

A38 Derby Junctions

TR010022

Volume 6

6.3 Environmental Statement Appendices

Appendix 9.3: Noise Modelling Details

Regulation 5(2)(a)

Planning Act 2008

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

April 2019

Infrastructure Planning

Planning Act 2008

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

A38 Derby Junctions Development Consent Order 202[]

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Regulation Number	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference	TR010022
Application Document Reference	6.3
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Version	Date	Status of Version
1	April 2019	DCO Application

Table of Contents

1.	Data used	1
2.	Modelling assumptions.....	1

Appendix 9.3: Noise Modelling Details

1. Data used

- OS Mastermap: provided by Highways England 12/09/18.
- OS Address Base Plus: provided by Highways England 10/10/18.
- OS Building Height Attribute (BHA) dataset: provided by Highways England 10/09/18.
- Existing topographic surveys for Kingsway junction, Markeaton junction, Markeaton Park and Little Eaton junction: 18/10/18.
- Existing wider area ground heights: provided by Highways England 06/07/15. Converted to 20cm contours along the existing A38 and 2m contours in the wider area by AECOM GIS team.
- 3D Scheme design: file 'All Junctions All Mainlines - with ret walls FINAL2 .dxf' 17/10/18.
- Road surfacing existing: HAPMS database of locations of thin surfacing 14/06/18.
- Road surfacing proposed: Maintenance contractor provided marked up plans of proposed resurfacing with thin surfacing prior to 2024 16/08/18.
- Existing noise barriers: HAPMS database 14/06/18: A38 northbound off slip road at the A6 junction (height estimated at 2.0m). Maintenance contractor provide original 'as built' drawings of the A38 indicating further barriers at Bardens Drive/ Ferrers Way and Kedleston Road 8/7/15
- Round 2 Important Areas: downloaded from data.gov.uk website 13/8/15.
- Traffic data: operational traffic data provided 26/4/18. Construction traffic data provided 06/12/18 (2024 Do-Minimum) and 23/01/19 for scenarios 0, 2 and 4.

2. Modelling assumptions

- Ground absorption: 1.0 for soft ground (vegetated), 0.0 for hard ground including water and road surfaces, based on OS Mastermap Topographic layer 12/09/18. Areas of less than 10m² or 1m width removed.
- Building heights for residential buildings standardized to 4.0m: 1 storey 6.0m: 2 storey, 9.0m: 3 storey etc. based on initial information from OS Mastermap BHA. Non-residential buildings used height direct from OS Mastermap. Some adjustments required to estimate missing heights.
- Road surfacing corrections:
 - Standard HRA:
 - speed <75km/hr: -1dB
 - speed ≥75km/hr: -0.5dB
 - Low noise thin surfacing:
 - speed <75km/hr: -1dB
 - speed ≥75km/hr: -3.5dB

- 10m x 10m grid used to produce noise change contour plots at height of 4.0m above ground.