

**WRITTEN REPRESENTATION**

**HIGHWAYS ENGLAND'S RESPONSE**

1. *Would you please explain why the requested acoustic barrier protection around the M4's complete curvature of The Myrke is not indicated on Highway Agency's "Enhanced Noise Mitigation" details!! The existing noise protection fence at the northern end of The Myrke has proved totally ineffectual as a general barrier against motorway noise at The Myrke and experience shows that the road surface treatments proposed will have limited effective life as wear and tear takes place.*

Highways England Comment

- 1.1 The enhanced noise mitigation study was based on a robust quantitative assessment (the methodology for which was agreed with the Highways England principal noise adviser). As described in the Enhanced Noise Mitigation Study Report, an updated version of which has been submitted at Deadline VII (Ref 514451-MUH-00-ZZ-RP-EN-400158), this assessment is a three step process comprising i) calculation of the perceptible noise reductions achieved through enhanced mitigation, ii) a cost/benefit analysis (in terms of health benefits related to noise reductions against mitigation costs), and iii) professional judgement where the combination of i) and ii) does not provide an obvious conclusion.
- 1.2 The Myrke was included in the enhanced noise mitigation study (reference EM26), and was treated in exactly the same manner as all other areas in the study. The outcome was that the existing timber close boarded fence would be replaced with a new high performance 2.5 metre high noise barrier. The new length of barrier is 245 metres (as shown on Sheet 12 of Drawing 2 in Appendix E of the Enhanced Mitigation Study), which extends the barrier 95m round the curvature of the M4 to the west of the Myrke. This 245 metres is in comparison to the 150 metres of new fencing that was previously specified in the Environmental Statement (Application Document Reference 6-1, APP-152).
- 1.3 In regards to the low noise surfacing, all road surface types degrade over time, with consequent increases in tyre/road noise. However, research has indicated that new low noise surfaces provide, on average, between 4 and 6 dB(A) benefit over tested hot road asphalt ("HRA") surfaces. In spite of the better acoustic durability of the HRA surfaces, the research concluded that low noise surfaces still outperformed the HRA surfaces by 1 to 3 dB(A) after 10 years. The -3.5 dB correction for a low noise surface, as prescribed in DMRB, is a reasonable average over the life of the surface for calculation and assessment purposes.
- 1.4 Like any surfacing, the life expectancy of low noise surfacing is determined by the specific constituents, quality of construction, amount of traffic and environmental conditions. The pavement is regularly monitored following installation and will be maintained to a high standard, to avoid wear and tear as far as possible. Maintenance of the low noise surface for 15 years is secured pursuant to requirement 5 in the draft Development Consent Order.