Transport Infrastructure Ireland

Noise and Vibration Assessment of Proposed National Roads – Standard Document

Stephen Byrne 4 March 2026

Agenda

Noise and Vibration Assessment of Proposed National Roads – Standard Document

1. **Background – Challenges to be addressed**

2. **Overview of Standard Development (Work Phase A and Work Phase B)**

3. **Programme and next steps**

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Background

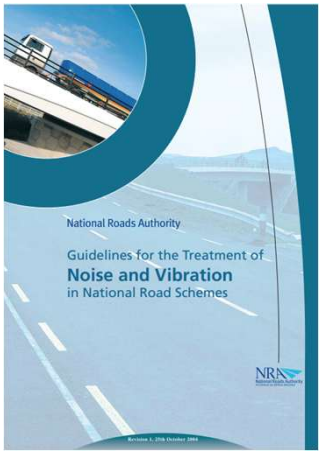
Challenges to be addressed

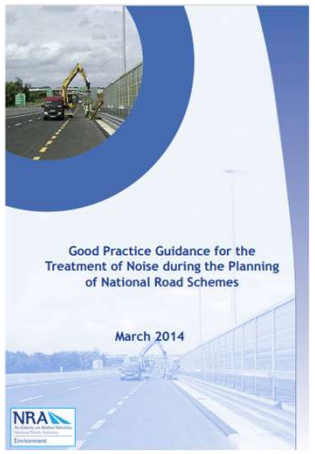
Background

Noise and Vibration Assessment of Proposed National Roads – Standard Document

Guidelines for the Treatment of Noise and Vibration in National Road Schemes 2004

- Design Goal of 60dB L_{den} for new national roads projects to ensure that the roads programme proceeded on a path of sustainable development
- Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes
- Design Goal did not take into consideration the existing receiving environment and varying sensitivities of different receptors





Background

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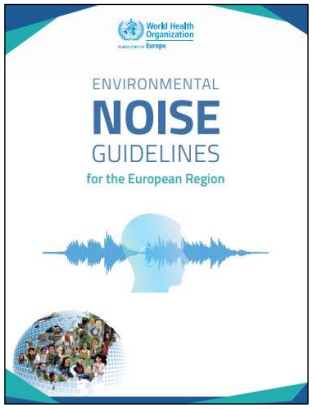

Developments at European level

- Environmental Noise Guidelines for the European Region – World Health Organisation [WHO ENG]
- Pathway to a Healthy Planet for All EU Action Plan: Towards Zero Pollution for Air, Water and Soil – European Commission
- CNOSSOS-EU noise prediction methodology
- Standard to consider the implications for TII of developments and inform an assessment methodology to ensure the sustainability of developing national roads

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Overview of Standard Development

Overview of Standard Development

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- TII 2021 Open Research Call: Assessment of Noise Impacts from National Roads Projects considering the World Health Organization Environmental Noise Guidelines for the European Region

- Project Partners: University of Galway, University College Dublin, RPS (Tetra Tech), Austrian Institute of Technology

- TII Project Manager: Stephen Byrne / Mark Evans
- Contract Signed: September 2022
- TII Publications: Planning and Evaluation (PE) Environment (Env)

Overview of Standard Development

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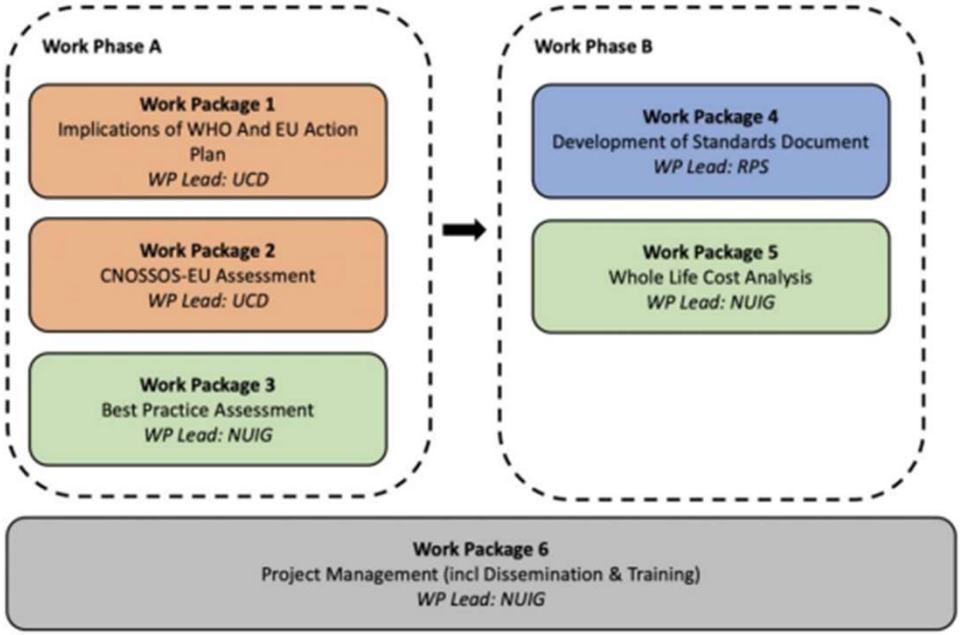
Work Phase A - Complete

- International Benchmarking: Best international practice for noise and vibration impact assessment
- Consideration of the implications of the 2018 WHO Noise Guidelines, as well as the EU's Pathway to a Healthy Planet
- Compared two noise calculation methods:
  - UK's Calculation of Road Traffic Noise (CRTN) and the European CNOSSOS-EU method
- Conducted a review of the costs of noise mitigation measures, along with an assessment of the socioeconomic costs of road traffic noise in Ireland
- Current Design Goals were assessed, and recommendations for updates developed



Overview of Standard Development

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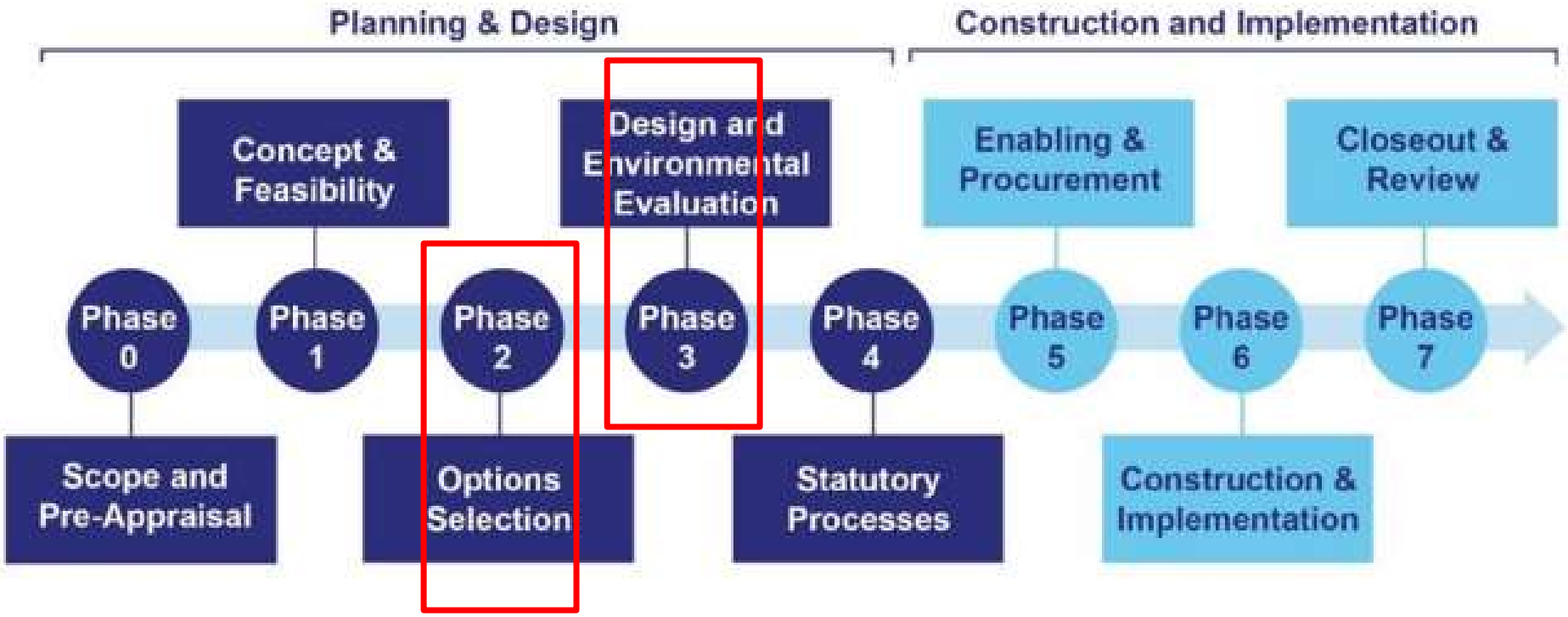
Work Phase B (ongoing)



Overview of Standard Development

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Work Phase B (ongoing)

Phase 2 **Options Selection**

- Zone of Influence
- Potential Impact Rating (PIR)
- Noise modelling
- Update, Refine, Report

Phase 3 **Design and Environmental Evaluation**

- Construction Assessment
- Prediction Methodology – CNOSSOS-EU
- Relative Assessment Criteria
- Sensitive Receptors & Contextual Modifiers
- Motorway Service Areas

Programme and Next Steps

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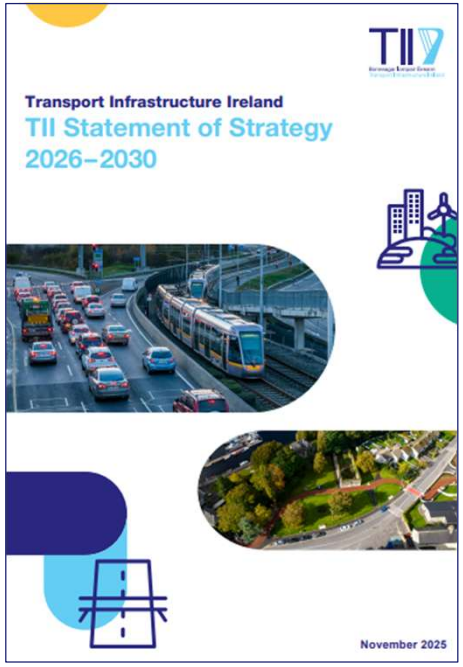
- Further development of Standard Document in Q1 and Q2 with input from TII Capital Programme – Roads and Network Management
- Consultation with Stakeholders
- Finalisation and Publication in Q2 / Q3 2026
- Deliver training roadshows across Ireland in Q4 2026
- Modern, noise standard that aims to protect stakeholders while enabling essential, sustainable national road infrastructure and services
- Contribute to TII achieving its objectives as set out in the TII Statement of Strategy 2026-2030



Thank you

Questions?

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