

LAOIS COUNTY COUNCIL
COMHAIRLE CHONTAE LAOISE



NOISE ACTION PLAN
2014 – 2018

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Table of Contents

DOCUMENT CONTROL	2
1. Introduction	6
1.1 Background.....	6
2 The European Directive and the Irish Regulations.....	6
2.1 Environmental Noise Directive (2002/49/EC)	6
2.2 Environmental Noise Regulations 2006 (S.I. No 140/2006)	7
2.3 National Authority.....	7
2.4 Noise Mapping Bodies.....	8
2.5 The Noise Action Plan.....	8
2.6 Action Planning Authority for County Laois	8
3 Existing Noise Management Legislation and Guidance.....	9
3.1 Environmental Protection Agency Act 1992	9
3.2 Planning.....	9
3.2.1 Laois County Development Plan and Local Area Plans	10
3.3 IPPC Licensing	11
3.4 Wind Energy Planning Guidelines.....	11
3.5 Quarries and Ancillary Activities.....	12
3.6 Building Regulations	12
4 Description of the Action Planning Area.....	12
4.1 Action Planning Area and Major generators of Environmental Noise	12
4.2 Description of the population within the study area	13
4.3 Noise Sensitive Premises.....	13
5 Strategic Noise Mapping with a Summary of the Results.....	14
5.1 Overview of the preparation of the noise map.....	14
5.1.1 Responsible Authorities	14
5.1.2 Noise Mapping Process.....	15
5.1.3 Review of First Round (2007) Noise Maps.....	15
5.1.4 Calculation Methodology.....	16
5.1.5 Data Sources	17
5.1.6 Software and Hardware.....	19
5.1.7 Population Exposure Estimates	19

5.2	Limitations of the Maps and Results	20
5.3	Results of Noise Mapping	20
6	Identification of prospective areas for noise management.....	21
6.1	Noise Onset Levels.....	21
6.2	Quiet Areas in Open Country	22
6.3	Results of Matrix Analysis.....	22
6.4	Confirmation of Extent of Impact.....	25
7	Mitigation and Protection Measures	25
7.2	Mitigation and Abatement Measures	25
7.2.1	Routing traffic on an alternative route	25
7.2.2	Revised Junction Design.....	25
7.2.3	Improved Acoustic Performance of Road Surface	25
7.2.4	Improved Street Maintenance.....	26
7.2.5	Driver Behaviour	26
7.2.6	Mitigate the Receiver of the Sound	26
7.2.7	Sustainable forms of travel	26
7.2.8	Land Use Planning.....	26
7.3	Budgets, cost benefit analysis and mitigation measures	26
8	Implementation Plan	27
8.1	Details of Implementation Plan.....	27
8.2	Benefits accruing from Implementation Plan	27
9	Public Participation	27
9.1	Public Consultation.....	27
9.2	Planning and Development (Strategic Environmental Assessment) Regulations 2004, SI No 436 of 2004.....	29
9.3	Submissions received during Public Consultation	29
9.4	Submission of Summary of Action Plan to Environmental Protection Agency	29
9.5	Publication.....	29
9.6	Review of the Action Plan.....	29
9.7	Freedom of Information and Data Protection.....	29
	Appendix A: Glossary of acoustic and technical terms.....	30
	Appendix B: Bibliography and References.....	31

Appendix C: Strategic Noise Maps 32
Appendix D: Newspaper Notice 33
Appendix E: Submissions received from the Public 34

1. INTRODUCTION

1.1 Background

In 1996, the European Commission published the Green Paper: FUTURE NOISE POLICY. The Green Paper identified environmental noise as a significant environmental problem for many Europeans, particularly in urban areas. It noted that while environmental noise can give rise to health issues, the priority given by Member States to this issue, was generally lower than the priority given to other forms of pollution such as water or air pollution. In addition there was a wide diversity of approaches across the European Union, in addressing the problem.

The Green Paper did not make specific proposals but it set out possible approaches:

- THE INTRODUCTION OF A HARMONISED REGIME ACROSS THE EUROPEAN UNION
- THE USE OF NOISE MAPPING TO MAP NOISE LEVELS
- THE INTRODUCTION OF A SINGLE FORM OF PREDICATION AND MEASUREMENT MODEL
- ENCOURAGING AND FACILITATING PUBLIC PARTICIPATION IN THE PROCESS
- SETTING TARGETS FOR REDUCTIONS IN ENVIRONMENTAL NOISE POLLUTION.

The current European Noise Directive [see section 2.1] had its genesis in this policy debate and is significantly shaped by the 1996 Green Paper.

2 THE EUROPEAN DIRECTIVE AND THE IRISH REGULATIONS

2.1 Environmental Noise Directive (2002/49/EC)

In 2002 the Environmental Noise Directive (2002/49/EC) [referred to as the Directive in this Action Plan and also commonly known by the acronym END] came into force across the European Union. The main objective is set out in Article 1:

THE AIM OF THIS DIRECTIVE SHALL BE TO DEFINE A COMMON APPROACH INTENDED TO AVOID, PREVENT OR REDUCE ON A PRIORITISED BASIS THE HARMFUL EFFECTS, INCLUDING ANNOYANCE, DUE TO EXPOSURE TO ENVIRONMENTAL NOISE.

To achieve this objective the Directive sets out three action stages for assessment and management. These are:

1. UNDERTAKE STRATEGIC NOISE MAPPING TO DETERMINE EXPOSURE TO ENVIRONMENTAL NOISE;
2. ENSURE INFORMATION ON ENVIRONMENTAL NOISE AND ITS EFFECTS IS MADE AVAILABLE TO THE PUBLIC;
3. ADOPT ACTION PLANS, BASED UPON THE NOISE MAPPING RESULTS WITH A VIEW TO PREVENTING AND REDUCING ENVIRONMENTAL NOISE WHERE NECESSARY AND PARTICULARLY WHERE EXPOSURE LEVELS CAN INDUCE HARMFUL EFFECTS ON HUMAN HEALTH, AND TO PRESERVING ENVIRONMENTAL NOISE QUALITY WHERE IT IS GOOD.

Using these tools, the Directive aims to develop EU wide measures to reduce noise emitted by major sources: these include road and rail vehicles and infrastructure, aircraft, outdoor and industrial equipment and mobile machinery.

2.2 Environmental Noise Regulations 2006 (S.I. No 140/2006)

The Environmental Noise Regulations 2006 (S.I. No. 140 of 2006) [referred to as the Regulations, in this Action Plan] give effect in Ireland to the EU Environmental Noise Directive. Environmental noise is defined in section 3 of the Regulations as:

UNWANTED OR HARMFUL OUTDOOR SOUND CREATED BY HUMAN ACTIVITIES, SPECIFICALLY NOISE EMITTED BY MEANS OF TRANSPORT (ROAD, RAIL AND AIR TRAFFIC) AND FROM SITES OF INDUSTRIAL ACTIVITY.

The Regulations are not intended to address all forms of noise. This is set out in section 4(3):

THESE REGULATIONS SHALL NOT APPLY TO NOISE CAUSED BY AN EXPOSED PERSON, NOISE FROM DOMESTIC ACTIVITIES, NOISE CREATED BY NEIGHBOURS, NOISE AT WORK PLACES, NOISE INSIDE MEANS OF TRANSPORT, OR NOISE DUE TO MILITARY ACTIVITIES IN MILITARY AREAS.

The objectives and scope of the Regulations are set out in section 4(1):

(TO) PROVIDE FOR THE IMPLEMENTATION IN IRELAND OF A COMMON APPROACH WITHIN THE EUROPEAN COMMUNITY INTENDED TO AVOID, PREVENT OR REDUCE ON A PRIORITISED BASIS THE HARMFUL EFFECTS, INCLUDING ANNOYANCE, DUE TO THE EXPOSURE TO ENVIRONMENTAL NOISE.

To achieve these objectives, the Regulations set out a two stage approach for the assessment and management of environmental noise. Firstly, the preparation of strategic noise maps for specific urban areas and infrastructure falling within defined criteria: these are large urban agglomerations, major roads, railways and airports. Secondly, using the results of the mapping process, local authorities are required to prepare action plans so as to advance the objectives set out in the Regulations; namely to prevent and reduce environmental noise. This process is outlined in greater detail in the sections that follow.

The Regulations proceed to designate certain powers and responsibilities to specific agencies and bodies. These are set out below.

2.3 National Authority

The Regulations designate the Environmental Protection Agency (EPA) as the national body with authority and responsibility for the implementation of the Regulations. In this role, the EPA provides advice and guidance to the Noise Mapping Bodies and the Action Planning Authorities. [These bodies are defined below]. In addition the EPA is required to advise the European Commission, on Environmental Noise in Ireland, based on the data provided in the Noise Maps and the Noise Action Plans¹.

¹ Section 5(4) Environmental Noise Regulations 2006 [SI No 140 of 2006]

2.4 Noise Mapping Bodies.

Under the Regulations, Noise Mapping Bodies are assigned responsibilities to draw up noise maps for various sources of environmental noise:

- Major roads with more than three million vehicles passages per year: the National Roads Authority is the Noise Mapping Body for National Roads and Motorways; the Local Authority (Laois County Council within the County of Laois) is the Noise Mapping Body for regional or county roads, where the traffic levels are above the benchmark set down in the regulations – three million vehicles passages per year
- Major railways with more than 30,000 train passages per year; Iarnród Éireann (not applicable in County Laois for this round of Action Plans)
- Major Airports with more that 50,000 movements per year; the relevant airport authority (not applicable in County Laois for this round of Action Plans)
- Major Agglomerations or cities; the local authority (not applicable in County Laois for this round of Action Plans)²

It is possible that the thresholds will change over time and that in future Action Plans, or revisions to the current plan, larger areas will come within the process.

[See Section 5 of this Action Plan for a detailed explanation of the Noise Mapping Process]

2.5 The Noise Action Plan

The Noise Action Plan builds on the information and data provided in the Strategic Noise Maps, so as to achieve the goals set out in the Regulations and in turn in the European Directive. The primary functions of the plan are:

- | |
|---|
| <ul style="list-style-type: none">○ ADDRESS THE MOST IMPORTANT AREAS, WHERE EXCEEDANCES OF ANY RELEVANT NOISE LIMIT VALUES HAVE BEEN ESTABLISHED BY THE STRATEGIC NOISE MAPS○ PROVIDE FOR CONSULTATION AND THE ACTIVE PARTICIPATION OF THE PUBLIC IN THE PROCESS³ |
|---|

The Action Plan does not cover the whole of County Laois; in fact it covers just a small part of it – the parts that are subject to the Strategic Noise Mapping, (further described in sections 4 and 5 below).

2.6 Action Planning Authority for County Laois

The Local Authority is designated in the Regulations as the Action Planning Authority, with responsibility for making and approving Noise Action Plans⁴. In County Laois, Laois County Council is the Action Planning Authority for the county. As discussed in the previous section and set out in section 11(1) of the Regulations, this action plan applies only to “places near a major road”. The extent of these areas is indicated on the maps in Appendix C.

² Section 6, Environmental Noise Regulation 2006; SI No 140 of 2006.

³ Section 11 Environmental Noise Regulation 2006; SI No 140 of 2006.

⁴ Section 7 Environmental Noise Regulation 2006; SI No 140 of 2006.

The address of the authority is:

Laois County Council
Áras an Chontae
Portlaoise
Co. Laois

Any communication in relation to the Noise Action Plan should be addressed to:

Director of Services
Infrastructure and Emergency Services
Laois County Council
Áras an Chontae
Portlaoise
Telephone: 057 8664000
Fax: 057 8622313
Email: noiseplan@laoiscoco.ie

3 Existing Noise Management Legislation and Guidance

The Environmental Noise Regulations and in turn the Directive address specific sources of noise; there is significant other legislation, regulation and guidance on other sources and aspects of noise. A brief outline of some of the salient provisions of existing noise management legislation and guidance is set out below.

3.1 Environmental Protection Agency Act 1992

The existing statutory provisions have primarily come about on foot of the Environmental Protection Agency Act of 1992. There are specific powers under sections 106 to 108 of the Act and these can be summarised as follows:

- Section 106 gives the relevant Minister certain powers to regulate noise that may give rise to a nuisance or be harmful to health or property;
- Section 107 gives powers to local authorities and the EPA to serve notice to take steps to control noise;
- Section 108 sets out a process whereby noise issues may be taken to the District Court, which may make an order requiring that the person or body responsible for the noise takes steps to eliminate or ameliorate the noise in question.

Laois County Council is committed to using the provisions of the Environmental Protection Agency Act 1992 Act, to limit and control noise, where there are reasonable grounds for concern that it will cause annoyance to members of the public.

3.2 Planning

Whilst Local Authorities have it within their powers to set conditions relating to noise as part of a planning permission, there is currently no national policy or guidance which addresses the issue of noise during planning.

The National Roads Authority has published the document “*Guidelines for the Treatment of Noise and Vibration in National Road Schemes*”, which sets out the procedure to be followed in respect of “the planning and design of national road schemes”.

The Department of the Environment, Heritage and Local Government (DEHLG) has published the following documents relating to sustainable development in the urban environment:

- Sustainable Urban Housing: Design Standards for New Apartments (Guidelines for Planning Authorities), September 2007;
- Sustainable Residential Development in Urban Areas: Consultation draft guidelines for Planning Authorities, February 2008; and
- Urban Design Manual: A best practice guide (A companion document to the Draft Planning Guidelines on Sustainable Residential Development in Urban Areas) Feb 2008.

The document dealing with Design Standards for New Apartments calls for “*attention at the design and construction stages to prevent undue noise transmission between units*”. There is no specific reference to appropriate design goals or the methodology to be employed, other than reference to Part E of the Building Regulations (see Section 3.6 below).

The guidelines for Sustainable Residential Development highlight the need to “*Deliver a quality of life which residents and visitors are entitled to expect, in terms of amenity, safety and convenience*”. They go on to state that “*Privacy is an important element of residential amenity*”. Whilst they are not mentioned specifically, environmental noise and noise transfer between dwellings are both key considerations in respect of amenity and privacy.

The Urban Design Manual lists Privacy & Amenity as one of twelve key issues, with specific reference to the need to prevent sound transmission in homes by way of appropriate acoustic insulation or layout. There is some comment in relation to the use of appropriate building materials and also the zoning of dwellings to minimize the potential for excessive noise transfer.

There is no local Environmental Noise Level currently in place in this Action Plan Area. In the absence of national guidance, no specific levels are being proposed in this Action Plan.

3.2.1 Laois County Development Plan and Local Area Plans

Noise is addressed in the current Laois County Development Plan:

*The protection of noise sensitive land uses such as residential uses are important in order to foster a good quality of life. Noise associated with construction works is considered to be temporary in nature and therefore is generally not a material consideration. However the Council will strive to shape development throughout the County to minimise the harmful effects of noise pollution on the community of County Laois.*⁵

To achieve this, the Development Plan sets down two policy objectives:

ENV 12 / P17 Require an assessment of impact of the developments on noise levels;
ENV 12 / P18 Restrict development proposals causing noise pollution in excess of best practice standards.⁶

⁵ Section 12.8. Laois County Development Plan 2011-2017

⁶ Section 12.8. Laois County Development Plan 2011-2017

The Development Plan can exert a significant influence on the exposure to environmental noise. As indicated in the EPA Guidance, there are two main scenarios where development can materially influence exposure to environmental noise. These primarily are:

- Bringing people to noise:
 - New housing, health care or educational developments near to existing road or rail infrastructure,
- Bringing noise to people:
 - New, realigned or redesigned roads or railways which increase the level of environmental noise, in the vicinity of noise sensitive locations.

Currently there are no specific limits for environmental noise, imposed by the Directive at a Europe wide level, or statutory limits, set down in the Regulations, or indeed Area Limits proposed in this Action Plan for this Action Planning Area. However, until specific planning guidance on environmental noise is indicated at a national level, it is proposed that the planning policy guidance notes issued by the Department of Environment in England⁷ and The Scottish Office⁸ will be taken into consideration, by the Planning Authority for this Action Planning Area.

The Council is committed to consider this Noise Action Plan in any future review of the County Development Plan, or Local Area Plans. Furthermore, the Council will seek to incorporate the principals, aims and objectives of this Action Plan in all future County Development Plans and Local Area Plans and specifically the aim of the Directive: to prevent or reduce the harmful effects due to exposure to environmental noise. As part of this process, it is proposed that planned developments within the Noise Mapping Area will be critically reviewed with respect to the noise band level; the noise sensitivity of the development; appropriate mitigation measures such as building and window orientation; and façade insulation measures.

In the Local Area Plans, extensive areas have been zoned “Enterprise and Employment”. Within these areas, and where the areas are adjacent to residential developments, due cognisance has been taken of the need for a noise regime that is appropriate to the specific location.

3.3 IPPC Licensing

Certain activities that are required to be licensed may be subject to noise conditions. The relevant guidance is set out in the EPA publication “*Guidance Note for Noise in Relation to Scheduled Activities*”. This document contains suggested noise limits of 55 dB(A) $L_{Ar,T}$ for daytime and 45dB(A) $L_{Aeq,T}$ for night-time; with said limits to be applied to “*sensitive locations*”. Whilst these limits have a very specific application, they have appeared in many different contexts and often form the basis for conditions in planning permissions.

3.4 Wind Energy Planning Guidelines

With specific regard to wind energy developments, the DEHLG Wind Energy Planning Guidelines suggests a “*lower fixed limit of 45dB(A) or a maximum increase of 5dB(A) above background noise at nearby noise sensitive locations*”. Section 5.3 of the Guidelines further suggests that the latter requirement may be relaxed in areas with low background levels. A fixed limit of 43dB(A) at night-time is deemed appropriate in Section 5.3 of the Guidelines.

⁷ DoE England, Planning Policy Guidance Note PPG24: Planning and Noise (Sept 1994)

⁸ The Scottish Office, Planning Advice Note PAN 56: Planning and Noise (April 1999)

Submissions received during the period of Public Consultation on the Draft of this Action Plan challenged the efficacy of the limits proposed in the DEHLG Wind Energy Planning Guidelines.

3.5 Quarries and Ancillary Activities

This publication contains a discussion on the primary sources of noise associated with quarrying and offers guidance in relation to the correct approach to be followed in respect of assessment and mitigation. Suggested noise limit values are 55dB $L_{Aeq,1hr}$ and 45dB $L_{Aeq,15min}$ for daytime and night time respectively, although more onerous values may be appropriate in areas with low levels of pre-existing background noise. In respect of blasting, reference is made to EPA guidance to the effect that *“blasting should not give rise to air overpressure values at the nearest occupied dwelling in excess of 125dB(Lin) max. peak with a 95% confidence limit”*.

3.6 Building Regulations

The current Irish Building Regulations call for certain constructions to offer “reasonable resistance” to both airborne and impact sound. In the absence of any form of objective criterion, reference is often made to the guidance values put forward in the “Similar Construction” method described in Technical Guidance Document E.

For buildings constructed in the vicinity of noise sources it is appropriate for specific façade noise insulation values, based upon a target internal noise level, to be a stated requirement of the construction, potentially with a pre-completion sound insulation test required, prior to habitation. This would ensure that the design targets of the construction are actually met.

4 DESCRIPTION OF THE ACTION PLANNING AREA

4.1 Action Planning Area and Major generators of Environmental Noise

County Laois is an inland county with an area of 1,720 square kilometres and a population of 80,560 (2011 census). The area for which Noise Mapping was conducted is 190 square kilometres – a 1200 metre band along the Motorways, National Roads and Regional Roads which exceed the threshold set down in the Regulations: a Major Road with more than 8,000 vehicles per day, or thereabouts. The total length of roads that meets this criterion in County Laois is approximately 100 kilometres. It is made up of the following sections of Major Road:

- THE ENTIRE LENGTH OF THE M7 AND M8 MOTORWAYS [66 KILOMETRES; ANNUAL AVERAGE DAILY TRAFFIC FIGURES (AADTs) FOR VARIOUS SEGMENTS VARIED BETWEEN 14,400 AND 21,400 VEH/DAY FOR M7, BETWEEN 10,200 AND 13,300 VEH/DAY FOR M8]
- A SEGMENT OF THE N77 WITHIN THE TOWN OF PORTLAOISE [2 KILOMETRES; AADT 10,500 VEH/DAY]
- A SEGMENT OF THE N80 BETWEEN MOUNTMELICK AND STRADBALLY, INCLUDING THE TOWN OF PORTLAOISE [21 KILOMETRES; AADT FOR VARIOUS SEGMENTS VARIED BETWEEN 8,400 AND 13,000 VEH/DAY]
- A SEGMENT OF THE N80 BETWEEN BALLICKMOYLER AND THE COUNTY BOUNDARY AT GRAIGUECULLEN [7.5 KILOMETRES; AADT LESS THAN 6,000 VEH/DAY, MAPPED BECAUSE OF SUPER-THRESHOLD LEVELS IN CARLOW SEGMENTS OF THE N80]
- A SEGMENT OF THE R445 WITHIN PORTLAOISE [3 KILOMETRES; AADT 15,000 VEH/DAY]

These can be further broken down between urban and rural roads:

- 12% OF THE SEGMENTS ARE WITHIN URBAN AREAS WITH SPEED LIMITS OF 50 OR 60 KILOMETRES PER HOUR.
- 88% IS IN RURAL AREAS WITH SPEED LIMITS OF 100 AND 120 KILOMETRES PER HOUR.

As County Laois does not have an airport, a major railway or a major urban agglomeration, only environmental noise from roads is the subject of this current Action Plan.

4.2 Description of the population within the study area

Laois is an inland County in the south midlands of Ireland covering an area of 171,990 hectares, which equates to 2.4% of the national landmass. Occupying a strategic position near the centre of the country, County Laois is land locked and shares borders with five adjoining counties Carlow, Kildare, Kilkenny, Offaly and Tipperary. Administratively, it is part of the four County Midland Region along with Counties Offaly, Westmeath and Longford. In terms of travel patterns Laois is under the influence of the Greater Dublin Area (GDA). At its nearest, County Laois is approx 70 km from the Dublin metropolitan area. This relative proximity to the capital has had a major effect on both the nature and extent of development and the associated traffic movements, particularly in the northern and eastern parts of the County. The travel time between Laois and Dublin continues to decrease as a consequence of improved road and rail infrastructure between the two places. In physical terms, the landmass of County Laois consists of a central plain containing most of the productive agricultural land, surrounded by a number of upland areas including the Slieve Bloom Mountains in the northwest, Killeeshin Plateau in the South East and Cullahill Mountain in the south. Though not as extensive as in Counties Offaly and Kildare, there are significant cutaway peatlands in the County mainly situated between Portlaoise, Mountrath and Abbeyleix.⁹

The study area of this Action Plan – the 1200 wide corridor along the major roads with in excess of some 8000 vehicles per day – can be broken down as set out in 3.1 above. These are:

- 12% OF THE SEGMENTS ARE WITHIN URBAN AREAS WITH SPEED LIMITS OF 50 OR 60 KILOMETRES PER HOUR.
- 88% IS IN RURAL AREAS WITH SPEED LIMITS OF 100 AND 120 KILOMETRES PER HOUR.

The Strategic Noise Maps [see section 5.2] indicate that the following population are above the onset levels [see section 6.2] – that is the level indicated by the EPA at which consideration should be given to assessment of noise mitigation measures:

- In excess of 70dB, L_{den} [an estimated 180 people in this Action Plan]
- In excess of 57dB, L_{night} [an estimated 812 people in this Action Plan]

4.3 Noise Sensitive Premises

This Action Plan follows the practice set down in the EPA Guidance and accordingly, hospitals, schools and housing are designated as noise sensitive premises.

⁹ 2.1 Laois County Development Plan 2011 – 2017

5 STRATEGIC NOISE MAPPING WITH A SUMMARY OF THE RESULTS

5.1 Overview of the preparation of the noise map

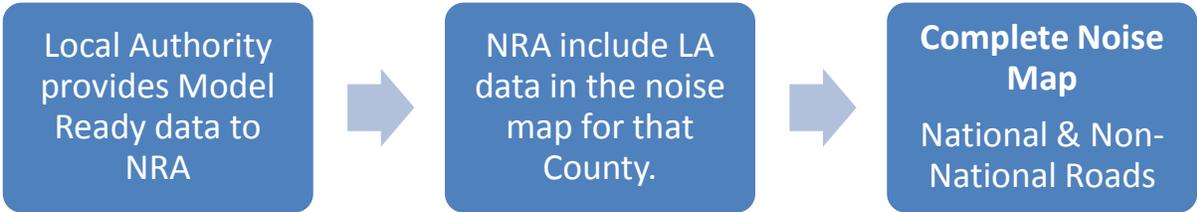
This section outlines the process involved in the development of the noise map, including the data sources, calculation methodology and authorities responsible.

5.1.1. Responsible Authorities

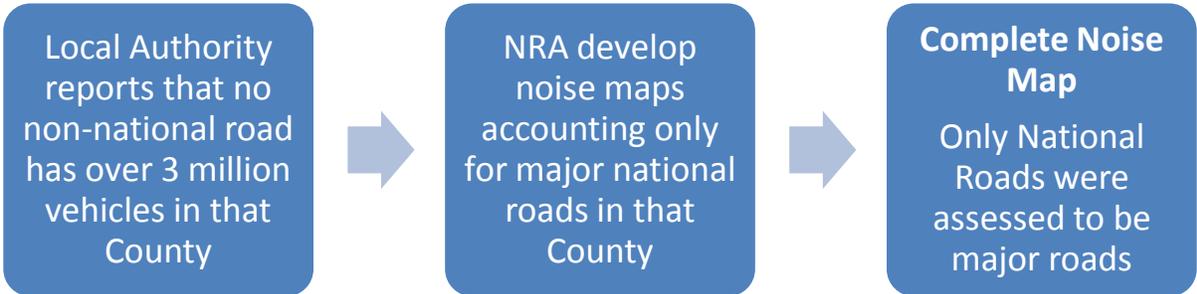
The Environmental Noise Regulations require the NRA to develop noise maps for every major road classified as a national road while the responsibility of mapping non-national roads rests with the relevant Local Authority within whose functional area the road lies.

In January 2012, a centralised approach to the noise mapping of major roads outside agglomerations was adopted. Through this centralised approach, one central body, the NRA, developed strategic noise maps for all major roads outside agglomerations, encompassing both national and non-national roads. Non-national roads were mapped by the NRA on the behalf of the relevant Local Authority provided that authority participated in the centralised approach and provided ‘model-ready’ data to the central body for calculations.

All Local Authorities with major roads within their jurisdiction participated in this centralised approach.



CASE 1: Non-national roads are deemed to be a major road when carrying in excess of 3 million vehicles per year



CASE 2: No non-national road deemed to be a major road.

5.1.2. Noise Mapping Process

Figure 1 displays the overview of the noise mapping process as presented in the EPA’s Guidance Note for Strategic Noise mapping¹⁰. There are three main phases to the process:

- 1) Preparation of datasets in the GIS Environment;
- 2) Noise calculations; and
- 3) Post Processing and Analysis.

Phase 1 was conducted separately for national and non-national roads while Phase 2 and Phase 3 merged datasets from national and non-national roads to form one complete model.

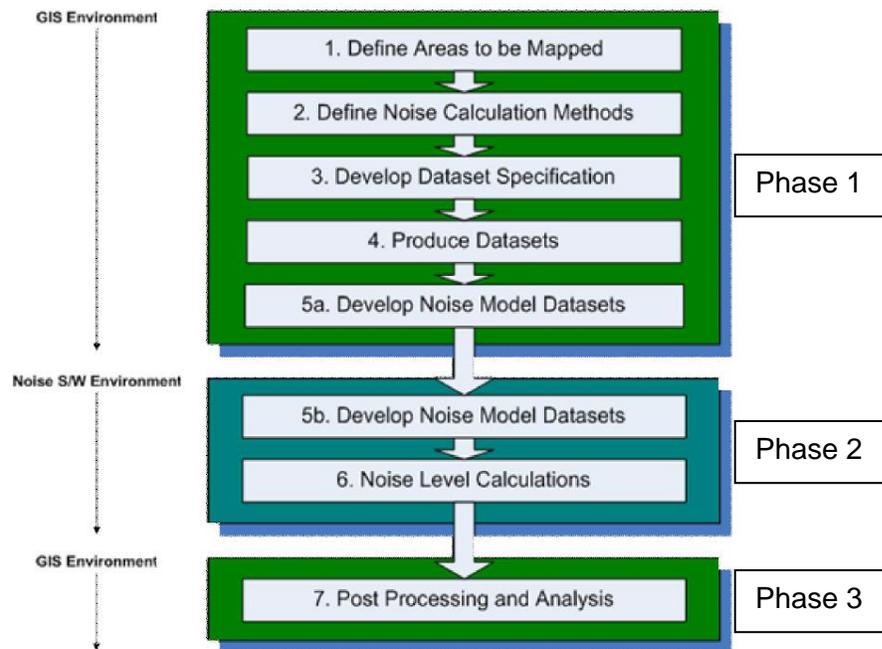


Figure 1: Overview of the noise mapping process

Population exposure assessments were then performed on a County by County basis.

5.1.3. Review of First Round (2007) Noise Maps

The EPA Guidance Note for Strategic Noise Mapping notes:

The Regulations introduce a continuing obligation on noise mapping bodies to review and, where necessary, revise each strategic noise map every 5 years, or sooner, as requested by the EPA, or when a material change in environmental noise in the area concerned, triggers a revision of the relevant noise action plan. The EPA “Guidance Note for Noise Action Planning”, July 2009, suggests that a noise action plan should be revised due to a material change if “it is known, or thought likely, that greater than 10% of the exposed population within the area of an action plan have experienced a change in the prevailing noise situation of greater than 3dB L_{den} or L_{night}”.

¹⁰ EPA Guidance Note for Strategic Noise Mapping (Version 2)

Therefore, Noise Mapping Bodies who undertook strategic noise mapping for the first round in 2007 have an obligation to undertake a review of the strategic noise maps and, where necessary, revise them. For the basis of this review of Round 1 strategic noise maps ahead of Round 2, the Noise Mapping Bodies should consider that a revision of the strategic noise maps is required if it is known, or thought likely, that greater than 10% of the exposed population within the area of an action plan have experienced a change in the prevailing noise situation of greater than 3dB(A) L_{den} or L_{night} .

Under the requirements of the second round of the Directive (2012), the flow thresholds for major roads have been reduced in comparison to the first round (2007), i.e. for the first round all roads with an AADT in excess of approximately 16,000 vehicles had to be mapped; for the second phase this threshold was reduced to approximately 8,000 vehicles. This has resulted in a requirement to undertake strategic noise mapping for sections or roads and railways which were not included within the first round in 2007.

For the second phase, and irrespective of the approach to the first phase, the Regulations designate the Local Authorities as the Noise Mapping Bodies for non-national major roads, and each Local Authorities has a statutory responsibility to ensure that strategic noise mapping of non-national major roads within their area is undertaken.

Due to the significant change in extents of roads to be mapped for the second phase, the NRA decided the best course of action was to revise all noise maps developed during the first phase, for the second phase of noise mapping.

5.1.4. Calculation Methodology

The second schedule of the Regulations sets out the recommended interim computation methods which may be used for the assessment of noise. The methods are referred to as interim methods as they are to be used until such time as a common method of noise assessment is adopted across Europe. The recommended interim methods of assessment set out in the second schedule of the Regulations contain the four EC Recommended Interim Methods set out in Annex II of the Directive. The Directive also provides for Member States to use either the EC Recommended Interim Methods or methods based upon those laid down in their own legislation. As it is common practise for environmental impact assessments to be undertaken in Ireland for roads and railways using the UK national calculation methods, the second schedule of the Regulations also sets out the UK methods CRTN and CRN.

The UK national computation method 'Calculation of Road Traffic Noise' (CRTN) adapted for use under the Regulations is described within the following documents:

- Department of Transport publication, 'Calculation of Road Traffic Noise', HMSO, 1988
- Converting the UK Traffic Noise Index L10,18h to EU Noise Indices for Noise Mapping, TRL Project report PR/SE/451/02, 2002; and
- Defra, Method for Converting the UK Road Traffic Noise Index LA10,18h to the EU Noise Indices for Road Noise Mapping, st/05/91/AGG04442, 24th January 2006.

In their Guidance Note for Strategic Noise Mapping the EPA recommended that the UK CRTN methodology be used for the assessment of road traffic noise levels, for the second round of strategic noise mapping. It notes that the method should be used with particular reference to the following:

- The NANR 93 project report;

- DMRB Volume 11 Section 3 Part 7 HD 213/11 Annex 4,
- Additional advice to CRTN procedures;
- TRL Project report PR/SE/451/02, Converting the UK Traffic Noise Index $L_{10,18h}$ to EU Noise Indices for Noise Mapping, 2002; using traffic count information, particularly for the night period, wherever practicable.

Thus CRTN, taking cognisance of the supplemental reports identified above, was used for all noise mapping calculations

5.1.5. Data Sources

In order to develop strategic noise maps the following data sources were utilised.

NRA Traffic Model

The NRA maintains a National Transport Model to support transport investment decisions, and facilitate good forecasts of traffic volumes on the road network for different future years, and economic conditions. The National Transport Model provides a comprehensive representation of base demand on the transport network, in addition to a series of future year transport forecasts. The Traffic Model was used to determine traffic quantities and composition.

Aerial LiDAR

In 2009, the NRA published a notice for tender for an aerial LiDAR survey of approximately 3,019km of the Irish national road network. The survey corridor was 1,200m in width. The survey was completed in early 2011 and outputs included 1 metre contours for the entire survey area, building height information for buildings within the survey corridor and a digital terrain model (Figure 2).



Figure 2: Sample Point Cloud from Aerial LiDAR Survey

GPS survey

Laois County Council staff used a GPS rover unit to sample ground levels throughout 500m zones on both sides of the major non-national roads in Portlaoise—the R445 and the R922 (now redesignated as National Secondary Road N77)—and falling outside of the LiDAR corridors surveyed for the NRA. (The 500m distance limit from each road was used for the sampling rather than the 1000m distance, because prior noise mapping had shown that the extent of significant noise propagation, within the developed urban environment and lower speed limit of Portlaoise, did not exceed 300m.) A digital terrain model was constructed from those survey results and ground contours were extracted from it, to be passed on to the NRA as inputs for the noise mapping model. In conjunction with Ordnance Survey of Ireland vector mapping heights were estimated, for the buildings closest to the major roads in question and provided as model input data as well.

GeoDirectory

The GeoDirectory data products are developed by OSi and An Post to provide a single point location object for each building in Ireland. The GeoDirectory dataset provides the definitive address database for the country and is an essential component in calculating the population exposed to the various noise bands – information that is required to be submitted to the EU as part of this work.

Corine Database

The European Environment Agency's (EEA) CORINE Land Cover 2000 dataset is a European-wide vector land parcel product derived from satellite imagery R2V processing. The CORINE dataset was developed in the framework of the CORINE programme to establish a computerised inventory on land cover. The dataset was used for making environmental policy as well as for other matters such as regional development and agriculture policies. For noise calculation, the dataset can be used to provide information on the land cover distribution.

Ordnance Survey of Ireland (OSI)

OSI maintain a wide range of mapping products that are available for use within strategic noise mapping. Some datasets required additional licensing. Some datasets included for analysis are:

- OSI Large Scale vector mapping:
 - 1:1,000 scale in urban areas;
 - 1:2,500 in suburban areas; and
 - 1:5,000 in rural areas.
- OSI Boundaries:
 - County, ED and Townlands boundaries.
 - OSI High Resolution Ortho Photography:

Central Statistics Office (CSO)

The CSO publish statistical information on population based upon Census returns. The most recent Census was held on 10 April 2011, and some of this information is now publicly available. The information available on population is issued according to various political boundaries, namely Province or County or City, Regional Authority, Constituency or Electoral Division.

Roads Database

The NRA's Roads Database is a GIS repository that contains much of the data required to successfully undertake this noise modelling project. The Roads Database contains information on carriageway types, road widths, noise barriers, surface types, texture depths and speed limits. These datasets are relevant and were used in developing noise models along with any supplementary data available.

As-Built Drawings

When new roads or road upgrades are complete, the Contractor is required to submit as-built documentation, including as-built drawings, to the NRA. These drawings indicate the position, type and height of noise barriers along the road scheme.

5.1.6. Software and Hardware

All datasets were prepared and collated in a GIS Environment prior to importing them to the noise mapping programme. All attributes were consistent through the datasets thus ensuring an efficient export.

Details of the noise mapping system are presented in Tables 1 - 3.

Modelling Hardware
Microsoft Windows Server 2003 R2
Standard x64 Edition
Intel Xeon CPU, X550 @2.67GHz with 15.9 GB of RAM

Table 1: Hardware Specifications

Modelling Software
Predictor V8.11
Predictor Calculation Client V8.10
Predictor Analyst V3.22

Table 2: Software Specifications

Calculation Settings
Fetching Radius 1,500m
Standard Tile Size 10km x 10km
Standard Tile Buffer 2,000m

Table 3: Calculation Settings

5.1.7. Population Exposure Estimates

Annex VI of the END requires that the estimated number of people living in dwellings exposed to various noise levels on the most exposed façade. In order to derive these results the following datasets were used

- population data from the CSO
- address data from the geo-directory

- façade points output by the noise model (describing the noise level at the facade of every building),
- building polygons, used by the noise model

The population data used was from Census 2011 and it uses the ‘*small areas*’ geographies which are areas of between 50 and 200 dwellings, downloaded from the CSO website, as well as ED’s, and Administrative counties. The address data used was Geo-Directory from quarter 2 2011 (Q2 2011). Façade points were the outputs of noise modelling. For the noise mapping 2012 project, a noise model was created within a 2km buffer on each road. By analysing all these datasets together it was possible to estimate the average number of people for each residence in the test area (the small area) and assign a noise level to that building. These estimates were collated to derive an overall exposure level for the County.

5.2 Limitations of the Maps and Results

As set out above, the noise model results presented on the noise maps are computer generated approximations of the contribution of road traffic noise, to the total environmental noise. They predict the noise level that would be experienced at the height of a first-floor window of a multi-storey building. The accuracy of the prediction at a given location depends on the accuracy of input parameters to the mapping software program. Differences between actual and assumed (often default) values for vehicle speeds, road surface characteristics, heights of structures between the source (road) and the receptor location, etc. will influence the accuracy of the output. Actual noise levels could significantly differ from the predicted value. Additionally, the noise mapping cannot indicate whether particular dwellings are already equipped with noise abating features or whether bedrooms might be located on the side of the building furthest from the noise source.

The Noise Mapping can be considered as a screening tool, designed to identify locations where the environmental noise resulting from traffic movements, may be elevated and potentially harmful or annoying; further investigation such as actual noise measurements at those locations can follow on from the screening where deemed appropriate.

5.3 Results of Noise Mapping

Noise Maps generated for Major Roads within County Laois are presented in Appendix C. The maps are organized in 5db(A) counter bands for two noise indicators:

L_{den} (dB)(A)
 L_{night} (dB)(A)

L_{den} (dB)(A), the day-evening-night indicator is the average value of the 12 hour day time period; plus the average value of the 4 hour evening period with an added 5 dB weighting or penalty; plus the average value for the 8 hour night time period with an added 10 dB weighting or penalty. .

L_{night} (dB)(A) the night indicator is the average value for the night time period (23.00 to 7.00).

Noise level range	Approximate number of people affected	Approximate number of dwellings	Approximate surface area (km ²)
<55.0	18076		120
55.0-59.9	1900	1314	37
60.0-64.9	1461		18
65.0-69.9	897	573	8
70.0-74.9	180		4
≥75.0	0	0	2

Noise Indicator L_{den} dB(A) – 24-hour weighted average within the Noise Mapping area of County Laois (2011)

Noise level range	Approximate number of people affected	Approximate number of dwellings	Approximate surface area (km ²)
<50.0	19574		151
50.0-54.9	1606	1119	22
55.0-59.9	1043		9
60.0-64.9	291	146	4
65.0-69.9	0		3
≥70.0	0	0	0

Noise Indicator L_{night} dB(A) – Night-time (23.00 to 07.00) average within the Noise Mapping area of County Laois (2011)

The Assessment year for Noise Mapping was 2011 and the data reflects the position at that time. While it is expected that there will be some growth in traffic volume during the lifetime of this Action Plan, this growth is projected to be modest, in line with the economic outlook for the region. Consequently the assessment year is considered to be a typical reflection of the life time of the Action Plan.

6 IDENTIFICATION OF PROSPECTIVE AREAS FOR NOISE MANAGEMENT

6.1 Noise Onset Levels

There are no specific limits for environmental noise, imposed by the Directive at a Europe wide level, or statutory limits, set down in the Regulations. Neither are there any local limits set down within this Action Plan area. However, the Environmental Protection Agency, in its role as the National Authority has proposed certain onset levels¹¹, at the upper and lower end of the scale. These levels have been adopted in this Action Plan.

- 70dB, L_{den} and
- 57dB, L_{night}

are the onset levels where it is appropriate to undertake an assessment for the provision of noise mitigation measures.

¹¹ 3.5.1.5 Guidance Note for Noise Action Planning EPA 2009

For areas that currently have low levels of noise:

- 55dB, L_{den} and
- 45dB, L_{night}

are the onset levels where it may be appropriate to consider introducing measures or controls, to preserve the area from any increase in environmental noise, above the existing relatively low level.

6.2 Quiet Areas in Open Country

The Environmental Protection Agency has indicated¹² that it is a requirement to delimit Quiet Areas within urban agglomerations. Areas such as

- Recreation Areas
- Public Parks
- Rivers
- Places of worship
- Hospitals

have been proposed as possible candidates. There are no urban areas in County Laois that fall within the definition of agglomeration.

Outside of urban agglomerations, areas may be designated as Quiet Areas in Open Country. These are defined as:

AN AREA, DELIMITED BY AN ACTION PLANNING AUTHORITY FOLLOWING CONSULTATION WITH THE AGENCY AND APPROVAL BY THE MINISTER, THAT IS UNDISTURBED BY NOISE FROM TRAFFIC, INDUSTRY OR RECREATIONAL ACTIVITY¹³

The Environmental Protection Agency has indicated that the Strategic Noise Maps do not provide a resource that may be extensively used to identify quiet areas in open country. In their Guidance¹⁴ the Agency has indicated that Action Planning Authorities may, at their discretion, consider widening the scope of coverage of the Action Plan, to include Quiet Areas in Open Country which are away from major sources of environmental noise, and delimit such areas for approval. No areas have been delimited under the current revision of this Action Plan. This will be kept under consideration, during any mid-term review or end of period revision, to the Plan.

6.3 Results of Matrix Analysis

As indicated above [section 5.2] the computer generated Strategic Noise Maps have certain inherent limitations, as do all forms of computer modeling. They do however serve as a useful screening tool. And as part of the screening process, this Plan proposes the following Screening Matrix. This tool will be used to identify candidate areas, for on the ground noise monitoring and other forms of possible intervention.

¹² 3.4.1 Guidance Note for Noise Action Planning EPA 2009

¹³ Section 3 Environmental Noise Regulations

¹⁴ 3.4.2 Guidance Note for Noise Action Planning EPA 2009

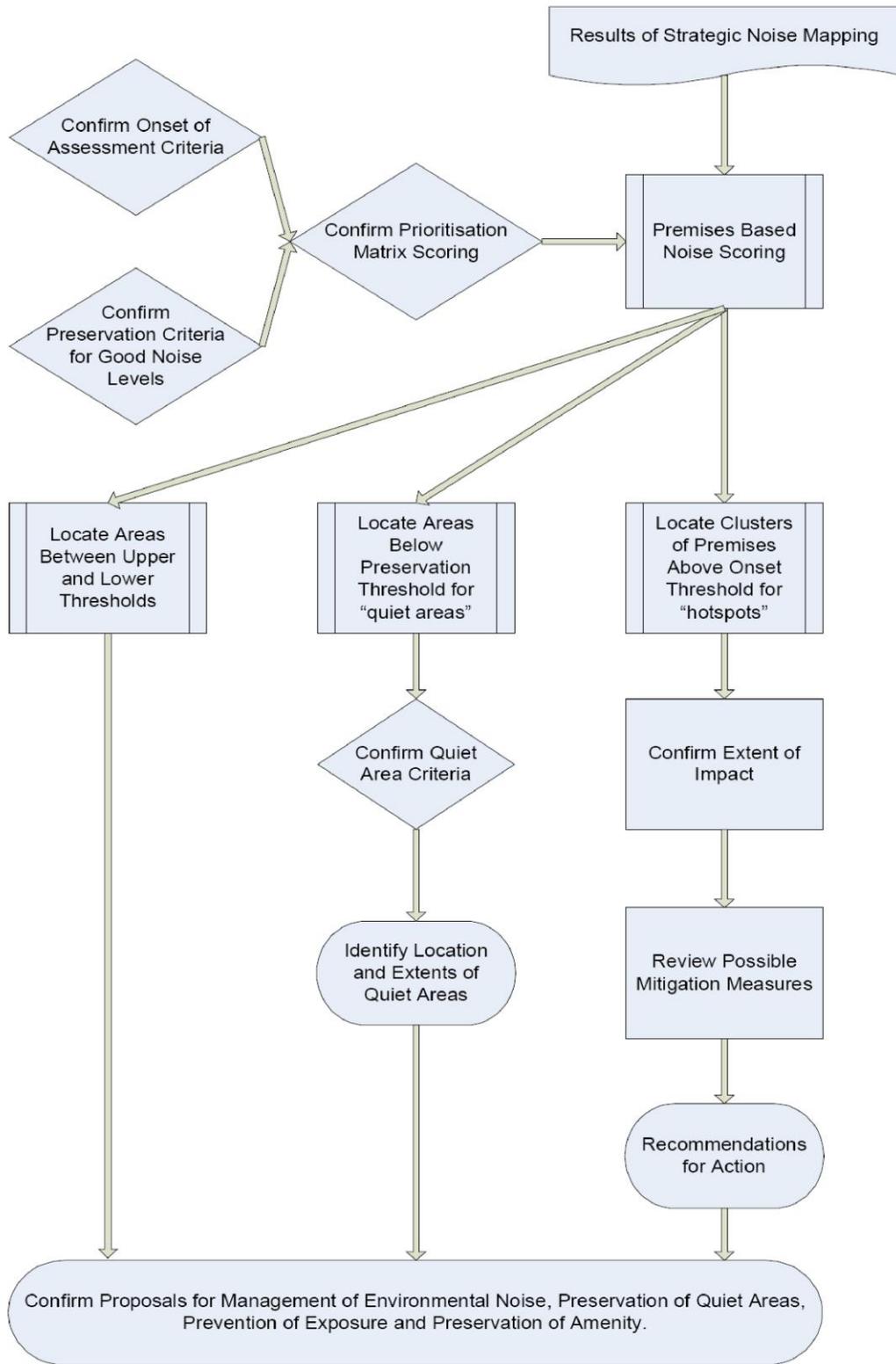
Screening Matrix					
Location:					
Decision Selection Criteria		Score Range L_{den}	Score Range L_{night}	Subtotal	
Noise Band	<45	5	6		
	45.0 – 49.9	4	5		
	50.0 – 54.9	3	4		
	55.0 – 59.9	2	2		
	60.0 – 64.9	1	3		
	65.0 – 69.9	2	4		
	70.0 – 74.9	3	5		
	≥75	4	6		
Type of Location	Town Centre	1	1		
	Residential	2	3		
	School	3	0		
	Hospital	3	3		
	Quiet Area	3	3		
	Recreational Open Space	2	2		
Noise Source	Industry	2	3		
	Road	3	4		
			Total Score		

NOTE: IT SHOULD BE NOTED THAT THE SCREENING MATRIX ALLOCATES A HIGH SCORE TO BOTH RELATIVELY HIGH AND RELATIVELY LOW LEVELS OF ENVIRONMENTAL NOISE. THIS SERVES TO SCREEN OUT BOTH AREAS THAT HAVE RELATIVELY LOW LEVELS OF ENVIRONMENTAL NOISE AND MAY MERIT PROTECTION AND PRESERVATION, AND AREAS THAT HAVE RELATIVELY HIGH LEVELS OF ENVIRONMENTAL NOISE AND MAY WARRANT INTERVENTION OR MITIGATION MEASURES.

Within the Matrix Analysis, each noise sensitive premises is scored under the three headings in the table above:

- Noise Band [allocated a score based on the noise level at the most exposed façade]
- Type of Location [allocated a score based on the location category]
- Noise Source [allocated a score based on the source of the noise, industry or road].

Based on the total score, data from the Matrix will enable specific premises and locations to be prioritised. A matrix assessment of 17 or higher will be considered to indicate that the onset levels may have been exceeded and the location should be included in the shortlist for further review and assessment. From this analysis the extent of the impact and the feasibility of mitigation measures will be reviewed. The decision making flowchart is set out below:



SOURCE: EPA GUIDANCE NOTE FOR NOISE ACTION PLANNING (JULY 2009)

6.4 Confirmation of Extent of Impact

Confirmation of the extent of Impact, as indicated in the Flowchart above, is an integral part of the process. Prioritisation of premises and locations is first undertaken based on the results of the strategic noise mapping. Then this information must be verified to confirm that the noise levels assessed by the strategic noise mapping process are actually confirmed by physical measurement at the specific location. The population exposure at these locations must also be confirmed.

7 MITIGATION AND PROTECTION MEASURES

Following on from the Screening process and the Matrix analysis, a number of measures will be considered, so as to achieve the objective set out in the Regulations: that is to avoid, prevent or reduce the harmful effects caused by environmental noise. These can be broadly set out as:

- MITIGATE THE SOURCE OF THE SOUND
- MITIGATE THE RECEIVER OF THE SOUND
- MITIGATE THE SOUND PATHWAY

In addition Land Use Planning can be reviewed to mitigate future potential areas of concern.

7.2 Mitigation and Abatement Measures

There are a range of possible physical interventions that can be considered. These can be considered under a number of headings:

7.2.1 Routing traffic on an alternative route

The routing of traffic, particularly heavy goods vehicles to an alternative route can significantly reduce exposure to road noise. The Dublin Port tunnel is an example. And while it can prove to be very effective, it invariably involves significant capital investment.

7.2.2 Revised Junction Design

Some forms of junction layout can lead to a reduction in environmental noise. Typically where signalised junctions are replaced by roundabouts or where non signalised junctions are replaced by mini roundabouts, there is a reduction in environmental noise. In some instances the reductions in noise can be quite small and quite clearly an array of other factors, such as traffic and pedestrian safety must be considered.

7.2.3 Improved Acoustic Performance of Road Surface

Changing the specification of the road surface course, from a material such as Hot Rolled Asphalt to a Stone Mastic Asphalt can lead to a reduction in traffic generated road noise. Reductions of between 2dB(A) and 4dB(A) have been noted. Changes such as this can be integrated into a Road Maintenance Programme. It should be noted that the acoustic performance of low noise surfaces is known to deteriorate with age.

7.2.4 Improved Street Maintenance

Repairs to surface irregularities, such as poorly reinstated trenches, bridge joints and other discontinuities in the road surface profile can improve the noise regime. Matters such as these would normally be addressed under regular maintenance programmes.

7.2.5 Driver Behaviour

Modifying driver behaviour and encouraging less aggressive driving patterns, can have a significant impact on the noise generated from roads. Improvements of between 1dB(A) and 5dB(A) have been estimated for cars, and up to 7dB(A) for heavy commercial vehicles. In general these improvements would have associated improvements in environmental pollution and road safety, but it is also possible that some reduction in the capacity of the road may also be recorded. Changes to drivers' behaviour are usually achieved by road signs and/or driver awareness campaigns.

7.2.6 Mitigate the Receiver of the Sound

The sound transmitted to residents in dwellings or office workers in public buildings can be reduced by various forms of insulation: insulation to the façade, insulation in the attic space, double or secondary glazing and acoustic treatment to vents and chimneys. Roadside sound abatement barriers can also be considered under this heading.

7.2.7 Sustainable forms of travel

It is clearly apparent that an increase in more sustainable forms of transport – that is a reduction in journeys by personal car with an associated switch to car pooling, public transport, cycling or walking – automatically leads to a reduction in environmental noise.

7.2.8 Land Use Planning

Land Use Planning is an important tool in controlling exposure to environmental noise. Due cognisance must be taken of the projected level of environmental noise, to which users will be exposed, in any proposed building.

7.3 Budgets, cost benefit analysis and mitigation measures

The literature on mitigation measures for roads arises primarily from densely populated urban agglomerations. It is invariably more difficult to justify large scale or expensive mitigation measures, on a cost benefit analysis, in a rural county, where the settlement patterns are dispersed and low rise. All mitigation measures, proposed under this Action Plan will be the subject of Cost Benefit Analysis.

This Action Plan covers the years 2014 to 2018 and it is required to take due cognisance of the economic horizon for this period. At the inception of the Action Plan, no specific funding, either local, national or European, has been identified for implementation of the Action Plan. Notwithstanding any economic or budgetary constraints, all due effort will be made to achieve implementation of this Plan and the measures identified therein.

8 IMPLEMENTATION PLAN

8.1 Details of Implementation Plan

There are no previous actions arising from the Regulations in this Action Planning Area.

This Action Plan is committed to achieving the objectives underpinning the Regulations:

To manage environmental noise, to avoid, prevent and reduce the harmful effects due to long term exposure to environmental noise, while in turn promoting good health and a good quality of life.¹⁵

It is proposed to implement the Action Plan as set out below:

Year 2014

- Review Strategic Noise Maps to identify priority areas and populations.
- Review County Policy including Sustainable Travel and Planning Policy to ascertain how these documents can more closely reflect the key objectives of the Noise Action Plan.

Year 2015

- Undertake a Matrix Screening analysis of priority areas.
- Undertake a programme of on-street noise monitoring to verify the data provided in the Strategic Noise Maps and the Matrix Screening
- Review the range of available mitigation measures.

Year 2016

- Undertake a feasibility study for possible mitigation measures.
- Undertake a cost benefit analysis for mitigation measures under consideration

Year 2017

- Collate data required for the next round of Strategic Noise Maps.

Year 2018

- Review Noise Action Plan and revise where appropriate.

8.2 Benefits accruing from Implementation Plan

Further assessment, including Matrix Analysis will shape and direct the Implementation Plan. In addition, as indicated at Section 7.3 above, no specific funding has been identified for the implementation of the Plan. Consequently, it is not possible to assess the benefits that will flow from the Plan, until the process is further advanced.

9 PUBLIC PARTICIPATION

9.1 Public Consultation

Both the Directive¹⁶ and the Regulations¹⁷ require that the public be consulted, as part of the Action Planning process. For this Action Plan, the consultation process followed the guidance

¹⁵ Sec 3.3 Environmental Protection Agency: Guidance Note for Noise Action Planning July 2009

¹⁶ Article 8(7) EU Directive 2002/49/EC

¹⁷ Paragraph 11(6) Environmental Noise Regulation 2006; SI No 140 of 2006

provided in the Department of the Taoiseach publication *Reaching Out Guidelines on Consultation for Public Sector Bodies*.

A formal public consultation process will be undertaken on the Draft Noise Action Plan 2014 – 2018, as set out below.

The Draft Noise Action Plan 2014 – 2018 was placed on public display for a six weeks period. During this period and for a further two weeks thereafter, written submissions were accepted from any member of the public who chose to make a submission, on any aspect of the Draft Action Plan. Public access to the Draft Noise Action Plan was available to the public at the following locations:

Laois County Council
Áras an Chontae
Portlaoise

At Public Libraries in County Laois

On the Laois County Council website
www.laois.ie

A notice was placed in a local newspaper inviting the public to make submissions on the Draft Action Plan.

The following details were provided for submissions from the public:

The Director of Services
Infrastructure and Emergency Services
Laois County Council
Áras an Chontae
Portlaoise

Submissions should be marked “Submission – Draft Noise Action Plan”

Or by email to noiseplan@laoiscoco.ie

Submissions should be received on or before 5.00pm on the 16th July, 2013

The Draft Noise Action Plan was also issued to the relevant stakeholders:

- Department of Environment Heritage & Local Government
- Department of Transport
- Environmental Protection Agency
- National Roads Authority [Head Office & Kildare Design Office]
- An Taisce
- Midland Regional Authority
- Counties of Offaly, Kildare, Carlow, Kilkenny and North Tipperary.

9.2 Planning and Development (Strategic Environmental Assessment) Regulations 2004, SI No 436 of 2004

During the period of Public Consultation, the Action Planning Authority considered any requirements arising from the Planning and Development (Strategic Environmental Assessment) Regulations 2004, (SI No 436 of 2004). It was not deemed necessary to undertake a Strategic Environmental Assessment on the Draft Noise Action Plan.

9.3 Submissions received during Public Consultation

Following the period of public consultation, all submissions received were given due consideration when preparing the Noise Action Plan 2014 – 2018. A summary of the submissions received is set out in Appendix E.

9.4 Submission of Summary of Action Plan to Environmental Protection Agency

This Action Plan was submitted to the Environmental Protection Authority, on 18th July, 2013. This will facilitate the submission of the data to the European Commission, as required in the Regulations. A summary of the Action Plan was also submitted to the EPA at the same time.

9.5 Publication

The Noise Action Plan 2014 – 2018 will be published in electronic format, on the Laois County Council website www.laoiscoco.ie within 28 days of being finalised. A notice will be placed in a local newspaper to advise the public accordingly.

9.6 Review of the Action Plan

Laois County Council, as the Action Planning Authority will review the Noise Action Plan, within five years, as required by the Regulations¹⁸. In the event that a material change in environmental noise occurs, this review will be brought forward, to address the issue.

9.7 Freedom of Information and Data Protection.

Laois County Council is subject to the statutory requirements under Freedom of Information and Data Protection.

Those making submission on the Draft Action Plan were advised that if they considered any information, provided in their submission, to be either commercially sensitive or confidential in nature, this should be highlighted and the reasons for its sensitivity specified. In such instances, the relevant material will be considered, in the light of the exemptions provided under the Freedom of Information Act. Based on this review, it will be determined whether any information should be released or not, under a Freedom of Information request.

¹⁸ Section 11(7) Environmental Noise Regulation 2006 SI No 140 of 2006

APPENDIX A: GLOSSARY OF ACOUSTIC AND TECHNICAL TERMS.

“AADT” Annual Average Daily Traffic means the total number of vehicles passing a point on a road during one year, divided by the number of days in the year

“acoustical planning” means controlling future noise by planned measures, such as land-use planning, systems engineering for traffic, traffic planning, abatement by sound-insulation measures and control of noise sources;

“action plan” means a plan designed for the purpose of managing noise issues and their effects, including noise reduction if necessary;

“action planning authority” has the meaning assigned by article 7;

“the Agency” means the Environmental Protection Agency established under Section 19 of the Environmental Protection Agency Act 1992 (No. 7 of 1992);

“the Directive” means Council Directive 2002/49/EC relating to the assessment and management of environmental noise;

Decibel (db): A unit measurement of sound.

“environmental noise” means unwanted or harmful outdoor sound created by human activities, including noise emitted by means of transport, road traffic, rail traffic, air traffic, and from sites of industrial activity including those defined in Annex I to Council Directive 96/61/EC of 24 September 1996 concerning integrated pollution prevent and control;

“Iarnród Éireann” means the company charged with the management, operation and development of Ireland’s rail network under the Transport (Re-organisation of Córas Iompair Éireann) Act 1986 (No. 31 of 1986);

“L_{den}” (day-evening-night noise indicator) means the noise indicator for overall annoyance, as further defined in the First Schedule of the Regulations;

“L_{day}” (day-noise indicator) means the noise indicator for annoyance during the day period, as further defined in the First Schedule of the Regulations;

“L_{evening}” (evening-noise indicator) means the noise indicator for annoyance during the evening period, as further defined in the First Schedule of the Regulations;

“L_{night}” (night-time noise indicator) means the noise indicator for sleep disturbance, as further defined in the First Schedule of the Regulations;

“major road” means a national, regional or international road which has more than three million vehicle passages per year;

“major railway” means a railway line which has more than 30,000 train passages per year;

“the Minister” means the Minister for the Environment, Heritage and Local Government;

“national authority” has the meaning assigned by article 5 of the Regulations;

“National Roads Authority” means the body established under Section 16 of the Roads Act 1993 (No. 14 of 1993);

“noise-mapping” shall mean the presentation of data on an existing or predicted noise situation in terms of a noise indicator, indicating breaches of any relevant limit value in force, the number of people affected in a certain area, or the number of dwellings exposed to certain values of a noise indicator in a certain area;

“noise-mapping body” has the meaning assigned by article 6;

“quiet area in open country” means an area, delimited by an action planning authority following consultation with the Agency and approval by the Minister, that is undisturbed by noise from traffic, industry or recreational activities;

“the Regulations” means the Environmental Noise Regulations 2006 (S.I. No. 140 of 2006).

“strategic noise map” means a map designed for the assessment of noise exposure in a given area.

APPENDIX B: BIBLIOGRAPHY AND REFERENCES

- Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002.
- SI 140 of 2006, Irish Statutory Instrument, Environmental Noise Regulations 2006
- Guidance Note for Noise Action Planning, EPA July 2009. .
- NRA Guidelines for the Treatment of Noise and Vibration in National Road Schemes 25th October 2004.

APPENDIX C: STRATEGIC NOISE MAPS

1. L_{den} County Laois – Strategic Noise Mapping Phase 2 (2012)
2. L_{night} County Laois – Strategic Noise Mapping Phase 2 (2012)
3. L_{den} Carlow/Graiguecullen to Ballickmoyler
4. L_{night} Carlow/Graiguecullen to Ballickmoyler
5. L_{den} Portlaoise East
6. L_{night} Portlaoise East
7. L_{den} Portlaoise West
8. L_{night} Portlaoise West

APPENDIX D: NEWSPAPER NOTICE

LAOIS COUNTY COUNCIL

DRAFT NOISE ACTION PLAN

In compliance with the Environmental Noise Regulations 2006 (SI No 140 of 2006), Laois County Council has prepared a Draft Noise Action Plan.

The Draft Noise Action Plan will be on public display, during normal office hours, from 22nd May, 2013 until 2nd July, 2013 inclusive at:

Áras an Chontae
Portlaoise
Co Laois

or at any Public Library in the County, during the normal library opening hours.

The Draft Noise Action Plan can also be viewed on the Laois County Council website at

www.laois.ie

Submissions are invited on the Draft Noise Action Plan, and can be made in writing to

Director of Services, Infrastructure and Emergency Services
Áras an Chontae
Portlaoise
Co Laois

Submissions should be marked "Submission – Draft Noise Action Plan"

Submission can also be made by e-mail to noiseplan@laoiscoco.ie

Submission can be made at any time up to 5.00 pm on 16th July, 2013

Laois County Council is subject to the provisions of the Freedom of Information Act (FOI). If you consider that any of the information supplied by you is either commercially sensitive or confidential in nature, this should be highlighted and the reasons for its sensitivity specified. In such cases, and in response to any FOI request, the relevant material will be examined in light of the exemptions provided in the Freedom of Information Act.

Kieran Kehoe
Director of Services
Infrastructure and Emergency Services

APPENDIX E: SUBMISSIONS RECEIVED FROM THE PUBLIC

1. Four submissions were received from three members of the public. All of the submissions related to Wind Farms and Wind Turbines and to Section 3.4 of this Action Plan. The submissions put forward the following points:
 - The DEHLG Wind Energy Planning Guidelines [see Section 3.4 of the Action Plan] was challenged, and particularly the Noise Limits proposed in those Guidelines.
 - It was stated that the noise limits proposed in the DEHLG document are inappropriate and that they do not take due account of recent research findings.
 - The scope of this Action Plan should be broadened to incorporate wind turbines.

COMMENT: The primary focus of this Action Plan is environmental noise emanating from sources that have been Mapped within the County: these are the Roads described in section 4.1 above. In Section 3.4 above, the Department of Environment, Heritage and Local Government's Wind Energy Planning Guidelines, were reference. Setting Noise Limits for Wind Turbines is outside the scope of this Action Plan. It is also outside the scope of this Action Plan to critique the DEHLG Guidelines, in the light of more recent research. Following consideration of these submissions Section 3.4 of the Action Plan has been revised as indicated below:

TEXT IN DRAFT ACTION PLAN: 3.4 Wind Energy Planning Guidelines

With specific regard to wind energy developments, this DEHLG document suggests a *"lower fixed limit of 45dB(A) or a maximum increase of 5dB(A) above background noise at nearby noise sensitive locations"*. The latter requirement may be relaxed in areas with low background levels. A fixed limit of 43dB(A) at night-time is deemed appropriate as there is no requirement to protect external amenity.

TEXT IN THIS ACTION PLAN 3.4 Wind Energy Planning Guidelines

With specific regard to wind energy developments, the DEHLG Wind Energy Planning Guidelines suggests a *"lower fixed limit of 45dB(A) or a maximum increase of 5dB(A) above background noise at nearby noise sensitive locations"*. Section 5.3 of the Guidelines further suggests that the latter requirement may be relaxed in areas with low background noise levels. A fixed limit of 43dB(A) at night-time is deemed appropriate in Section 5.3 of the Guidelines.

Submissions received during the period of Public Consultation on the Draft of this Action Plan challenged the efficacy of the limits proposed in the DEHLG Wind Energy Planning Guidelines.