

# **A1 in Northumberland: Morpeth to Ellingham**

**Scheme Number: TR010059**

## **Noise and Vibration Re-assessment**

Infrastructure Planning (Examination Procedure) Rules 2010

Planning Act 2008

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

Infrastructure Planning

Planning Act 2008

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

**The A1 in Northumberland: Morpeth to  
Ellingham**  
Development Consent Order 20[xx]

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**Noise and Vibration Re-assessment**

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# 1 PURPOSE OF THIS DOCUMENT

- 1.1.1. This document concerns the operational stage noise assessment of the A1 in Northumberland: Morpeth to Ellingham Scheme (the 'Scheme'). The operational stage noise assessment has been updated.
- 1.1.2. An addendum (the 'Noise Addendum') to the Environmental Statement (ES) will be submitted at Deadline 1, which will include an updated operational stage noise assessment of the Scheme.
- 1.1.3. The purpose of this document is to explain the reason for the updated assessment and provide a summary of the assessment findings.
- 1.1.4. The updated operational noise assessment presented in the Noise Addendum will supersede the operational noise assessments presented within the following documents. Only the operational stage assessment and associated sections of the ES are superseded. The construction stage assessments remain valid:
  - a. Chapter 6 Noise and Vibration Part A [APP-042]
  - b. Chapter 6 Noise and Vibration Part B [APP-043]
  - c. Chapter 16 Assessment of Cumulative Effects [APP-062]
  - d. Appendix 16.5 Noise and Vibration Likely Significant Effects of the Scheme [APP-331]
  - e. Appendix 6.10 Noise and Vibration DMRB Sensitivity Test Part A [APP-215]
  - f. Appendix 6.10 Noise and Vibration DMRB Sensitivity Test Part B [APP-285]
- 1.1.5. The Noise Addendum will contain text that can be read in substitution for the corresponding text contained in the ES.

## 2 REASONS FOR UPDATE

- 2.1.1. The primary reason for the Noise Addendum (see paragraph 2.1.2 below for other considerations) is due to a change in the proposed Scheme opening year since the Environmental Impact Assessment (EIA) was carried out.
- 2.1.2. Although the primary reason for undertaking the Noise Addendum assessment is to verify the findings presented within the ES for the revised opening and design years, the following aspects have also been integrated:
- a. Release of updated guidance in the form of DMRB LA 111 Noise and Vibration, Revision 2, May 2020
  - b. Assessment of Part A: Morpeth to Felton ('Part A') and Part B: Alnwick to Ellingham ('Part B') to ensure the cumulative assessment carried out within Chapter 16 [APP-062] is appropriate.
- 2.1.3. Each of these are discussed below.

## 2.2 POSTPONEMENT OF OPENING YEAR

- 2.2.1. For the purpose of the EIA, the assessment of the Scheme presented in Chapter 6: Noise and Vibration Part A (APP-042), Chapter 6: Noise and Vibration Part B (APP-043), and Chapter 16: Assessment of Cumulative Effects (APP-062), was undertaken using traffic data applicable to an anticipated opening year of 2023 and consequent design year of 2038. The opening year has been set at 2024 consistently with that set out in paragraph 4.1.10 in Chapter 4: Environmental Assessment Methodology of the ES [APP-039], with a consequential design year of 2039.
- 2.2.2. Chapter 2: The Scheme (Paragraph 2.4.18) of the ES [APP-037], presents the conclusions of a sensitivity analysis which was carried out on the traffic data in order to test whether the change in traffic levels resulting from such a postponement would materially affect assessments for the revised opening year and design year. From this analysis it was concluded that no material change in outcomes of those assessments that use the traffic data is anticipated. To validate this conclusion, a re-assessment has been undertaken for operational noise, based on traffic data provided for an opening year of 2024 and a design year of 2039.
- 2.2.3. The construction methodologies to be employed are unlikely to be affected by the change in opening year. It therefore remains the case that the change to the opening year is expected not to influence the construction noise and vibration assessment. The Noise Addendum assessment, and therefore this document as well, address only operational noise from the Scheme. The construction stage assessments presented within Chapter 6: Noise and Vibration Part A [APP-042], Chapter 6: Noise and Vibration Part B [APP-043], and Chapter 16: Assessment of Cumulative Effects [APP-062] remain valid.

## **2.3 RELEASE OF LA 111**

- 2.3.1. Since the assessments reported in the ES were completed, DMRB guidance has been updated. DMRB Volume 11, Section 3, Part 7, HD 213/11 (DMRB HD 213/11) guidance was current at the commencement of the noise and vibration assessment and throughout all the work to determine the noise and vibration effects of the Scheme. However, in November 2019, DMRB LA 111 was released (and subsequently revised in May 2020), superseding DMRB HD 213/11. As part of the ES, a sensitivity test was undertaken to determine whether the conclusions of the ES might change as a result of the updated guidance. For Part A, within Paragraph 6.10.58 of Chapter 6: Noise and Vibration Part A [APP-042], and Paragraph 16.8.20 of Chapter 16: Assessment of Cumulative Effects [APP-062], it is concluded that there is the potential for one additional significant adverse effect due to the updated guidance. For Part B of the Scheme, within Paragraph 6.10.26 of Chapter 6: Noise and Vibration Part A [APP-043], and Paragraph 16.8.21 of Chapter 16: Assessment of Cumulative Effects [APP-062], it is concluded that the application of the updated guidance is not expected to result in any additional significant adverse effects. This sensitivity test was undertaken using traffic data for a predicted opening year of 2023 (and a design year of 2038). The Noise Addendum assessment, adopting the new predicted opening year of 2024 (2039 design year), incorporates a full and comprehensive assessment undertaken in line with DMRB LA 111.
- 2.3.2. The key updates to the guidance which have been introduced within DMRB LA 111 and are incorporated into the Noise Addendum assessment, are discussed further within Appendix 6.10 Noise and Vibration DMRB Sensitivity Test Part A of the ES [APP-215], and Appendix 6.10 Noise and Vibration DMRB Sensitivity Test Part B of the ES [APP-285]. For ease of comparison with the DMRB HD 213/11 assessments, the Scheme Study Area was unchanged for the sensitivity tests [APP-215 and APP-285]. For the purpose of the Noise Addendum assessment, the Scheme Study Area has now been updated to fully reflect the DMRB LA 111 guidance.

## **2.4 COMBINING PARTS A AND B OF THE SCHEME**

- 2.4.1. The ES currently includes two separate noise and vibration chapters, one for Part A (Chapter 6: Noise and Vibration Part A [APP-042]) and one for Part B (Chapter 6: Noise and Vibration Part B [APP-043]). The operational noise assessments presented in these chapters are based on traffic data for the respective Parts of the Scheme. An assessment using the whole Scheme traffic data was also undertaken and is presented in Chapter 16: Assessment of Cumulative Effects [APP-062].
- 2.4.2. The Noise Addendum assessment considers the Scheme as a whole. Given their geographical separation, individual calculation areas have been derived for Part A and Part B, with receptor specific predictions being undertaken within each. The assessment is however based on traffic data for the whole Scheme and a single all-encompassing Study Area has been derived for the Scheme incorporating the individual Part A and Part B calculation areas.

- 2.4.3. Adoption of the DMRB LA 111 approach in methodology and to defining the Scheme Study Area, led to a change in the number of receptors included within the Noise Addendum assessment.

### 3 ASSESSMENT FINDINGS

- 3.1.1. Although the Noise Addendum will consider both beneficial and adverse effects of the Scheme, this section focuses on the potential for changes to the significant adverse effects reported for the Scheme.
- 3.1.2. The adoption of the DMRB LA 111 methodology and traffic data for an opening year of 2024 and design year of 2039 have not materially changed the pattern of absolute noise levels and noise level changes presented in Chapter 6: Noise and Vibration Part A [APP-042], Chapter 6: Noise and Vibration Part B [APP-043] and Chapter 16: Assessment of Cumulative Effects [APP-062].
- 3.1.3. Nevertheless, there are, as might be expected, a number of small differences and it is necessary to consider whether any of these might result in any changes to the significant operational effects reported within Chapter 6: Noise and Vibration Part A [APP-042], Chapter 6: Noise and Vibration Part B [APP-043], and Chapter 16: Assessment of Cumulative Effects [APP-062].
- 3.1.4. Within Chapter 6: Noise and Vibration Part A [APP-042] and Chapter 16: Assessment of Cumulative Effects [APP-062], three significant adverse operational noise residual effects were predicted as a result of Part A of the Scheme. There was the potential for one additional significant adverse operational noise residual effect as a result of adopting the DMRB LA 111 methodology reported within Appendix 6.10 Noise and Vibration DMRB Sensitivity Test Part A of the ES [APP-215].
- 3.1.5. The Noise Addendum assessment shows that these four properties are still predicted to experience significant adverse effects. In addition, due to the combined changes described in paragraph 2.1.2, a further two properties in the area of Fenrother are predicted to experience significant adverse operational noise effects as a result of the Scheme. These properties are predicted to experience moderate adverse noise level changes in the short-term. Mitigation measures in the form of acoustic screening have been investigated for these two receptors but these measures are considered unlikely to meet the meaningful benefit threshold of at least 3 dB for acoustic mitigation presented in Chapter 6: Noise and Vibration Part A [APP-042]. Therefore, the adverse operational noise residual effects at these receptors remain significant.
- 3.1.6. Within Chapter 6: Noise and vibration Part B [APP-043] and Chapter 16: Assessment of Cumulative Effects [APP-062], the operational stage assessments applicable to Part B of the Scheme indicate that no significant adverse effects are predicted to occur. The assessment presented within the Addendum confirms this conclusion.



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