

Louth County Council



Comhairle Contae **Lú**
Louth County Council

Noise Action Plan

2018-2023

Louth County Council
Environmental Compliance

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Abstract

This Noise Action Plan has been prepared in accordance with the requirements of the SI 140 of 2006, also known as the Environmental Noise Regulations. These regulations give effect to the European Union Environmental Noise Directive (END) 2002/49/EC, relating to the assessment and management of Environmental Noise.

The overall aim of managing environmental noise within the framework of the regulations is to avoid, prevent and reduce the harmful effects due to long term exposure to environmental noise which will in turn promotes good health. The Noise Action Plan is therefore designed with the twin aims of:

- Avoiding significant adverse health impacts from noise.
- Preserving environmental noise quality where good.

The END requires member States to produce strategic noise maps for the main sources of environmental noise i.e. major roads, major railways, etc.

The Environmental Noise Regulations 2006, S.I. 140 of 2006 provide for a two-stage approach to the assessment and management of environmental noise. Firstly, strategic noise maps must be prepared for areas and infrastructure falling within defined criteria, e.g. major roads, railways and airports. Secondly, the Regulations require the preparation of noise action plans for each area concerned, based on the results of the mapping process. The fundamental objective of action plans is the prevention and reduction of environmental noise.

Noise Action Plans are required to be produced by the Action Planning Authorities in 2018. These Action Planning Authorities are those local authorities within whose functional areas major roads, etc are located. As there are no airports or railways above the respective threshold the Noise Action Plan in Co Louth refers to **Road Traffic** noise only from routes which have more than 3 million vehicle passages.

Under the Environmental Noise Regulations 2006 Louth County Council is the designated body for preparing a Noise Action Plan for both national and regional roads within the County that have traffic levels of more than 3million vehicles per year. The list of roads are detailed on Table 2 within this document. This plan provides a description of the extent of the action planning area and the stretches of road affected by environmental noise. The results of the noise mapping indicate that a number of the population within the functional area of Louth County Council are being exposed to noise levels due to road traffic sources. A decision matrix, is intended to identify priority areas that may require noise management.

1 Introduction

1.1 Purpose and Scope of END (Environmental Noise Directive)

In 2002 the European Union issued Directive (2002/49/EC) relating to the assessment and management of environmental noise. This Directive is referred to as the Environmental Noise Directive or END.

1.1.1 The Aim of the Directive:

“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”

The key requirements of the END can be set out in three stages as follows:

- i.* Undertake strategic noise mapping to determine exposure to environmental noise.
- ii.* Ensure information on environmental noise and its effects are made available to the public.
- iii.* Adopt action plans, based upon the noise-mapping results, with the objective of reducing preventing and reducing environmental noise where necessary and to preserving environmental noise quality where it is good.

1.2 Purpose and Scope of the Regulations

Statutory Instrument No. 140 of 2006, also known as the Environmental Noise Regulations, gives effect to European Council Directive 2002/49/EC.

The Regulations set out to:

“Provide an 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 exposure to environmental noise.” - Article 4(1)

The Regulations are to apply to environmental noise to which people are exposed, in particular in built up areas, in public parks or other quiet areas in an agglomeration, in quiet areas in open country, near schools, near hospitals, and near other noise sensitive buildings and areas. – Article 4(2)

In the context of the Regulations, environmental noise is defined as 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. – Article 3(1)

The 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. – Article 4(3)

1.3 Roles and Responsibilities of Designated Bodies

The Regulations designate the Environmental Protection Agency (EPA) as the national authority charged with overseeing the implementation of the Regulations – Article 5(1). As the designated national authority it is the responsibility of the EPA to report the results of the strategic noise mapping and action planning to the Commission. - Article 5(4). The EPA is required to submit summaries of the Action Plans to the EC no later than **18 January 2019**. The EPA is also required to provide advice and guidance to the relevant noise mapping bodies and action planning authorities.

1.3.1 Noise Mapping Bodies

The relevant noise mapping bodies were required to produce strategic noise maps for the main sources of environmental noise by June 2017, in respect of the calendar year 2016, for:

- Any agglomeration with a population greater than 100,000
- Any major road with more than 3 million vehicle passages per year
- Any major railway with more than 30,000 train passengers per year
- Any major airport

Under the Regulations the following organisations have been designated as noise mapping bodies:

- For the agglomeration of Cork, Cork City and Cork County Councils.
- For the agglomeration of Dublin, the four Dublin local authorities
- For major railways, Iarnród Éireann or the Railway Procurement Agency, as appropriate
- For major roads, the Transport Infrastructure Ireland (TII) for national roads and the relevant road authority or authorities, as appropriate for non national roads.
- For major airports, the relevant airport authority.

1.3.2 Action Planning Authorities

Action Planning Authorities are responsible for making Action Plans following consultation with the EPA and the relevant noise mapping bodies. Action Plans must satisfy the minimum requirements as set out in the Fourth Schedule of the Regulations.

Action Planning Authorities produced Action Plans for the first and second round during 2008 and 2013. This action plan is being produced for the third round starting in 2018. This will be carried out every five years thereafter. Action Plans must be produced based on the results of the

noise mapping. It is also required to review and revise the noise maps if necessary from time to time and whenever a major development occurs affecting the existing noise situation.

The Regulations require the Action Planning Authorities to consult the public when drawing up and revising Action Plans. – Article 11(6)

Under the Regulations (Art.7) the following organisations have been designated as action planning authorities:

- For the agglomeration of Cork, Cork City and Cork County Councils.
- For the agglomeration of Dublin, the four Dublin local authorities
- For major railways, the local authority or local authorities within whose functional area or areas the railway is located.
- For major roads, the local authority or local authorities within whose functional area or areas the road is located.
- For major airports, the local authority or local authorities within whose functional area or areas the airport is located.

The EPA advise that Article 7 of the Regulations should be interpreted to mean “any local authority or local authorities within whose functional area or areas are affected by noise from the (road or railway or airport)” (Ref. EPA Draft Guidance Notes)

1.4 Key Phases

The key phases in meeting the requirements are as set out below.

1.4.1 Identification of Areas required to be mapped

The Action Plan must refer to places near the major roads, major railways and major airports, and within any relevant agglomeration. – Article 11(1) (a) to (d), which means those places affected by noise from the major sources, as shown by the results of the noise mapping, and all locations within any relevant agglomeration. The EPA advise that noise from major sources is regarded as affecting an area if it causes either an L_{den} value of 55dB(A) or greater or an L_{night} of 50dB(A) or greater anywhere within an area.(Ref. EPA Guidance Notes for Noise Action Planning 2009)

In the case of County Louth the only major noise source meeting the criteria set out in the Regulations are those roads with more than 3 million vehicle passages per year. Areas which were required to be mapped are in the vicinity of these roads.

1.4.2 Preparation of Strategic Noise Maps

Article 6 of Statutory Instrument No. 140 of 2006 outlines the relevant noise mapping bodies and for major roads these are:-

(i) Where such roads are classified as national roads in accordance with Section 10 of the Roads Act 1993 (No. 14 of 1993), the National Roads Authority,(now Transport Infrastructure Ireland) on behalf of the action planning authority or authorities concerned, and

(ii) Other than those provided for in sub-paragraph (i), the relevant road authority or authorities, as appropriate.

Strategic noise mapping was undertaken during 2016/17 by Transport Infrastructure Ireland (TII) in respect of the national and regional roads in County Louth. Data from the Transport Infrastructure Ireland (TII) traffic counting system was used to identify those roads which met the 3 million vehicle passages per year criterion. Data from the local authority was used to identify the regional roads which met the 3 million vehicle passages per year criterion.

Noise mapping uses software that estimates the noise level in an area from a particular noise source. The objective is to identify locations where action may be needed to reduce high noise levels and to protect areas where the noise levels are low.

The strategic noise maps generated by the Transport Infrastructure Ireland (TII) give predictions for two noise indicators, L_{den} and L_{night} . The L_{den} maps are presented in 5dB contour bands beginning at 55dB L_{den} and ranging up to 75dB L_{den} . These maps also give an indication of noise levels that are predicted greater than 75dB L_{den} . L_{night} maps range from 45dB to 70dB L_{night} . The noise levels indicated are attributed only to the specific source of noise being considered, namely the traffic on the roadway and therefore do not consider any other noise source.

1.4.3 Development of the Noise Action Plans

Within the framework of the Environmental Noise Directive (END) and the context of sustainable development, the overall aim of managing environmental noise is to avoid, prevent and reduce the harmful effects due to long term exposure to environmental noise, which would in turn promote good health and a good quality of life.

The emphasis of the END and the Regulations is on “important” areas as established by the strategic maps. The Action Plan is therefore designed with the twin aims of;

- Avoiding significant adverse health impacts from noise and
- Preserving environmental noise quality where it is good.

The Regulations require the Action Planning Authority to consult the public when drawing up and revising Action Plans – Article 11(6). To comply with this requirement a formal public consultation exercise on the Draft Action Plan will be undertaken. The public consultation process will have regard to the Department of Public Expenditure and Reform publication *Consultation Principles & Guidelines 2016*.

Relevant bodies will also be proactively consulted in parallel to the wider public consultation.

The methodology for the public participation will ensure that the public was consulted about proposals and given early and effective opportunities to participate in the preparation of the Action Plans. The results of the public participation will be taken into account and the public informed of the decisions taken. Sufficient time will be allowed for each stage of public participation process.

1.4.4 Implementation of the Plans

Plans are to be implemented within a five year time scale. The Regulations require action planning authorities to review (and revise, if necessary) the Noise Action Plan every five years, or sooner where a material change in environmental noise in the area occurs. (Article 11 (7)).

2 Existing noise management legislation and guidance.

2.1 National Legislation or Guidance

All proposals for development/works under the Action Plan will be required to demonstrate compliance with the requirements of environmental and planning legislation and planning and licensing processes, including existing provisions of relevant land use plan(s) and policy documents such as the National Planning Framework and the Regional Spatial, the Economic Strategy for the Eastern and Midlands Region, the Louth County Development Plan 2015-2021, the Dundalk and Environs Development plan 2009-2015 (extended) and the Drogheda Development plan 2011-2017 (extended).

2.1.1 Noise Action Plan Policy Statement:

The aim of Louth County Council is to use the EPA Act 1992 where possible in order to take steps to limit environmental noise. In addition to this the council will require developers for any future developments which are located beside the identified major routes to take cognisance of the noise action plan

2.1.1 Environmental Protection Agency Act 1992

The existing statutory provisions have come about on foot of the Environmental Protection Agency Act of 1992. Sections 106 to 108 of the Act of direct relevance, and may 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.

2.1.2 Building Regulations

The current Irish Building Regulations call for certain constructions to offer “reasonable resistance” to both airborne and impact sound. Guidance values are put forward in the “Similar Construction” method described in Technical Guidance Document E of the Building Regulations 1997 -2014

2.1.3 Department of the Environment, Heritage and Local Government

The 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: Guidelines for Planning Authorities May 2009
- Urban Design Manual: A best practice guide, May 2009

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*”.

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*” and states that “*Privacy is an important element of residential amenity*”.

The Urban Design Manual lists Privacy and 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 minimise the potential for excessive noise transfer.

2.1.4 National Roads Authority Guidelines

The National Roads Authority (NRA) (now Transport Infrastructure Ireland TII) 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. These guidelines specify design goals for noise associated with the construction and operation of new national road schemes.

The NRA Guidelines for the design of new national roads indicates that mitigation measures should be considered above a level of 60dB L_{den} free-field. The guidelines put forward measures for mitigating the adverse effects of road construction in so far as possible through the use of measures such as alignment changes, barrier construction, and the use of low noise road surfaces.

2.1.5 IPPC/ Waste 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: Licence Applications, NG4 Surveys and Assessments in relation to Scheduled Activities*” This document contains suggested the following noise limits

Scenario	Daytime Noise Criterion , db LarT (7:00 to 19:00 hrs)	Evening Noise Criterion , db LarT (19:00 to 23:00 hrs)	Daytime Noise Criterion , db LarT (23:00 to 07:00 hrs)
Quiet Area	Noise from the licenced site to be at least 10dB below the average daytime background noise level measured during the baseline survey.	Noise from the licenced site to be at least 10dB below the average evening background noise level measured during the baseline survey.	Noise from the licenced site to be at least 10dB below the average night time background noise level measured during the baseline survey.
Areas of Low background noise	45dB	40dB	35dB
All other areas	55dB	50dB	45dB

.Table 1 NG4; Guidance Note for Noise Licence Applications

2.1.6 Wind Energy Planning Guidelines

This is a DEHLG document dealing specifically with wind energy developments. Noise levels from wind farms are generally expressed in terms of the L_{90} indicator. The 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.¹

2.1.7 Quarry and Ancillary Activities

This publication contains a discussion of 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”.²

The guidance or limits which do exist only cover a restricted number of the possible situations where community or environmental noise is an issue to be addressed. Consequently there are many situations for which there are currently no direct guidelines or legislation. This can lead to

¹ DEHLG Wind Energy Guidelines 2006

² EPA Environmental Management in Extractive industry 2006

inconsistencies in carrying out noise assessments and to existing measures being quoted out of context.

2.1.8 National Planning Framework (Policy Objective 65);

In 2017 , the Department of Housing Planning and Local Government (DHPLG) issued the National Planning Framework 2040 which includes- policy objective 65 :

This document states the following, “Promote the pro-active management of noise where it would have significant adverse impacts on health and quality of life and support the aims of the Environmental Noise Regulations through National planning guidance and Noise Action plans”.

The National Plan will be considered in the development of the Noise Action Plan. National and regional transport initiatives that may arise from implementation of the National Planning Framework (NPF) and the Regional Spatial and Economic Strategy (RSES) for the Eastern and Midlands Region (currently in preparation, see Section 2.1.9 below) have the potential to result in: adverse health effects that will need to be mitigated; and/or beneficial effects with regard to preserving environmental noise quality. Such issues will be considered during the implementation of the NPF and RSES, including as part of the environmental assessments, where required, for individual transport initiatives.

2.1.9 Economic Spatial Strategy.

The Regional Spatial Strategy is currently being finalised. This is being developed from the National Planning Framework. The Regional Spatial Strategy which will replace the Regional Planning Guidelines which will be considered in the development of the Noise Action Plan

2.2 Regional or Local Legislation and Guidance

2.2.1 Louth County Development Plan 2015-2021

The Louth County Development Plan 2015-2021 (LCDP) includes the Dundalk and Drogheda Development plans 2011-2017 which were both extended. It is a strategic objective of the LCDP to direct development in accordance with the Settlement Hierarchy to provide for the sustainable development of the County for the period of 2015-2021 and beyond.

The preferred development strategy as stated in the LCDP is based inter alia on building strong urban centres while protecting the rural hinterlands and thus seeks to achieve the following:

- Critical mass in Dundalk and Drogheda, followed by the Level 2 and 3 centres
- Development of the 24 smaller rural settlements capable of providing local services with small rural enterprises
- Managing development in rural areas (focus on agricultural diversification/appropriate rural enterprise)
- Protecting the environment by implementing an environmental protection policy recognising the environmentally sensitive zones within the county

The LCDP identified 6 Development Zones within the County. The purpose of the zones was to conserve and protect the amenities of rural areas and to promote development in a sustainable manner. They also assist in the operation of the development management function with regard

to planning applications for development in rural areas. In exercising the development management role the Council has regard (*inter alia*) to the Strategic Objective for the Development Zone. Of note in this instance is Development Zone 1, 2 and 6. The Strategic Objectives for each are as outlined below:

Development Zone 1: To preserve and protect the natural unspoilt physical landscapes (RD 31 and RD 32)

Development Zone 2: To protect the scenic quality of the landscape and facilitate development required to sustain existing rural community (RD 33 and RD 34)

Development Zone 6: To preserve and protect the heritage and cultural landscape of the UNESCO World Heritage Site of Bru na Boinne, the Tentative World Heritage Site of Monasterboice and the Site of the Battle of the Boyne. (RD 41 and RD 42)

Economic Development:

The economic strategy seeks to focus development on strategic economic growth centres and support economic growth towns. The majority of economic growth will be focused on the two principle urban areas of Dundalk and Drogheda. There is recognition of considerable scope for economic opportunities in rural Louth and in this regard, the Level 2 centres of Ardee and Dunleer and to a lesser extent identified Level 3 centres are promoted. In this regard Policies EDE 9, EDE 10 and EDE 11 apply.

The importance of the provision of adequate and suitable landscaping and amenity in commercial and industrial development is recognised in the LCDP. Further, the provision of a buffer zone up to 15m in width will be required where industrial and other sensitive land uses adjoin, to ensure amenities of adjoining properties are not adversely affected. In this regard there should be no significant amenity loss (by way of noise, smell or other nuisance) to immediate neighbours or the area in general. Further, in relation to Nuisance generally, the LCDP requires that where conflict could arise in respect of commercial/industrial development and other users, the “Good Neighbour” principle shall be applied and the Louth County Council “Noise Action Plan 2013-2018”. Policy EDE 14 is applicable in relation to the above.

Transport

Motorway interchanges are strategic locations sought after by developers due to the desirability and benefits of having immediate access to the national primary road network. Uncontrolled and poorly regulated development at such locations can be problematic for a myriad of reasons including negative impact on rural environments. Thus in regulating development in a sustainable and appropriate manner, a policy has been included in the Plan which promotes and facilitates development at Urban Related Interchanges (Junctions 10, 16, 17 & 18), but which most importantly resists development at rural related motorway interchanges (junctions 12, 13, 14, 15, & 20).

Louth is fortunate in having an excellent road hierarchy including motorway, national, regional and local roads. Specifically in relation to the M1 and the potential for development in close proximity to same, Policy TC 8 has been included which states the following:

Development proposals of a residential or other nature within 100mts of either the M1 motorway or the NI/A1 national route will be restricted in all but exceptional circumstances. Any development assessed under this policy will be subject to the provisions of Policy ENV 6 and ENV 7 of this Plan, the “Spatial Planning and National*

Roads Guidelines for Planning Authorities” 2012 and the costs of implementing and mitigation measures concerned should be borne by the developer.

**Only where the proposed development is infill development and is located within an established building line.*

Policies ENV 6 and ENV 7 both of which are referenced in Policy TC 8 above are contained within Chapter 8 of the LCDP and are concerned specifically with Environmental Noise. In this regard policies ENV 6 & ENV 7 state the following:

“To implement the Louth County Council Noise Action Plan 2013-2018 in order to avoid, prevent and reduce the harmful effects, including annoyance, due to environmental noise exposure.

To require that where new development is proposed within the limit of the noise maps for the designated sections of roads in the County, appropriate mitigation measures are undertaken so as to prevent harmful effects from environmental noise.”

Notwithstanding the fact that the county boasts an excellent road network as referenced previously it also has a good network of local, regional and national bus routes in addition to a main line rail service. Sustainable transport modes are increasingly being promoted in the form of improved public transport services, improved cycling and walking facilities and infrastructure supporting the use of electric vehicles. The Plan whilst recognising the dominance of the private car will nonetheless seek to promote alternative sustainable modes of transport. This is reflected in the settlement strategy whereby the majority of development is directed to the existing compact towns and other settlements. This is reflected in many of the policies contained in the Plan and include but are not limited to the following: TC 1, TC 3 and TC 5.

Cycling as an alternative mode of transport is encouraged and promoted which is evident in the applicable policies, including *inter alia*: TC14, TC22, TC23, TC24, TC25 and TC 28.

In relation to public transport, the Council will seek to promote the enhancement of public transport and infrastructure in towns, villages and the rural areas and to this end, policies TC 32, TC 33, TC 34, TC 36, TC 37 and TC 38 apply.

Conservation and Natural Environment

Strategic objectives contained in the Plan include *inter alia* for the protection of the environment of County Louth whilst ensuring the fulfilment of environmental responsibilities coupled with the protection of the County’s heritage and other amenities. To this end, there are a substantial number of policies contained within the plan which seek to realise these objectives including in relation to European Sites (SPA and SAC), Proposed Natural Heritage Areas, Landscape Character Assessment, Areas of Outstanding Natural Beauty and Areas of High Scenic Quality.

There are 11 European Sites in Louth which form part of the Natura 2000 network which are the prime wildlife conservation areas in the county considered to be of significant importance at Irish and European level. Policy HER 5 states that plans or projects that would have a significant adverse impact upon conservation objectives of any Natura 2000 sites will not be permitted. Regarding pNHA, Policy HER 7 states that development which would result in a significant deterioration of habitats or a disturbance of species in the pNHA will be resisted.

A Landscape Character Assessment was prepared for the County and herein 9 Landscape Character Areas were identified the classification of which was based on a matrix of factors including *inter alia*: tranquillity (relates to low levels of build environment, traffic, noise and

where artificial lighting (public and private) is at a minimum). In relation to Landscape Character Assessment, policies HER 10, HER 11 and HER 12 apply.

Louth contains 2 distinct areas designated as Areas of Outstanding Natural Beauty by reason of their unspoiled natural landscapes and spectacular scenic quality. These are located in the North of the County at Carlingford and Feede Mountains and in the south of the County at Clogherhead and Port Oriel. In relation to the former, much of the area remains in its natural state covered in gorse, bracken and heather parts of which are designated as SAC and pNHA. The latter although less rugged is of equal importance and both the areas are extremely sensitive environments and are therefore afforded a high degree of protection in the Plan. In this regard Policy HER 60 applies.

Concerning Areas of High Scenic Quality, there are 6 identified areas in the county and whilst not possessing the exceptional natural beauty of landscapes of outstanding natural beauty, they add to the stock of natural scenic landscapes within the county. Their protection is provided for under HER 61 of the LCDP.

2.2.2 Dundalk & Environs Development plan 2009-2015 (extended)

1. Provide a sustainable transportation system for Dundalk & Environs to secure the successful integration of land use and for the convenience of the public. (SO5)
2. Adopt a strategic approach to land use and transportation planning by prioritising development in areas where public transport facilities are available or can economically be provided and by encouraging higher density development in such areas. (TR3)
3. Require applicants for development likely to generate 500 plus vehicle trips per day to submit a mobility management plan. (TR6)
4. It is the policy of the council in co-operation with other agencies, bodies and developers, to implement an integrated pedestrian footpath and cycle path network throughout the plan area. (TR13)

Applications for economic development proposals will be assessed having regard to the following:

- Noise impact assessment and the provision of mitigation measures, where appropriate
- Provision of a buffer zone of up to 15m at the interface of the development and any adjoining areas

2.2.3 Drogheda Development plan 2011-2017 (extended)

1. Provide a sustainable transportation system for Drogheda and its environs to secure the successful integration of land use and for the convenience of the public (SO5)
2. Require applicants for any development likely to generate 500 plus vehicle trips per day to submit a Mobility Management plan. (TR6)

3. Adopt a strategic approach to land use and transportation planning by prioritising development in areas where public transport facilities are available or can economically be provided and by encouraging higher density development in such areas. (TR7)
4. It is the policy of the council in co-operation with other agencies, bodies and developers, to implement an integrated pedestrian footpath and cycle path network throughout the plan area.

2.2.4 Development Control

The following standard condition is generally applied to commercial and residential development over 5 units:

The equivalent continuous sound level (L_{eq}) attributable to all on site operations associated with the development, outside of any inhabited house or building used for public assembly, in the vicinity of the site, shall not exceed 55dB(A) L_{eq} (30minutes) over the period 08:00 hours to 20:00 hours, Monday to Friday and 08:00 hours to 16:00 hours on Saturday; and shall not exceed 45dB(A) L_{eq} (30 minutes) at all other times. No pure tones or impulsive characteristics shall be audible outside of any inhabited house in the vicinity of the development.

2.2.5 Noise Action Plan 2013-2018

In developing the second round of the Noise Action plan for the period 2013 -2018 the council planned the following programme of works to extend over the 5 years of the action plan.

Year 1

- Identify from noise maps where onset levels of assessment are exceeded
- Carry out site visits and visual assessment of these areas
- Identify areas for further investigation.

Year 2

- Identify budget for external noise consultants.
- Complete consultants brief
- Procure consultants
- Consult with the EPA on process for delimiting Quiet Areas.

Year 3

- Identify areas for noise mitigation
- Agree works package with relevant Road Authorities, including timetable for implementation and evaluation. Allow time in programme for obtaining planning permission if required.
- Identify budget.

Year 4

- Review progress of Action Plan.

Year 5

- Identify Quiet Areas for delimiting and submit proposal to EPA and Minister

- Review progress of works package
- End of programme review.

The main barrier in relation to achieving any of the programmes of measures is reflective on the commencement of relevant road schemes where noise abatement measures are incorporated to the design of new or upgraded section of road, which is dependent on funding being made available. The Noise Action Plan for 2013-2018 was included in the County Development plan and both the Dundalk and Drogheda Plans with the following policies:

ENV 6 To implement the Louth County Council Noise Action Plan 2013-2018 in order to avoid, prevent and reduce the harmful effects, including annoyance, due to environmental noise exposure.

ENV 7 To require that where new development is proposed within the limits of the noise maps for the designated sections of roads in the County, appropriate mitigation measures are undertaken so as to prevent harmful effects from environmental noise.

In the second action plan properties were identified over the onset level of assessment for Lday and Lnight from the noise maps. No direct mitigation measures were carried out, but as expected, the majority of the properties identified were on the routes within the two main urban areas in Louth, i.e. Dundalk and Drogheda. The County Development Plan has identified a number of initiatives and policies that are commensurate with the objectives of the Noise Action Plan that would assist in reducing traffic based noise. In Dundalk cycle lanes are in place which is supportive of a viable alternative to travelling by car.

In the rural area a number of properties were also identified close to the regional and national routes.

A number of road improvement schemes were carried out on some of the identified roads which were completed during this period. These works were mainly comprised of realignment and traffic calming measures. Realignment work was carried out on the N53 Dundalk to Castleblaney road during this period. This was carried out over three phases between 2013 and 2015.

On the N2 south of Ardee road improvements have been carried out at Blakestown Cross. This junction has been realigned. Although this is on a section of road which has been mapped by the TII the traffic volumes going year on year have appeared to fall below the ADDT of 3 million vehicles.

All the routes from the second round were mapped again as part of the third round of the Noise Action Plan. These will continue to be monitored over the third round of the Noise Action plan.

Quiet Areas in Open Country; The identification of quiet areas in open country was one of the objectives outlined in the Program of measures in the second round. None were identified however efforts were made in terms of sourcing suitable locations. The matter was highlighted at Environmental and Planning Strategic Policy Committee meeting whereby input from a number of stakeholders was sought. Following this a number of proposed areas in Zone 1 and Special areas of conservation were put forward for consideration. These areas will be located away from major sources of noise and will be reflective of relevant policies plans and guidelines. Going forward into the third round of the Noise Action Plan it is hoped that quiet areas in open country will be identified.

In round 3 all regional and national routes over 3 million vehicles passages per year were mapped and will be examined. All of the routes in round 2 have been mapped again as part of the round 3 mapping. As was the case in the previous Noise Action Plans, Louth County Council will consult with the relevant roads authorities in relation to any mitigation measures proposed. The aim of Louth County Council in this Noise Action Plan is to endeavour to carry out the list of actions under the programme of measures. It is important to note that just like the previous Noise Action Plans there are a number of risk factors associated with the delivery of the programme of measures such as the availability of finance and the approval of other statutory bodies

The noise Action plan is effectively a strategic policy document. This Noise action plan will reflect the wider context of local national sustainable development plans and will adhere to the requirements of the County Development Plan. In accordance with the EPA guidance (Mar 2018), it was recommended that SEA screening of the Noise Action Plan and associated consultation process be completed during the public consultation period, this will also be carried out.

3 Description of the Action Planning Area

3.1 Extent of the Area

In County Louth, the only noise source to be considered by the Action Planning Authorities relate to major roads carrying in excess of 3 million vehicle passages per year, as defined in the Regulations. The designated noise mapping agency, the Transport Infrastructure Ireland (TII), has produced distinct noise maps for national and regional roads in Co Louth.

The Action Plan must refer to places near the major road. The guidance from the EPA states that noise from major sources is regarded as affecting an area if it causes either an L_{den} value of 55dB(A) or greater, or an L_{night} value of 50 dB(A) or greater anywhere within the area. It is therefore considered appropriate to define areas within the 55dB(A) L_{den} or the 50dB(A) L_{night} as being ‘near’ the major road for the purposes of the Action Plan.

3.2 General Geographical Description

County Louth has an area of 821 square kilometres and although it is the smallest county in Ireland in geographical terms, it is one of the most populated and urbanised outside of Dublin. This is due to the presence within its borders of two of the largest provincial towns in the country, Dundalk and Drogheda. It is located to the north east of Ireland, is bordered by counties Monaghan and Meath to the west and south respectively and Counties Armagh and Down to the north. The eastern boundary of the county comprises of the Irish Sea. The three main towns are Drogheda, Dundalk and Ardee. Drogheda and Dundalk rank sixth and seventh, respectively in terms of size within the state.

3.3 Description of the general population

The 2016 Census of Population gives the population of the county at 128,884 compared with 122,897 in 2011. The three main towns in the county are Drogheda, Dundalk and Ardee. Drogheda and Dundalk have a population of 40,956, and 39,004 respectively and Ardee has a population of 4928 (as recorded in the 2016 Census of population).

The housing units in the county as a whole are predominantly single dwelling with multi unit development generally confined to the larger towns. Within the Action plan areas, single unit dwellings predominate, with the majority located in the towns of Drogheda and Dundalk. Residential development in these urban areas is at a much higher density relative to the rural areas which consists predominantly of once off rural housing.

3.4 Description of Noise Sensitive Premises

Some premises are more sensitive to noise pollution than others. The Noise Action plan in addition to being concerned with the effects of traffic noise on residential properties is also concerned with other noise sensitive premises such as places of worship, hospitals, nursing homes, schools, childcare facilities, offices and certain livestock farms which may merit special consideration. The potential noise sensitive locations will be identified and assessed using the strategic noise maps and applying the decision matrix during the current Noise Action plan. In Louth these sensitive areas would include schools, churches, and hospitals along the mapped routes. It is important to note that environmental noise levels are only in relation to the traffic noise from the regional/national roads that have been mapped and do not include the influences of other sources including other roads and streets not mapped.

3.5 Description of the Main Infrastructure and Services

Louth occupies a strategic position on the east coast of Ireland midway between the two main urban centres on the island; Belfast and Dublin. The county is intersected by key transport links, the E01 euro-route / M1, motorway, the N2 route from to Derry and Donegal and the Dublin/Belfast rail line. The Euro-route connects the main ports on the Island, Larne and Rosslare, and these form the cornerstone of an efficient transport network between the island of Ireland, Britain and mainland Europe.

Louth also has three commercial ports which are located at Dundalk, Drogheda and Greenore.

4 Responsible Authority for Action Planning

In County Louth, the only noise source to be considered by the Action Planning Authorities relates to major roads, in excess of 3 million vehicle passages per year, as defined in the Regulations. Louth County Council, is the designated action planning authority.

4.1 Contact details for the responsible Action Planning Authorities

The following is the contact details for the responsible authorities:

Louth County Council
Town Hall
Crowe Street
Dundalk
Telephone (042)9335457
Fax: (042)9353196
Email: environment@louthcoco.ie

Louth County Council is the lead authority in developing the Noise Action Plan.

4.2 Description of Other Bodies of Relevance

The Environmental Protection Agency (EPA) is the designated national authority responsible for overseeing the implementation of the Regulations. The EPA is required to provide advice and guidance to the relevant noise mapping bodies and action planning authorities and is responsible for reporting information to the European Commission.

The Transport Infrastructure Ireland (TII) is the designated noise mapping body acting on behalf of the action planning authorities for major roads where such roads are classified as national roads. In the case of County Louth the only noise sources for the first round action plan are major roads.

Both the EPA and the TII will be consulted in relation to the Action Plan.

4.3 Description of any Noise- Reduction Measures Already in Force Within the Action Planning Area, or Projects in Preparation

The M1 motorway/N1 dual carriageway through County Louth has now been completed. The motorway/dual carriageway was constructed on a phased basis beginning with the Dunleer Bypass in the 1990s and completed with the Dundalk Western bypass since 2008. The motorway/dual carriageway has had a significant effect on traffic noise in the County generally by diverting traffic from congested routes in heavily populated areas.

This has resulted in a reduction in the net number of the population subjected to noise pollution. However some properties along the motorway had the potential for an increase in noise levels due to the new road. These effects were mitigated by measures including the use of appropriate noise barriers, identified in the Environmental Impact Assessments (EIA's). E.I.A.'s were carried out for all phases of the motorway except the Dunleer Bypass as this section predated the EIA Directive.

Funding has been obtained for the Ardee bypass-N52. This will reduce the volume of traffic within the town of Ardee thus reducing the associated traffic noise levels. Work for this is due to commence in 2018.

New residential development is restricted in the vicinity of the motorway. New one-off dwellings are not permitted within 100m of the curtilage of the motorway. The provision of a buffer zone of not less than 15m in width is required where industrial and other land use adjoin. These stipulations are included in the Louth County Development Plan.

5 Summary of the Results of the Noise Mapping

5.1 Overview of the Preparation of the Noise Maps

Strategic noise mapping was undertaken during 2016/17 by the designated noise mapping body, the Transport Infrastructure Ireland (TII) in respect of major roads in County Louth. The TII also undertook noise mapping of major regional Roads on behalf of County Louth who are the designated noise mapping body for non national major roads.

A noise map is a graphical representation of the various noise levels in a particular area with different colours representing different noise levels in dB(A). To produce a noise map a number of variables must be determined in order to correctly represent the amount of noise generated at the source, e.g.. by traffic driving on the road. The noise level at the source for road traffic is primarily influenced by traffic speed, the overall quantity of vehicles in the traffic flow, the proportion of heavy commercial vehicles, (HCVs), in the flow and the type of road surface. The manner in which the noise propagates away from the source must then be calculated; this involves determining the reduction in noise level as it propagates from the source. Environmental noise from road traffic decreases as it propagates from the source by the following principal attenuation mechanisms, geometric divergence, atmospheric absorption, ground attenuation and attenuation by diffraction

5.1.1 Data Sources Used to Compute the Various Noise Levels

Shapefiles representing each of the items presented in **Table 1** below were assembled in ArcGIS

<i>Road</i>	<i>Buildings</i>	<i>Contour</i>	<i>Topography</i>	<i>Walls</i>	<i>Embankments</i>	<i>Bridges</i>
Direction	Height	Contour Height	G	Height	Height	Start/End Point
Texture Depth				Reflection Properties		Height
Lane Width/Road Width						
Surface Type						
Speed						
18-hour Traffic Flow						
Carriageway Type						
Composition						

Table 1: Required Attributes for each dataset

Where possible Toolkits presented in the “Good Practice Guide for Strategic Noise Mapping and the Production of Associated Data on Noise Exposure”, developed by the European Commission Working Group Assessment of Exposure to Noise (WG-AEN), were used to collect some of the

data required above. TII also undertook noise mapping of major regional Roads on behalf of County Louth who are the designated noise mapping body for non national major roads.

5.1.2 Information on CRTN

The UK national computation method “Calculation of Road Traffic Noise (CRTN), Department of Transport – Welsh Office, HMSO, London, 1988” as recommended in Part II of the Second Schedule of the Environmental Noise Regulations 2006 (S.I. No. 140 of 2006) was used for all calculations. This method was released in 1988 and replaced the previous method which was developed in 1975.

The revision was carried out by the Transport and Road Research Laboratory and the Department of Transport in the United Kingdom. This publication includes a method which may be used to determine the noise source emission levels of road traffic due to the nature of it’s composition along with a method to determine how the noise is attenuated as it propagates away from the source. The method treats roads as line sources and predicted noise levels are expressed in terms of the L_{10} index, which is the noise level exceeded for 10% of the time, and is therefore quite different to the L_{den} indicator. As such, a conversion factor is required.

5.2 General Guidance used to prepare the maps

In order to determine the average speed at which vehicles were travelling, it was assumed that vehicles travelled at the signposted speed limit for the road as suggested in Toolkit 3.5 in WG-AEN’s Good Practice Guide.

Walls/Embankments

A LiDar survey was used to identify acoustically significant features along identified roads as well as, as built drawings and existing NRA databases.

Building Heights

Buildings were set to a standard height of 8m, representing an average 2-storey house with a 2m roof. This is the default height suggested in Toolkit 15.2 in WG-AEN’s Good Practice Guide which should be used when no information is available. Where feasible, larger buildings were represented more accurately.

Traffic Counts

CRTN requires 18-hour traffic counts to describe a road source. These were obtained by examining the diurnal profile for both HCV and Non-HCV traffic and calculated an 18-hour flow based on Annual Average Daily Traffic (AADT) figures.

5.3 Presentation of Results

5.3.1 Noise Maps

Noise maps for major roads in County Louth are presented in Appendix D. The maps are prepared for L_{den} and L_{night} and noise levels are presented in 5dB contour bands. The maps are also available on the Louth County Council website.

5.3.2 Summary Exposure Statistics for Action Planning Area

The noise action plan for County Louth refers to road traffic noise only. The following list gives the roads that have exceeded the three million vehicles passages per year threshold: The traffic counts for the Regional roads in the county were carried out in 2016 using Metro counters Radar Recorders Loop counters and Manual counts. The AADT figure was calculated using the NRA Expansion Factors 2012 for Short Period Traffic counts. The majority of regional roads identified were in or within the vicinity of the two main towns in Louth (Dundalk and Drogheda) which was expected. Transport Infrastructure Ireland identified the National roads there were over the threshold. The extents of these routes are identified on the attached noise maps at Appendix D and on the Louth County Council website;

Road	Description
R-173	Ballymascanlon roundabout Dundalk east to junction with R174
R-132	Bridge Street Linen Hall Street, Clanbasil Street, Crowe Street, Francis Street, Park Street, Dublin Street , old Dublin road until Green gates Junction on Old Dublin Road Dundalk
R-108	Baymore Road Drogheda
R-152	Platin Road Drogheda
R-168	Mell Trinity Street Drogheda
R-132	Old Dublin road from Monasterboice junction with motorway and south through Drogheda until Meath border
R-934	Castletown Road Dundalk
R-171	Anne Street Dundalk
R-950	Junction between Clanbrassil Street-Bridge Street-Linenhall Street Dundalk
R-172	Joycelyn Street to Seatown Place and Avenue Road Dundalk
R-166	Newfoundwell Road Drogheda
R-178	Dominick Place until junction with Mount Avenue Dundalk
M1	Motorway through Co Louth from border at North to border with Meath
N51	Slane Rd from Roundabout on M1 Motorway until Meath border
N53	Castleblaney Road from Roundabout on M1 motorway to Armagh border
N2	Monaghan border going south through Ardee and Collon.
N33	Ardee link road to M1 motorway
N52	Ballymascanlon roundabout through R132 until roundabout on M1 junction Dundalk

Table 2 : Extents of roads over three million vehicle passages per year

The following tables give estimated population exposed to traffic noise in each noise band for L_{den} and L_{night} within the County based on data obtained from the TII.

Table 3a and b L_{den}

Table 4a and b L_{night}

L_{den}	Population (estimate)
55-59	5440
60-64	2576
65-69	2862
70-74	2228
>75	56

L_{den}	No of dwellings per Contour (approx)	Approximate Area km ²
> 55	5584	76
> 65	2449	17
> 75	30	3

Table 3a and 3b L_{den} exposure limits

L_{night}	Population (estimate)
50-54	2913
55-59	2867
60-64	2572
65-70	65
>70	0

L_{night}	No of dwellings per Contour (approx)	Approximate Area km ²
> 50	3729	45
> 60	1372	9
> 70	0	0.1

Tables 4a and 4 b L_{night} exposure limits

5.4 Limitations of the Maps / Results

The EPA Guidance Note for Noise Action Planning concludes that the strategic noise mapping results provide a best estimate, rather than a complete and wholly accurate account. There is no actual field data included in the model to verify results. It is therefore considered necessary to confirm that the noise levels indicated by the strategic noise maps are being experienced by the population within the study area prior to the review of potential noise mitigation measures and any subsequent commitment of budget.

6 Identification of Areas to be subject to Noise Management Activities

6.1 Overview

The EPA Guidelines state that it is not considered practical to undertake a detailed assessment of need for every premises within the Action Planning Areas. It is therefore necessary to develop a means of identifying the most important locations via some form of decision support matrix or selection process.

The commencement of this process requires some form of noise level value, or values, for the onset of the process of assessment of need. Onset levels, for assessment of noise mitigation measures and for assessment of noise preservation where they are good, for roads, are set out in **table 4**.

The Strategic Noise Maps provide information on the assessed noise levels at properties within the Action Plan Areas, along with an estimate of the number of inhabitants. These databases are then used in combination with the onset of assessment noise levels to develop a noise scoring decision matrix. This decision matrix is used to draw up a short list for potential action. An example of a decision matrix used by Dublin City Council is given in appendix E.

6.2 Description of the Decision Matrix

6.2.1 Onset of Assessment Levels

In accordance with the guidance issued by the EPA the following onset of assessment noise levels apply:

For assessment of noise mitigation measures

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

For assessment of noise level preservation where they are good

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

6.2.2 Quiet Areas in Open Country

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

The results of the strategic noise mapping do not provide a clear indication of the location of areas which could be designated as quiet areas in open country. This is partially due to the nature of the assessed noise source, which is limited to traffic noise, and partially due to the area of coverage of the noise maps, which is near to major sources, and therefore not locations which will be undisturbed by them.

One option open to Action Planning Authorities is to widen the scope of coverage of the Action Plan to include Quiet Areas in Open Country away from the major sources, and delimit such areas for approval. The EPA recommends that any areas put forward for designation would have low levels of environmental noise, and be predominantly free of long term noise from human activity.

The Louth County Development Plan has a strategic objective to protect and maintain the open nature of the county’s countryside with reference to the recommendations of *County Louth’s – Landscape Character Assessment*. Nine landscape character areas have been identified in County Louth. The classification of each landscape character area is based on a matrix of factors which includes tranquillity, which relates to low levels of built environment, traffic and noise.

At this point in time it is considered that there is not sufficient information on the acoustic environment in potential Quiet Areas in Open Country to enable specific areas be delimited for approval. However the findings of the Landscape Character Assessment provide a useful starting point in the process and are in line with current research which recommends that the classification of Quiet Areas should not be dependent on acoustic measurements alone but should incorporate other criteria, including amenity use, landscape, ecological, aesthetic, cultural and historical.

The Local Authority will liaise with Planning to identify potential locations in the open country. The EPA will be consulted during the current Noise Action plan with a proposal for delimiting quiet areas in open country.

6.2.3 Application of the Criteria / Matrix

A decision support matrix is a chart which enables identification, analysis and rating of the strength of relationships between various sets of information. It enables a number of different factors to be examined and facilitates the assessment of the relative importance of each.

The following is an example of a decision support matrix based on work by Dublin City Council.

	Decision Selection Criteria	Score Range L _{den}	Score Range L _{night}	Subtotal
Noise Band(dB(A))	<45	5	6	
	45-49	4	5	
	50-54	3	4	
	55 - 59	2	2	
	60-64	1	3	
	65-69	2	4	
	70-74	3	5	
	>75	4	6	
Type of Location	Residential	2	3	
	Noise Sensitive Location	3	3	
	School	3	1	
	Quiet Area	3	3	
	Recreational open space	2	2	
Type of Noise Source	Road	3	4	
			TOTAL	

Table 4: Priority Matrix

A score of 17 or above is proposed to be used to indicate that threshold levels have been exceeded and the location should be included in the shortlist for further assessment.

6.2.4 Results of the Analyses

The results of the analyses will be available following the drawing up of a short list of potential areas for action, using a noise scoring matrix to that previously described.

7 Mitigation and Protection Measures

7.1 Processing Areas above Onset of Assessment Criteria

A list of potential areas for action will be drawn up using a noise scoring matrix similar to that previously described.. The next stage is to confirm that the noise levels assessed by the mapping exercise are accurate. This will be done by reviewing and refining the noise models, if appropriate, and by undertaking field survey work to measure noise levels.

Once the extent of the noise impact has been confirmed for the locations under review, the potential noise mitigation measures will be investigated, and a cost benefit analysis undertaken for each, with the aim of developing a selection matrix leading to a recommendation for action.

7.2 Preservation of Areas below Protection Threshold

The potential noise impact of future development can be adequately managed through the Planning and Licensing Processes including existing provision for Environmental Impact Assessments.

The potential noise impact from increased traffic on major roads can be adequately addressed by reviewing (and revising, if necessary) the Noise Action Plan every 5 years, or sooner where a material change in environmental noise in the area occurs.

7.3 Preservation of Areas Between the Thresholds

The potential noise impact of future development can be adequately managed through the Planning and Licensing Processes including existing provision for Environmental Impact Assessments.

The potential noise impact from increased traffic on major roads can be adequately addressed by reviewing (and revising, if necessary) the Noise Action Plan every 5 years, or sooner where a material change in environmental noise in the area occurs.

7.4 Confirming the Extent of Noise Impact

This will be done by reviewing and refining the noise models, if appropriate, and by undertaking field survey work to measure noise levels.

The field survey work will also ascertain whether the property being assessed has noise sensitive rooms on the most exposed facades, or whether noise mitigation measures were already present which may not have been taken into account by the noise mapping model.

7.5 Review of Possible Mitigation Measures

7.5.1 The Planning System

The EPA Guidelines recommend that the Noise Action Plans contain a review of the use of the planning system to help manage the effects of environmental noise and that any evaluation criteria to be used are specified, or relevant documents referenced.

In order to successfully use the planning process to avoid, or minimise, noise exposure in a consistent manner it is considered necessary to issue guidance on noise exposure levels for proposed development. Such guidance will apply on a county wide basis and is not restricted solely to the area covered by the strategic noise mapping.

There are two scenarios to consider when issuing guidance. Firstly, where new residential development or other noise sensitive development is proposed in an area with an existing climate of environmental noise. There is currently no clear national guidance on appropriate noise exposure levels in this scenario. Pending the introduction of such guidance the following UK Guidelines shall apply:

- The Scottish Office, PAN 1/2011: March 2011 Planning Advice Note (PAN) provides advice on the role of the planning system in helping to prevent and limit the adverse effects of noise

In the second scenario, where new, or altered, sources of noise are introduced to existing residential or other noise sensitive locations, there are currently a number of guidance documents, which cover some of these situations as previously outlined. Where existing guidance does not cover the situation under consideration, the following UK Guidelines shall apply:

- The Scottish Office, PAN 1/2011: March 2011 Planning Advice Note (PAN) provides advice on the role of the planning system in helping to prevent and limit the adverse effects of noise
- BS 4142:2014 Method for Rating Industrial and Commercial Sound, British Standards Institution (BSI), London 2014
- ProPG Planning and Noise Guidance note (May 2017)

Regional Planning Guidelines, County Development Plans, Local Area Plans and Environmental Impact Assessments must have regard to sustainable transport and sustainable urban mobility

strategies. A key element of such strategy is to encourage modal shift away from the private car to more sustainable forms of transport such as public transport, cycling and walking.³

7.5.2 Abatement Measures

Combating Road Traffic Noise

To create an effective overall plan for the reduction of road traffic noise, individual measures should be consolidated into a single set of measures. Examples of this consolidated approach include the following:

- Traffic avoidance plans that combine walking, cycling and public transport.
- Investment in dedicated Cycle Routes.
- Speed reduction plans involving partial access zones, smoothing traffic flows and reducing driving speeds.
- Traffic flow relocation by diverting traffic along non residential, less sensitive routes.
- Mitigation of noise black spots by optimising traffic signals and traffic management.
- Traffic congestion management through management and optimisation of the availability of parking spaces.
- Plans to improve road surfaces and maintenance.

Screening Noise

Noise barriers can be an effective method of reducing the noise of traffic. Roadside noise barriers may be only acceptable for roadways, where pedestrians do not need to cross. It would be unpractical to place noise barriers along streets, which are crossed by pedestrians along their entire lengths. However they could be erected at the boundaries of private properties or public institutions to protect noise sensitive buildings or areas (e.g. hospitals, schools and public parks)

Acoustic Glazing

Soundproofing with dual or triple glazing or equivalent products are a possibility for further protection against noise, if no other measures can be applied or if the effect of other measures is insufficient. However, windows must be kept closed to be effective. Many people have trouble adjusting to this restriction on their normal behaviour. Also, this form of ventilation is not commonly found in the current or new housing stock.

Changing road surfaces

Renewing road surfaces or replacing rough paving with smooth asphalt is another action that can be taken to reduce sound levels and noise impact.

³ EPA Guidance notes 2008

Measures need to be taken to ensure that vehicle speeds do not increase following the resurfacing of the road. Any increase in speed will lead to an increase in noise and negate possible gains due to the smoother road surface.

In the case of noise-reducing road surfaces Stone Mastic Asphalt or Porous Asphalt can reduce traffic generated noise.

7.6 Assessing Effectiveness of Potential Measures

Once the extent of the noise impact has been confirmed for the prioritised locations, as previously outlined in this report, the potential noise mitigations measures will be investigated, and a cost benefit analysis undertaken for each. The estimation of the number of people to benefit from any noise reduction measures can then be achieved. A cost benefit analysis on the potential actions being considered will be carried out in order to develop a prioritised list of actions to be undertaken. This is necessary in order to maximise value for money and deliver benefit from investment. The European Commission working group - 'Working Group on Health and Socio-Economic Valuation of Noise' have produced a position paper in which the following was recommended: -

For road transport, the (interim) use of the median value change in noise perceived by households is 25 € per dB (Lden), per household per year.

A health impact assessment would be a useful means for humanizing the noise results, but would be difficult to undertake this assessment as there is an absence of relevant guidance. New research on noise and health funded by the EPA research programme should hopefully feed into this process.

It should be noted that any work proposed, by the Louth Noise Action Plan will be contingent on finances being available

7.7 Budget and Cost Benefit Analysis

The cost-benefit analysis should address lifetime construction and maintenance costs against noise reduction benefit. The benefit of noise reduction may be viewed in terms of decibels / people / time or could be evaluated (in monetary terms) to fully process the analysis. Guidance documents such as *Community Support Framework Evaluation Unit, Proposed Working Rules for Cost Benefit Analysis, June 1999* are considered acceptable reference standards for undertaking cost benefit analysis of this nature.

However as the noise mitigation being reviewed relates to a single noise source, namely major roads, it is considered appropriate that the scope and detail of the cost benefit analysis to be employed should be agreed in advance with the relevant Roads Authority.

Following the cost-benefit analysis, the locations being reviewed will be prioritised to give a list of beneficial, achievable actions for noise mitigation. This will be done in consultation with the relevant Roads Authority and once agreed and a budget identified will be implemented.

7.8 Outcome

Areas above Onset of Assessment Criteria

Areas with predicted noise levels above the onset of assessment criteria will be prioritised using a standardized decision support matrix. This follows a review to confirm that the predicted noise levels are accurate.

Mitigation measures such as those discussed elsewhere, will assessed for each area and following a cost-benefit analysis a list of achievable actions for noise mitigation will be agreed with the relevant Roads Authority.

Intermediate and Below Preservation Threshold Areas

The implementation of existing Planning and Licensing Regulations is considered adequate to address new development in areas both below the protection threshold and between the thresholds.

8 Public Participation

8.1 Overview

The Regulations require the Action Planning Authorities to consult the public when drawing up and revising Action Plans.

A formal public consultation was undertaken on the Draft Action Plan, as detailed below. This gave the public an early and effective opportunity to participate in the preparation of the plan. The consultation process was planned and undertaken having regard to the Department of Public Expenditure and Reform publication *Consultation Principles & Guidelines 2016*.”.

The following is the timetable of work to be achieved in developing the Noise Action Plan.

May-July 2018	Public consultation and written submissions
July 2018	Draft action plans to be drawn up
September 2018	Action plan Authorities to submit their Action plans to the EPA for final review
18 th Jan 2019	Details of noise control programs and measures to be reported to the EC by the EPA for 3 rd round- ENDRM DF9 and Summary of Noise Action Plans to be reported to the EC by the EPA for 3 rd round- ENDRM DF10

The Draft Action Plan will be on public display from 28th May 2018 until 9th July 2018 with written submissions until 23rd July 2018 . A notice was placed in the local papers in advance advising the public of the locations where and when the plan was on display. A copy of the Draft Action Plan was displayed in the following public buildings:

- Louth County Council, Millennium Centre, St Alphonsus Rd, Dundalk,
- Civic Offices Drogheda, Fair Street Drogheda,
- Town Hall Dundalk, Crowe Street, Dundalk,
- County Library, Jocelyn Street Dundalk,
- Library Stockwell Street, Drogheda,
- Civic Offices Fair Green Ardee.

A copy was also available on the Louth Local Authorities Website www.louthcoco.ie.

The public were invited to make submissions in writing to the following:

Emer O Gorman, Director of Service, Corporate Services, Environment, European Relations, and Human Resources

or

emailed to environment@louthcoco.ie to arrive no later than 4pm on the 23rd July 2018.

In addition comment were sought from relevant groups. Refer to Appendix C for the list of these organisations.

8.2 Results of Consultations

A total of three submissions were received during the public consultation process. There were from the following.

Transport infrastructure Ireland

Environmental Protection Agency

Department of Culture Heritage and the Gaeltacht.

Transport Infrastructure Ireland

Transport Infrastructure Ireland requested the following amendments to the Draft Noise Action Plan,

- 2.1.4 Amended by replacing *“these guidelines set out limits for noise related to both the construction and traffic flow on ne road schemes”* to *“ the guidelines specify design goals for noise associated with the construction and operation of new national road schemes”*
- 2.1.5 Section 77 of the Roads Act 1993. This paragraph was removed as it was repealed by the Public Transport Regulations Act 2009.
- 5.1.1 The following sentence was added, *“In 2017 TII undertook an internal project to develop a dataset of all environmental noise barriers installed along the national road network. For strategic maps prepared for county Louth 11km of noise barrier were included within the model”*
- 7.7 TII are available to meet with review and discuss potential noise mitigation measures and cost benefit analysis exercises to be completed by Louth County Council.
- 9.1 TII are available to meet with Louth County Council to review the strategic noise maps prepared.
- General comments were noted in the submission which related to minor errors within the Draft Plan as follows

1.3.1 *“Traffic” Infrastructure* changed to *“Transport” Infrastructure*

1.4.2 Include “ (now transport Infrastructure Ireland) after National Roads Authority.

4.2 first round changed to third round

9.6 “Transport Infrastructure Ireland must be based upon the results of strategic noise mapping carried out by the designated noise mapping bodies” changed to “Noise Action Plans must be based upon the results of strategic noise mapping carried out by the designated noise mapping bodies”

Appendix A includes Transport Infrastructure Ireland means the body formed through the merger of the National roads Authority and the Railway Procurement Agency under the Roads Act 2015 with effect from 01/08/15.

Environmental Protection Agency

The Environmental Protection Agency submitted the same comments as per the to the Draft SEA Screening. All amendments were therefore carried out prior to the Draft Noise Action Plan going on display

- Relationship with other plans and programs

“The plan should acknowledge the need for consistency between the Plan and with the relevant policies and objectives of the National Planning Framework and regional Spatial and Economic Strategy for the Eastern and Midlands region under preparation”. Text acknowledging this has been integrated into Sections 2 and 9.6 of the Draft Action Plan.

- “In finalizing the plan there is merit in considering the national/regional transport initiatives that may arise from the National Planning Framework and regional Spatial and Economic Strategy for the Eastern and Midlands region.” Text has been integrated into Section 2.9 of the Draft Action Plan considering this issue
- The EPA also a stated that “there was merit in establishing a” Transport Strategy for County Louth” to provide for a co ordinate means of considering , assessing and developing sustainable transport options which can be implemented within the various settlements as appropriate”. This was noted by Louth County Council. Sustainable mobility is currently addressed through land use planning by Louth County Council and by sectoral transport plans/strategies etc. prepared by others. Louth County Council will continue to take into account sectoral transport plans/strategies etc. when undertaking designated functions relating to land use planning and transpor
- “Upon implementing the Plan there is merit in amending the existing County Development Plan to incorporate and implement the latest version of the Plan and the associated commitments. The requirements of the SEA Directive should be considered as part of this process”. Any variation to the existing County Development Plan on foot of adopting the Action Plan will be subject to SEA and AA screening (and full assessments if necessary) in compliance with relevant legislation.
- Specific Comments on the Draft SEA Screening Report The SEA Screening Report provides a useful overview of the existing requirements in force within the planning hierarchy that provide for noise management at national, regional, county and local level. These were noted by Louth County Council

- *In addition to the assessment carried out in accordance with Schedule 1 of S.I. No. 435 of 2004, we also note that the relevant parts of the Plan have been assessed against the SEA Environmental Report ‘Strategic Environmental Objectives’ for the Louth County Development Plan, as set out in Table 2.3 Screening Analysis relevant parts of the Noise Action Plan. This was noted by Louth County Council*
- *Future Modifications to the Draft Plan Where changes to the Plan are made prior to finalisation, or where modifications to the Plan are proposed following its adoption, these should be screened for potential for likely significant effects in accordance with the criteria as set out in SEA Regulations Schedule 1 (S.I. No. 435 of 2004). This was noted by Louth County Council*
- *Environmental Authorities Under the SEA Regulations (S.I. No. 435 of 2004, as amended by S.I. No. 200 of 2011), notice should also be given to the following: • The Minister for Housing, Planning and Local Government • Minister for Agriculture, Food and the Marine, and the Minister for Communications, Climate Action and Environment, where it appears to the competent authority that the plan or programme, or modification of the plan or programme, might have significant effects on fisheries or the marine environment Where it appears to the competent authority that the plan or programme, or amendment to a plan or programme, might have significant effects in relation to the architectural or archaeological heritage or to nature conservation, the Minister for Culture, Heritage and the Gaeltacht. Notice has also been given to relevant environmental authorities by Louth County Council as part of the SEA screening process. These authorities will be notified again once a determination is made as to whether or not SEA is require*

Department of Culture Heritage and the Gaeltacht.

- *This Department notes that the draft Louth Noise Action Plan 2018-2023 is accompanied by two documents, a Strategic Environmental Assessment (SEA) Screening report and Determination and a Screening Statement in support of the Appropriate Assessment (AA). It is also noted that an existing plan is in place for 2013-2018. Noted by Louth County Council*
- *This Department welcomes the fact that the strategic environmental objectives in the SEA screening include the conservation of protected species (B1) and of biodiversity in general outside of designated sites (B3), in addition to protecting Natura 2000 sites (B2). Noted by Louth County Council*
- *It appears that the Screening Statement in support of the Appropriate Assessment does not contain the AA screening as an appendix, whereas the SEA document is both a screening and a determination. This Department therefore cannot comment on the screening issues considered in any detail. However, section 7 of the Draft Noise Action Plan 2018-2023 Report details relevant parts of the Noise Action Plan and possible mitigation measures. The AA Screening Statement does not include a determination as this will*

be made, in compliance with the Regulations, at adoption of the Plan. Conclusions are provided in the SEA Statement at Section 4

- *Such measures include combatting road traffic noise by traffic avoidance plans that combine walking, cycling and public transport and investment in dedicated cycle routes. Noted by Louth County Council*
- *With regard to any new cycle and pedestrian routes, they should not target sensitive ecological sites or parts of sites, as such routes have potential for disturbance to habitats and species, including as a result of noise and lighting for example. Such routes would need ecological assessment in their planning and design in order to ensure their development is consistent with nature conservation objectives and legal compliance requirements. Louth County Council response; Any project that arises as a result of the Noise Action Plan must comply with all relevant levels of the National Planning Framework; including the Louth County Development Plan The potential noise impact of development is managed through the Planning and Licensing processes, including through Environmental Impact Assessments, Strategic Environmental Assessments and application of relevant Guidance relating to noise. It has been evaluated that the Noise Action Plan has no source for effects on ecological processes*
- *This Department notes from section 9.1 that Louth County Council will, following consultation with the Environmental Protection Agency (EPA), carry out a review of Zone 1 areas and Special Areas of Conservation in order to identify a process to delimit Quiet Areas in Open Country. As detailed in section 6.2.2, such areas under the Regulations mean an area, delimited by an action planning authority following consultation with the Agency and approved by the Minister, that is undisturbed by noise from traffic, industry or recreational activities. Noted by Louth County Council.*
- *In section 9.2 there is a target/objective of the delimiting of “Quiet Areas in open countryside”, and these will be linked with sites of national, regional or local importance with regard to landscape, cultural or historical significance, amenity areas or environmentally sensitive areas. It is also noted that there will be consultation on the delimiting of the Quiet Areas with the EPA in year 2 of the 5 year Plan and those areas identified will be submitted to the EPA and Minister in year 5. Noted by Louth County Council*
- *With regard to the natural heritage, this Department requests that it is consulted where such Quiet Areas include environmentally sensitive areas of nature conservation importance, including European sites (i.e. Special Areas of Conservation (SAC) designated under the EC Habitats Directive (Council Directive 92/43/EEC) and Special Protection Areas (SPA) designated under the EC Birds Directive (Directive 2009/147 EC)) and sites proposed as Natural Heritage Areas (pNHA) under the Wildlife Acts of 1976-2012. Noted by Louth County Council see section 9.6.*

8.3 Notification of Plan

The Strategic noise action plan is to be published in electronic format within 28 days of being finalised. A notice to this effect is to be placed in the local press

9 Implementation Plan

9.1 Roles and Responsibilities

Louth County Council will on behalf of the three Action Planning Authorities in County Louth implement the measures in collaboration with the relevant authorities. The carrying out of mitigation and protection measures to deal with noise from the designated roads is contingent on funding being made available. The agreement of the relevant road authorities will be required to implement the measures.

The review of the strategic noise maps will be carried out in consultation with the TII and the EPA.

The continuing implementation of the planning and licensing regulations is a matter for the appropriate statutory body including, Louth County Council, EPA, An Bord Pleanála.

Louth County Council will, following consultation with the EPA, carry out the review of Zone 1 areas and Special areas of Conservation in order to identify a process to delimit Quiet Areas in Open Country .

9.2 Targets and Objectives

The long term strategy of the Action Planning Agencies is to aim at avoiding significant adverse health impacts from noise and preserving environmental noise quality where it is good. The planning system is regarded as having a significant influence on the control of exposure to environmental noise and may play a key role in the improvement of amenity. The appropriate use of the planning system will continue to be used to help avoid, or minimise, the adverse impacts of noise without placing unreasonable restrictions on development. The Department of Culture Heritage and the Gaeltacht will also be consulted in developing Quiet Areas.

The delimiting of ‘Quiet Areas in open countryside’ for approval by the EPA and the minister will be linked with sites of national, regional or local importance with regard to landscape, cultural or historical significance, amenity areas or environmentally sensitive areas.

The Action Plans drawn up for Round 3 over the next 5 years, and beyond to subsequent rounds, will ensure that appropriate mitigation measures are implemented to prevent and reduce environmental noise where necessary from major sources.

9.3 Programme of Works

Year 1

- Identify from noise maps where onset levels of assessment are exceeded
- Carry out site visits and visual assessment of these areas
- Identify areas for further investigation.

- Continue to carry out traffic counts on identified routes.

Year 2

- Identify budget for external noise consultants.
- Complete consultants brief
- Procure consultants
- Consult with the EPA on process for delimiting Quiet Areas.

Year 3

- Identify areas for noise mitigation
- Agree works package with relevant Road Authorities, including timetable for implementation and evaluation. Allow time in programme for obtaining planning permission if required. Consult with relevant road authorities in respect of identifying mitigation measures and their delivery
- Identify budget.

Year 4

- Review progress of Action Plan.

Year 5

- Identify Quiet Areas for delimiting and submit proposal to EPA and Minister
- Review progress of works package
- End of programme review.

9.4 Evaluation and Review

A review of the programme will be carried out annually by Louth County Council. There are a number of risk factors associated with the delivery of the programme. These include financial, procedural and possibly planning risks. It should be noted that some critical elements are outside the control of Louth County Council and will require the approval of other statutory bodies. Also the financial resources required to deliver the programme has yet to be determined and the **delivery of the noise action plan will be contingent on adequate funding being available.**

In view of these uncertainties, it is important that the programme is subject to an ongoing review so as to alert all relevant parties to any change in circumstances. Louth County Council will review the programme on an annual basis and advise all relevant bodies on how the key outcomes are being progressed.

9.5 End of Program Review

The Plan will span a five year period commencing in 2018 and finishing in 2023. This will coincide with the next round of noise mapping and action planning. The end of program review will evaluate progress in terms of the programme drawn up in the Action Plan. The review will also examine the effectiveness of individual measures in terms of measurable noise values. Lessons learned from the first phase action plan will be utilised in the preparation of the second phase and subsequent rounds of action plans.

9.6 Summary and Conclusion

The Environmental Noise Regulations 2006, which gives effect to the EU Environmental Noise Directive, requires that Noise Action Authorities prepare Noise Action Plans for their functional areas in respect of specified environmental noise sources. Transport Infrastructure Ireland must be based upon the results of strategic noise mapping carried out by the designated noise mapping bodies. All proposals for development/works under the Action Plan will be required to demonstrate compliance with the requirements of environmental and planning legislation and planning and licensing processes, including existing provisions of relevant land use plan(s) and policy documents such as the National Planning Framework and the Regional Spatial, the Economic Strategy for the Eastern and Midlands Region, the Louth County Development Plan 2015-2021, the Dundalk and Environs Development plan 2009-2015 (extended) and the Drogheda Development plan 2011-2017 (extended).

In the case of County Louth, only one noise source, that from major roads with traffic in excess of three million movements per year, is applicable for the second round of action plans. Strategic noise mapping in respect of those roads, was carried out by, the Transport Infrastructure Ireland in 2016/17. A Noise Action Plan, which is based on the results of these noise maps, was prepared by Louth County Council.

The Noise Action Plan describes the action planning area and the responsible authorities. It discusses existing noise management legislation and guidance. A summary of the results of the strategic noise mapping is included and the areas that are to be subject to noise management activities are identified. Mitigation and protection measures are set out for these areas and an implementation plan has been drawn up.

The Noise Action Plan covers a five year period beginning in 2018, and must be reviewed and revised if necessary at least every 5 years. The public will be given early and effective opportunities to participate in the preparation of the Plan. This will be done by conducting an 8 week public consultation process on the Draft Plan. The results of the public participation will be taken into account when preparing the final document and the public will be informed of the

decisions taken. Other bodies including the Transport Infrastructure Ireland, adjacent Local Authorities and other relevant organisations were consulted on the draft document. Guidance and advice will be obtained from the designated national authority, the EPA, at all stages of the process.

The results of the strategic noise mapping indicates that, in the County as a whole, an estimated population of **2284 and 5504** have predicted noise levels above the onset levels for assessment of L_{den} and L_{night} respectively. As previously discussed all properties identified from the strategic noise maps will be assessed using the decision based matrix. Following this, further investigations will be undertaken at the relevant areas.

The Noise Action Plan has been drawn up with the twin aims of:

- Protecting the future noise climate
- Improving the existing noise climate where necessary

With this in mind the following key actions are proposed

1. The potential noise impact of future development will be adequately managed through the Planning and Licensing processes, including existing provision for Environmental Impact Assessments. Implementation of existing regulations will continue and the County Development Plan will take cognisance of the noise action plan.
2. The potential noise impact from increased traffic on major roads will be addressed by reviewing (and revising, if necessary) the Noise Action Plan every 5 years, or sooner where a material change in environmental noise in the area occurs. The noise action plan will be reviewed.
3. Carry out, following consultation with the EPA, a review of the landscape assessment and characterisation process in order to identify a process to delimit Quiet areas in open country that will be complementary to the findings of the County Louth- Landscape Character Assessment Study. Identify areas for delimiting and submit proposal to EPA and Minister for approval.
4. The accuracy of predicted noise levels will be confirmed and potential noise mitigation measures identified on a priority basis. Confirmation of maps will consist of visual inspection and where appropriate, noise analysis. A cost-benefit analyses on potential actions will be carried out and a list of beneficial, achievable actions for noise mitigation drawn up.
5. A budget will be identified with each relevant authority and a programme of works agreed and implemented. As with all proposed works, the delivery of any proposed actions will be contingent on funding being available

Appendix A

Glossary of Acoustic and Technical Terms:

“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);

“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 ()

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

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

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

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

“L_ArT” The equivalent continuous A- weighted sound pressure level during a specified time interval, T, plus specified adjustments for tonal character and impulsiveness of the sound.

“L_Aeq,T”

The equivalent steady sound level in dB containing the same acoustic energy as the actual fluctuating sound level over the given period, T.

ADDT Average Annual Daily Traffic

“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;

“major airport” means a civil airport which has more than 50,000 movements per year, excluding those movements purely for training purposes on light aircraft; in this context, “a movement” means a single take-off or landing of an aircraft;

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

“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 an agglomeration”, means an area, delimited by an action planning authority following consultation with the Agency and approval by the Minister, where particular requirements on exposure to environmental noise shall apply.

Traffic Infrastructure Ireland” means the body formed through the merger of the National roads Authority and the Railway Procurement Agency under the Roads Act 2015 with effect from 01/08/15.

Appendix B

Bibliography and References

Environmental Protection Agency - Environmental Management Guidelines, Environmental Management in the Extractive Industry (Non-Scheduled Minerals, 2006).

Environmental Protection Agency - Guidance Note for Noise: Licence Applications, NG4 Surveys and Assessments in relation to Scheduled Activities 2012

Department of the Environment, Heritage and Local Government, *Wind Energy Planning Guidelines*, 2006

National Roads Authority Correspondence (2008)

Environmental Protection Agency

Louth County Development Plan 2015-2021

Dundalk and Environs Development Plan 2011-2017 (extended)

Drogheda Borough Council Development plan 2011-2017 (extended)

European Commission Green Paper 'Fair and Efficient Pricing in Transport' (1996)

Draft Guidance on Noise Action Plans EPA 2008

Fingal County Council

Appendix C

List of relevant Groups for consultation

- An Taisce
- Forestry Service
- Newry and Mourne Council
- Northern Ireland Road Service
- Iarnród Éireann
- Heritage Council
- Meath County Council
- Monaghan County Council
- Transport Infrastructure Ireland
- Environmental Protection Agency
- Department of Environment Community and Local Government (DECLG)
- Department of Transport Tourism and Sport
- Loughs Agency
- Inland Fisheries

Appendix D

- Maps

Appendix E Example Prioritisation Decision Support Matrix

A decision support matrix is a chart which enables identification, analysis and rating of the strength of relationships between various sets of information. It enables a number of different factors to be examined and facilitates the assessment of the relative importance of each.

Table 1 provides an example prioritisation decision support matrix, based upon work carried out by Dublin City Council.

Table 1: Example decision support matrix

		Priority Matrix		
		Location:		
Decision Selection Criteria		Score Range L _{den}	Score Range L _{night}	Subtotal
Noise Band (dB(A))	<45	5	6	
	45-49	4	5	
	50-54	3	4	
	55-59	2	2	
	60-64	1	3	
	65-69	2	4	
	70-74	3	5	
	75-79	4	6	
>=80	5	7		
Type of location	City Centre	1	1	
	Commercial	1	2	
	Residential	2	3	
	Noise Sensitive Location	3	3	
	Quiet Area			
	Recreational	3	3	
	open Space	2	2	
Type of Noise Source	Air	3	4	
	Industry	2	3	
	Rail	2	3	
	Road	3	4	
			Total Score	0

The use of the table may be automated using a spreadsheet or database application, with each noise sensitive premises allocated to one of the “types of location” categories, and the noise level at the most exposed façade scored as per the “noise band” and the source scored as per the “Type of Noise Source”

**Appendix F:
Overview of Recommended Approach to Determine Actions to be Undertaken**



