentially significant road links are presented in Table 8.
- 4.2.11 Explanation of the information within Table 8 is provided in Volume 5, Appendix SV- 001-00000, with the following additional notes in Table 7.

**Table 7: Explanatory notes for assessment results – indirect construction effects**

Colour	Explanation
	Where the significant effect column is highlighted, then a significant effect is identified on nearby communities.
	Yellow denotes a minor impact – a change is of $\geq 3\text{dB} - <5\text{dB}$ , or $\geq 1\text{dB} - <3\text{dB}$ where a high existing sound level is identified.
	Orange denotes a moderate impact – a change is of $\geq 5\text{dB} - <10\text{dB}$ , or $\geq 3\text{dB} - <5\text{dB}$ where a high existing sound level is identified.
	Red denotes a major impact – a change is of $\geq 10\text{dB}$ , or $\geq 5\text{dB}$ where a high existing sound level is identified.
~	When considered under the significance criteria set out in Volume 5: Appendix SV-001-00000, Annex A, Section 1.3, these adverse effects are not considered to be significant on a community basis.
*	For non-residential receptors this indicates the predicted noise levels are above screening criteria which, based upon further qualitative receptor information, (see footnote) does not give rise to a significant effect.
O, CT, V	Combined Impact: If noise or vibration impacts from other construction activities occur at this location: onsite activities (O), off-site construction traffic activities (CT), or construction Vibration (V).
R, NR	Number of properties affected (approx.) – identified by type of receptor: R: total number of residential (total number of residential in community). NR: total number of non-residential.

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**Table 8: Assessment of construction traffic noise levels**

Road name	Portion of road affected	Number of properties affected (approx.)	Daytime traffic sound levels $L_{Aeq,16hr}$ dB			Change compared to current traffic sound level (dB)		Combined impact	Significant effect
			Without the Proposed Scheme (2030)	Typical month during construction	Peak month during construction	Typical month during construction	Peak month during construction		
Clive Green Lane	Between A530 Nantwich Road and Clive Green	R: 6 (0)	67.6	68.4	69.2	0.8	1.6	O, V	~
Darnhall School Lane, Winsford	Between B5074 Swanlow Lane and Glebe Green Drive	R: 50 (240) NR: 2	53.4	57.7	58.9	4.3	5.5	-	MA02-C-C4 MA02-C-N2 MA02-C-N3
Glebe Green Drive/Durham Drive, Winsford	Between Darnhall School Lane and Dover Drive	R: 80 (240)	56.9	59.9	60.6	3.0	3.7	-	MA02-C-C4
Dover Drive/Mount Pleasant Drive, Winsford	Between Durham Drive and Woodford Lane West	R: 110 (240)	57.1	59.7	60.4	2.6	3.3	-	MA02-C-C4
A54 St Michael's Way, Middlewich	Between Wheelock Street and The Bull Ring	R: 37 (37)	68.3	68.3	69.4	0	1.1	-	~21

<sup>21</sup> Duration of peak impact less than 6 months and therefore considered to be not significant on a community basis.

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Road name	Portion of road affected	Number of properties affected (approx.)	Daytime traffic sound levels $L_{Aeq,16hr}$ dB			Change compared to current traffic sound level (dB)		Combined impact	Significant effect
			Without the Proposed Scheme (2030)	Typical month during construction	Peak month during construction	Typical month during construction	Peak month during construction		
A54 Chester Road, Middlewich	Between Grange Lea and A539 Croxton Lane	R: 13 (0)22	67.9	67.6	68.9	-0.3	1.0	-	~
A54 Middlewich Road, Stanthorne (existing)23	Between junction with A533 Northwich Road and Birch Lane	R: 2 (0)	68.8	66.7	67.3	-2.1	-1.5	-	~
A533 Bostock Road (existing)23	Between Old Hall Farm and South Lodge	R: 11 (0)24	67.1	63.5	64.8	-3.6	-2.3	-	~
B5309 Centurion Way, Middlewich	Between B5081 Byley Lane and roundabout at White Park Close	R: 10 (35)	67.2	67.4	69.0	0.2	1.8	-	MA02-C-C5
B5309 Centurion Way, Middlewich	Between roundabout at White Park Close and B5309 King Street	R: 25 (35)	66.0	66.2	68.1	0.2	2.1	-	MA02-C-C5

<sup>22</sup> Includes eight properties associated with committed development Planning ref. 19/1549C.

<sup>23</sup> Note this road is realigned during a later phase of construction. The results presented are representative of the phase which results in the greatest change in noise level to the community.

<sup>24</sup> Includes seven properties associated with committed development Planning ref. 17/04252/FUL.

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Road name	Portion of road affected	Number of properties affected (approx.)	Daytime traffic sound levels $L_{Aeq,16hr}$ dB			Change compared to current traffic sound level (dB)		Combined impact	Significant effect
			Without the Proposed Scheme (2030)	Typical month during construction	Peak month during construction	Typical month during construction	Peak month during construction		
B5309 King Street, Middlewich	Between Rive Dane overbridge and junction with A530 Croxton Lane	R: 6 (0)	69.8	70.1	71.2	0.3	1.4	-	~
A530, Middlewich	Between junction with A530 Croxton Lane and Whatcroft Hall Lane	R: 4 (0)	71.5	71.9	72.9	0.4	1.4	-	~
A530, Middlewich	Between junction with Whatcroft Hall Lane and Davenham Road	R: 3 (0)	69.8	71.1	72.3	1.3	2.5	-	~
B5081, Byley	Between Lily Lane and B5082 Northwich Road	R: 30 (30)	66.8	68.7	70.3	1.9	3.5	-	MA02-C-C6
A530	Between Crowders Lane and B5309 King Street	R:6 (3) NR: 0 Tot: 6	70.8	70.8	72.3	0.0	1.5	-	~
A556	Between Exit onto Cookes Lanes and Cookes Lane Entry slip road	R:0 NR(0) Tot: 0	74.5	74.5	75.5	0.0	1.0	-	~

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Road name	Portion of road affected	Number of properties affected (approx.)	Daytime traffic sound levels $L_{Aeq,16hr}$ dB			Change compared to current traffic sound level (dB)		Combined impact	Significant effect
			Without the Proposed Scheme (2030)	Typical month during construction	Peak month during construction	Typical month during construction	Peak month during construction		
A556/B5569 (northbound)	Between Linnards Lane and A559 Manchester Road	R:6 (6) NR:0 Tot: 6	71.8	72.3	73.2	0.5	1.4	-	~
A556/B5569 (northbound)	Between Linnards Lane and A559 Manchester Road	R:6 (6) NR:0 Tot: 6	72.0	72.6	73.5	0.6	1.5	-	~



## **Airborne sound levels used in other assessments**

- 4.2.12 The construction sound results contained in this document have been used by other disciplines, namely agriculture, historic environment, landscape and visual, communities and socio economics, in their assessments. This includes the information in Table 5 and Table 6. Locations of interest to these other disciplines which may not appear in Table 5 or Table 6 are presented in Table 9.

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**Table 9: Construction airborne sound levels for use in cross discipline assessments**

Assessment location ID		Impact information				Discipline						
Reference	Area represented	Typical/highest monthly outdoor $L_{pAeq}$ [dB] at the façade		Change during month with highest noise level		Construction activity resulting in highest forecast noise levels	Agriculture	Communities	Socio-economic	Ecology	Heritage	Landscape
		Day 07:00 – 19:00	Night 23:00 – 07:00	Day 07:00 – 19:00	Night 23:00 – 07:00							
610544	Yew-Tree Farm (Livestock), Coalpit Lane, Stanthorne (Map Book ref.: MA02/6)	72/77	33/38	33	4	Day: Demolitions Night: Highway works <sup>18</sup>	Y	-	-	-	-	-
610546	Dairy Farm (Livestock), Whatcroft Hall Lane, Whatcroft (Map Book ref.: MA02/13)	64/69	-/30	20	0	Day: Highway works Night: Highway works <sup>18</sup>	Y	-	-	-	-	-
613038	Plumley Lime Beds SSSI <sup>13</sup>	55/60	-/-	10	0	Day: Earthworks	-	-	-	Y	-	-
613039	Plumley Lime Beds SSSI	52/56	-/-	7	0	Day: Highway works	-	-	-	Y	-	-
613040	Plumley Lime Beds SSSI	51/56	-/-	5	0	Day: Earthworks	-	-	-	Y	-	-
613041	Plumley Lime Beds SSSI	50/55	-/-	7	0	Day: Earthworks	-	-	-	Y	-	-







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