Executive Summary:

This is the third Noise Action Plan produced for the functional area of Roscommon County Council. This Draft Noise Action Plan has been prepared in accordance with the requirements of EU Directive 2002/49/EC (known as the Environmental Noise Directive, or “END”), which was transposed into Irish Law by the Environmental Noise Regulations 2006, SI No. 140 of 2006.

The actions detailed herein have been drawn up to assess noise exposure in the area, as indicated by strategic noise mapping located on the identified routes within the functional area of Roscommon County Council. It is envisaged that noise action planning should concentrate on planning strategic issues identified by the noise mapping process as provisions already exist to deal with noise nuisances, including neighbour, entertainment and construction noise.

This Action Plan gives an overview of the main requirements of the Environmental Noise Regulations and the authorities responsible. The methods used in the production of strategic noise maps are outlined and summary results are presented. These results are analysed and several recommendations are made as to the best way to limit population exposure to environmental noise pollution.

Roscommon County Council will adopt a strategic approach to managing environmental noise pollution and will aim to assess and prioritise the limitation of Environmental noise levels where they are potentially harmful.

Following the submission of the Summary Noise Action Plan to the European Commission (EC) in 2019, Roscommon County Council will review and revise if necessary the Noise Action Plan every five years, or sooner, where a material change in Environmental noise in the study area occurs.

(Cover photograph “The Gaelic Chieftain”, Curlew Bypass N4 Boyle to Sligo)
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1 Background/Introduction.

1.1 Background

Roscommon County Council has compiled this Noise Action Plan for the functional area of Roscommon County Council in accordance with the Environmental Noise Regulations 2006, S.I. No. 140 of 2006 (Regulations).

“Environmental noise” is defined in the Directive 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 such as those requiring integrated pollution prevention and control licences.

All member states are required to prepare Strategic Noise Maps indicating populations exposed to environmental noise emanating from transport (road, rail and air traffic) and industrial activities. These maps will be the basis for illustrating to the public such information and as a tool to prepare Noise Action Plans by the responsible authorities Purpose of the Environmental Noise Directive (END).

This plan also includes a review of the 2013 Noise Action Plan

1.2 Noise and Effects of Noise

In accordance with the WHO Environmental Noise Guidelines for the European region published in Oct 2018 the following health outcomes were selected as either critical for developing recommendations on the health impacts of environmental noise

Cardiovascular disease
Annoyance
Effects on sleep
Cognitive Impairment
Hearing Impairment
According to the findings of the World Health Organisation (WHO), noise is the second largest cause of health problems, just after the impact of air quality. The World Health Organization's Night Noise Guidelines for Europe present evidence of the health damage of night-time noise exposure and recommend threshold values above which adverse effects on human health are observed. Recommendations for the various sources of noise are set out in the new guidelines.

For Road Traffic Noise the recommendations are:

For average noise exposure the Guideline Development Group strongly recommends reducing noise levels by road traffic below 53 decibels (dB) L den.

For night exposure the recommendation is for 45dB L night.

1.3 Purpose of the Environmental Noise Directive - 2002/49/EC (END)

In 2002 the European Union issued a Directive (2002/49/EC) relating to the assessment and management of environmental noise, also known as the Environmental Noise Directive, hereafter referred to as the END. The Directive’s main aim is to put in place a European-wide system for identifying sources of environmental noise, informing the public about relevant noise data and then taking the necessary steps to avoid, prevent or reduce noise exposure.

The European Union Directive (2002/49/EC) relating to the assessment and management of environmental noise was transposed into Irish law under Statutory Instrument No. 140 of 2006, also known as The Environmental Noise Regulations 2006. The Regulations were brought into force in accordance with the powers conferred on The Minister by sections 6, 53 and 106 of the Environmental Protection Agency Act 1992 (No. 7 of 1992), as amended by Part 2 of the Protection of the Environment Act 2003 (No. 27 of 2003).

1.4 Noise Assessment

Requires competent authorities in Member States to generate strategic noise maps for major roads, railways, airports and agglomerations, using harmonised noise indicators $L_{den}$ (day-evening-night annual average sound level) and $L_{night}$ (night time annual average sound level). The maps are used to
present environmental noise data, as a source of information to the public and to assist in the preparation of Noise Action Plans.

1.5 General Community Environmental Noise

“Environmental noise” is 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 commercial or industrial activity such as those that lead to complaints from the public or those requiring integrated pollution prevention and control licences.

Current national guidance documents list types of premises/areas considered “noise sensitive” premises as any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.

In addition to the specific road noise measures included in this plan Roscommon County Council will examine all Planning applications and all complaints in relation to noise included in these definitions with a particular emphasis on noise sensitive locations. Where necessary, a full review of the application or complaint will be undertaken, noise assessments will be carried out and mitigation measures as appropriate will be imposed including but not limited to the installation of noise monitoring equipment by the operator of the premises to be monitored by Roscommon County Council to ensure compliance with Noise regulations.

Action in relation to Community Environmental noise can be taken under Planning, Environmental and noise regulations and as appropriate by An Garda Síochána. Roscommon County Council is currently developing a protocol for dealing with noise complaints. This protocol will be developed in accordance with the recommendations as set out in the Network for Ireland’s Environmental Compliance & Enforcement (NIECE) publication ‘National Protocol for Dealing with Noise Complaints for Local Authorities (NIECE, 2016)’
1.6 Development of Action Plans

Purpose and scope
Noise action plans are aimed at defining a common approach intended to avoid, prevent and reduce exposure to environmental noise and also at protecting quiet areas. They will form the basis of a long term environmental noise strategy and are not tools for dealing with nuisance noise complaints.

Extent/Range
Action plans are based on the results of the noise mapping process. The noise mitigation measures contained within action plans deal with potential issues identified during noise mapping, with a view to reducing the number of people exposed to unacceptably high noise levels and protecting areas of perceived tranquillity.

Public Participation and the Role of the Public
Public participation and dissemination of data to the public are integral parts of the END and the Environmental Noise Regulations. The public should be consulted at all stages of policy development and implementation. The role of the public is to review and guide the formulation of strategic noise policy with a view to avoiding, preventing and reducing, where necessary, exposure to environmental noise. Their role is not to highlight individual instances of noise annoyance, but to contribute to an overall best approach to widespread environmental noise reduction.

1.7 Scope of the Environmental Noise Directive (END)

The Directive is aimed at establishing harmonised EU measures to reduce noise emitted by the major sources, in particular road and rail vehicles and infrastructure, aircraft, outdoor and industrial equipment and also at providing a basis for developing and complementing the existing set of community measures concerning environmental noise. It does not apply to noise that is caused by the exposed person himself/herself, noise from domestic activities, noise created by neighbours, noise at work places or noise inside means of transport or due to military activities in military areas. Noise maps are strategic tools and should not be used for the assessment of local noise nuisances.

1.7.1 Aims and Objectives
The aim of the Environmental Noise Directive is “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 objective of the Directive is to establish an EU wide approach to avoid prevent or reduce environmental noise where necessary and particularly where exposure levels can induce harmful effects on human health, and to preserve existing good quality environmental noise levels. The Regulations identify and assign responsibilities to the particular organisations required to produce strategic noise mapping, and to those organisations responsible for the development of action plans.

Roscommon County Council as the Action Planning Authority was required to produce Action Plans in 2008, 2013 and this third round in 2018. Plans must be prepared every five years. The Action Plan must be prepared 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 long term objective is to substantially reduce the noise exposure harmful to the health of residents within the subject areas. The establishment of designated Quiet Areas in Open Country, which are subject to EPA and Ministerial Approval, will focus on areas of national, regional or local importance in terms of landscaping cultural and historical aspects, amenity areas and environmentally sensitive locations. These objectives will be achieved through the ongoing development of the Noise Action Plan and through the National planning processes and regulations and the County Development Plan. This approach will be supported subject to the provision of specific resources by a process of regular review and verification by on site field surveys and measurement within the specified timeframes for the Action Plans.

1.8 Roles and Responsibilities of Designated Bodies.

1.8.1 National Authorities.
The Regulations designate the Environmental Protection Agency (EPA) as the 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. The EPA is responsible for reporting to the European Commission the information relating to strategic noise mapping and action planning in accordance with Article 10(2) of the Directive.
1.8.2 Noise Mapping Bodies

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

- For the agglomeration of Cork, Cork City Council and Cork County Council;
- For the agglomeration of Dublin, Dublin City Council and the County councils of Dun Laoghaire/Rathdown, Fingal, and South Dublin;
- For major railways, Íarnród Éireann or Transport Infrastructure Ireland, as appropriate, on behalf of the action planning authority or authorities concerned;
- For major roads, where such roads are classified as national roads in accordance with Section 10 of the Roads Act 1993 (No. 14 of 1993), the Transport Infrastructure Ireland, on behalf of the action planning authority or authorities concerned, and other than those provided for in part (i), the relevant local authority or authorities, as appropriate; and
- For major airports, the relevant airport authority, on behalf of the action planning authority or authorities concerned.

The relevant noise-mapping bodies were required to produce strategic noise maps for:

- An agglomeration with more than 100,000 inhabitants
- A major road
- A major railway
- Any major airport

A major road is defined as any motorway, regional or national road with more than 3 million vehicle passages per year, while a major railway is any railway with more than 30,000 train passages per year.

The Regulations also state that the designated noise-mapping bodies are required to make and maintain a strategic Noise Map, or Revised Map as appropriate over the life time of the Plan.
1.8.3 Action Planning Authorities
Under the Environmental Noise Regulations the following organisations have been designated as action planning authorities:

- For the agglomeration of Cork, Cork City Council and Cork County Council;
- For the agglomeration of Dublin, Dublin City Council and the County Councils of Dun Laoghaire/Rathdown, Fingal, and South Dublin;
- For major railways, the local authority or local authorities within whose functional area or areas the railway is located
- For major roads, the relevant 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 the airport is located.

Accordingly, Roscommon County Council is designated as the action planning authority for all sections of major roads within the functional areas of the Council, which experience a volume of traffic greater than 3 million vehicle passages per year.

There are no major railways, airports or agglomerations subject to noise mapping or action planning within the functional area of the Council. The railways in County Roscommon are not considered to be major as they do not have more than 30,000 train passages per year.

1.8.4 Responsibilities of Action Planning Authorities

Action planning authorities are responsible for the making and approval of action plans, in consultation with the Agency and the noise-mapping body for the noise maps involved. Action plans must satisfy the minimum requirements set out in the Fourth Schedule of the Regulations.

Action planning authorities are required to ensure that:

- The public are consulted on proposals for action plans
- The public are given early and effective opportunities to participate in the preparation and review of Action Plans
- The results of public participation are taken into account in finalising Action Plans or reviews of Action Plans
- The public are informed of the decisions taken in relation to Action Plans
Reasonable time-frames are adopted to allow sufficient time for each stage of public participation.

Under the first phase of implementation of the Regulations, Noise Mapping Bodies and Action Planning Authorities were assigned responsibility to draw up noise maps and prepare noise action plans for the following noise sources:

- Major railways with more than 60,000 trains per annum (not applicable to Roscommon).
- Major airports with more than 50,000 flights per annum (not applicable to Roscommon).
- Major roads with more than 6 million vehicles per annum.
- Agglomerations of greater than 250,000 inhabitants (not applicable to Roscommon).

These plans were produced in 2008/2009 and spanned a period of five years.

The second round of plans was drawn up to take account of reduced thresholds for noise sources, these thresholds are listed below:

- Major railways with more than 30,000 trains per annum (not applicable to Roscommon).
- Major airports with more than 50,000 flights per annum (not applicable to Roscommon).
- National roads with more than 3 million vehicles per annum.
- Non-National or Regional roads with more than 3 million vehicles per annum.
- Agglomerations of greater than 100,000 inhabitants (not applicable to Roscommon).

Under this third round the thresholds are the same as under the second round

- Major railways with more than 30,000 trains per annum (not applicable to Roscommon).
- Major airports with more than 50,000 flights per annum (not applicable to Roscommon).
- National roads with more than 3 million vehicles per annum.
- Non-National or Regional roads with more than 3 million vehicles per annum.
- Agglomerations of greater than 100,000 inhabitants (not applicable to Roscommon).

1.9. Preparation of Strategic Noise maps

The Transport Infrastructure Ireland (TII), as the noise mapping body for National roads, has prepared noise maps for the M6(N6), N4 and N61 and N63, while Roscommon County Council as the noise mapping body for the Non-National or Regional roads complied data for the preparation of maps for the R362 in County Roscommon. For these roads it was confirmed by
verified vehicle count data that the roads had more than three million vehicles per annum. This Noise Action Plan has been prepared by Roscommon County Council to address environmental noise from National roads, Non-National or Regional Roads with more than three million vehicles per annum.

The noise maps generated by the TII and subsequently presented to the European Commission by the EPA are plotted in graphical form in terms of $L_{den}$ and $L_{night}$. They are presented in 5dB contour bands beginning at 50-54dB ($L_{night}$) and ranging up to 70-74dB ($L_{den}$). The maps also provide an indication of noise levels which are greater than 75dB. The noise levels indicated are predictions attributed only to a specific source of noise i.e. road traffic.

**For Roscommon the action planning area covers the sections of roadway as follows:**

- The M6 from Athlone (Bogganfin/Monksland) and the Ballinasloe Interchange (Tulrush);
- The N6 from county boundary with Westmeath to junction 13 of M6;
- The R362 from county boundary with Westmeath to round about/junction with L-2047-0 Monksland;
- The N61 from Athlone (Bogganfin) to Roscommon (Ardsallagh Beg/Ballypheasan);
- The N63 from county boundary with Longford through Ballyleague village (speed limit area);
- The N4 from Carrick on Shannon (Cortober/Drishoge) to Boyle (Drumode/Tintagh).

As a result of the lowered threshold of vehicles per annum, a more extensive road network requires noise mapping than that of the original 2008 plan. The data for this round of mapping was compiled during 2017. It is intended that the approach recommended for the long-term management of road noise in the current action planning area will include all identified major roads and some non-national roads in County Roscommon listed above.

**1.9.1 Action-Planning Authorities.**

Roscommon County Council under Article 7 (d) of the Environmental Noise Regulations 2006 is the designated Action Planning Authority for the purpose of this plan. Roscommon County Council endeavoured to publish the plan by Nov 2018, following consultation with the Environmental Protection Agency, and make an action plan for major roads which have more
than three million vehicle passages per year. In the case of Roscommon County Council this relates to the sections of road listed above.

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**Implementation of the Plan**

This new Noise Action Plan will span a 5 year time scale from 2018 to 2023. The Action Plan details measures proposed to be introduced to lessen the effect of high levels noise in areas highlighted in the Noise Maps. They detail planned activities over the lifespan of the Noise Action Plan and include a program review before the end of the action plan time frame.

The following outlines the Timetable adopted for the preparation and completion of this 3rd round of Noise Action Plans:

- **Sept 2018:** Draft Action Plan to be submitted to the EPA for review
- **Oct-Nov:** Public consultation phase
- **Dec 2019:** Noise action plan updated following public consultation and submitted to EPA for final review.
- **18th January 2019:** Details of noise control programs and measures to be reported to the EC by the EPA for 3rd round – ENDRM DF9 and
- **18th January 2019:** Summary Noise Action Plans to be reported to the EC by the EPA for 3rd round - -ENDRMDF10
2 Existing Noise Management Legislation and Guidance.

2.1 National Legislation and Guidance.

2.1.1 Noise Action Plan Policy statement
The aim of Roscommon 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 that all future developments located beside identified major routes take cognisance of the noise action plan.

2.1.2 Environmental Protection Agency Act 1992.
In Ireland, the principal law relating to noise is Sections 106, 107, and 108 of Part VI of the Environmental Protection Agency (EPA) Act 1992.

S106:
The Minister for the Environment has power under Section 106 of this Act, after consulting with other concerned Ministers and the EPA, to make regulations for the purpose of the prevention or limitation of any noise which may give rise to a nuisance or constitute a danger to health or damage property.

S107:
Local Authorities have powers under Section 107(1) to serve a notice on any person in charge of premises, processes or works, other than an activity which is licensable under IPC, when they consider that it is necessary to do so in order to prevent or limit noise. The EPA has the same power in relation to an activity licensable by it.

S108:
The (Noise) Regulations 1994 (S.I. 179) which implemented Section 108 of the EPA Act1992, were designed to simplify and strengthen the procedures for dealing with noise nuisance. A Local Authority, the EPA or any other affected person may complain to the District Court under Section 108(1) of the EPA Act, where any noise is so loud, so continuous, so repeated, of such duration or pitch or occurring at such times as to give reasonable cause or annoyance to a person in any premises in the neighbourhood, or to a person lawfully using any public place. The EPA Act provides a method for dealing with nuisance noise in the community. It does not however, address noise pollution in the long term. The END, enacted through the Environmental Noise
Regulations, is the beginning of a framework to develop long term strategic policies to combat noise pollution and protect the public from potentially harmful effects of environmental noise exposure

### 2.1.3 IPPC and Waste Licensing.

The EPA’s Integrated Pollution Prevention Control Licensing terms require that certain bodies must limit environmental pollution caused by industrial activities in order to obtain a license to operate. The relevant guidance is set out in the EPA publication in 2016, *Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)*. This document recommends a “Best Available Technique” approach to the assessment and mitigation of noise pollution. This approach should take into account the nature of the noise e.g. constant, impulsive or tonal, the nature of the surrounding environment and the time and duration of noise emissions. The document contains guideline values that can be applied on a general level. This document in section 4.3 contains typical noise limits values from licenced sites

- 55 dB $L_{Ar,T}$ for daytime (07:00 to 19:00hrs),
- 50 dB$L_{Ar,T}$ for evening (19:00 to 23:00hrs)
- 45dB $L_{Aeq,T}$ for night time (23:00 to 07:00hrs).

These noise limits are typical of those set for areas which are not designated as Quiet Areas or areas with low background noise, in these areas more stringent noise levels apply. Whilst these limits have a very specific application, they have appeared in many different contexts and often form the basis for conditions in planning permissions. Similar noise conditions are also imposed on waste-licensed facilities.

### 2.1.4 Waste Permitting.

Roscommon County Council may impose noise conditions on waste permitted facilities where noise is considered to be a potential issue. These conditions are generally similar to the EPA waste licence conditions.
2.1.5 Wind Energy Planning Guidelines

The Department of the Environment, Heritage and Local Government in 2006 published Wind Energy Development Guidelines. The EPA also produced Guidelines in 2011 entitled “Guidance Note on Noise Assessment of Wind Turbine Operations at EPA Licensed Sites (NG3)”. The proposed cumulative site and turbine noise limits in the EPA guidelines are

- Daytime 55 dB L Ar,T
- Night-time 45 dB L Aeq
- Wind turbine noise not to exceed 45dBLaeq at any time or to contain any significant tonal components

At the time of publication of this Noise Action Plan the aforementioned Department guidelines were undergoing review. If at the end of the national review process there are amendments made to existing Wind Energy Development Guidelines, Roscommon County Council will endeavour to incorporate such changes into future Noise Action Plans, into any actions carried out in accordance with this plan or future actions or noise mitigation measures implemented in accordance with the provisions of S.I. 140 of 2006, Environmental Noise Regulations, 2006.

It should be noted that in the ‘Renewal Energy Strategy’ which was adopted as part of the Roscommon County Development plan 2014-2020 that “A (outdoor)noise limit of 40dB attributable to one or more turbines, should be applied in order to restrict noise from wind turbines at noise sensitive properties.

2.1.6 Quarries and Ancillary Activities

Section 261 of the Planning and Development Act, 2000, introduced a new system of one-off registration for all quarries. Only those quarries for which planning permission was obtained in the 5-year period before S261 became operational were excluded. The Department of the Environment published guidelines for Planning Authorities for quarries and ancillary activities in April 2004, including recommended noise conditions for inclusion as part of registration or where a full planning permission was required. Depending on the complexity of the quarrying operation,
noise conditions were included as part of the registration process and as part of the planning process for quarry extension applications.

### 2.1.7 Transport Infrastructure Ireland Guidelines

In light of the lack of standardised methods for the assessment of road traffic noise the NRA published the “Guidelines for the Treatment of Noise and Vibration in National Road Schemes.” In 2014 the NRA also published a ‘Good Practice Guideline for treatment of Noise during the Planning of National Road Schemes. It is also the intention of TII to publish standards documents relating to noise and vibration in the context of planning and construction of (proposed) national roads. These guidelines propose design goals for noise related to both the construction and traffic flow on new road schemes.

For new roads in Ireland, it is standard practice to adopt the traffic noise design goal contained within the TII guidance document. This document specifies that the Authority (i.e. TII) considers it appropriate to set the design goal for Ireland as follows:

- **day-evening-night 60dB L_\text{den}** (free field residential façade criterion)

Noise mitigation measures are deemed necessary whenever all of the following three conditions are satisfied:

- the combined expected maximum traffic noise level, i.e. the relevant noise level, from the proposed road scheme together with other traffic in the vicinity is greater than the design goal, and;
- the relevant noise level is at least 1dB more than the expected traffic noise level without the proposed road scheme in place; and the contribution to the increase in the relevant noise level from the proposed road scheme is at least 1dB.

These conditions will ensure that mitigation measures arising out of this process are based upon the degree of impact of the scheme under consideration. This Design Goal is applicable to new road schemes only.
Essentially what this means, is that for any new road scheme, the Environmental Impact Assessment Report must take this target into account, with regard to any existing sensitive residential property likely to be affected by the road scheme. The guidelines present an approach to mitigating the adverse effects of road construction in so far as possible through the use of measures such as alignment changes, barrier construction e.g. earth mounds, and the use of low noise road surfaces. The responsibility for considering noise mitigation policy relating to any proposed new sensitive properties in the vicinity of the road scheme lies with the relevant Planning Authority.

2.1.8 Building Regulations 1997 (as amended)

Part E of the Building Regulations (Part E Amendment) Regulations 2014 relates to the mitigation of sound transfer between dwellings and rooms within a building.

Sound.

E1 Each wall and floor separating a dwelling from— (a) another dwelling or dwellings, (b) other parts of the same building, (c) adjoining buildings, shall be designed and constructed in such a way so as to provide reasonable resistance to sound.

Reverberation.

E2 The common internal part of a building which provides direct access to a dwelling shall be designed and constructed so as to limit reverberation in the common part to a reasonable level.

Definitions for E3 this Part.

In this Part—“Reverberation” means the persistence of sound in a space after a sound source has been stopped.”

No consideration is given to the nature or location of the building or potential noise sources. More comprehensive regulations should include façade noise insulation guidelines and appropriate standards to be met before habitation.
2.2 Regional and Local Legislation and Guidance

2.2.1 National Planning Framework, 2040

In 2018, the Government issued the National Planning Framework 2040, which includes - Policy Objective 65 to:

Promote the pro-active management of noise where it is likely to 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 top level national spatial plans in Ireland will essentially guide where population increase and economic growth is to be focused.

2.2.2 Regional Planning Guidelines for the West Region 2010-2022.

These Guidelines set out the vision for the West Region through the formulation of strategic goals, policies and objectives. The physical planning context of the region is set out with a number of future development options explored. The Regional Authority and Planning Guidelines for the West Region 2010 – 2022 under policy EAP24 supports the implementation of the Environmental Noise Regulations (S.I. 140 of 2006). The Western Region includes County Roscommon and a key aspect of the West Regional Authority’s Regional Planning Guidelines is integrating sustainable economic development with the protection and enhancement of the environment. These guidelines however will soon be superseded by the Regional Spatial & Economic Strategies(RSES) document which is currently in preparation and will reflect the policies as set out in the National Planning Framework.(NPF)

2.2.3 Roscommon County Development Plan 2014-2022

As included in the Roscommon County Development Plan 2014 – 2022 section 9.1.4, Roscommon County Council will seek to ensure that new developments do not cause an unacceptable increase
in the noise and pollution levels affecting surrounding properties. In considering planning applications for residential development in areas adjoining major roads, the Council will have regard to any Noise Maps and Noise Action Plans relating to the site location in accordance with the EU Directive on Assessment and Management of Environmental Noise as implemented by the Environmental Noise Regulations (Department of Environment, Heritage and Local Government, 2006).

It should be noted that in the ‘Renewal Energy Strategy’ which was adopted as part of the RCDP that “A (outdoor) noise limit of 40dB attributable to one or more turbines, should be applied in order to restrict noise from wind turbines at noise sensitive properties.

### 2.3 Existing Noise Limit Values

At present there is no existing legislation that limits noise levels to a particular value. To address the lack of legislative measures and unify the approach taken by Action Planning Authorities the EPA have issued guideline noise levels for the onset of assessment of noise exposure and prioritising areas for noise mitigation measures. The proposed onset of assessment levels relating to road traffic noise are given below.

**Onset levels for noise mitigation measures:**
- $70 \text{dB } L_{\text{den}}$
- $57 \text{dB } L_{\text{night}}$

**Onset levels for measures to preserve the existing noise situation:**
- $55 \text{dB } L_{\text{den}}$
- $45 \text{dB } L_{\text{night}}$

These levels reflect an annual average 24 hour period.

These values were decided upon after a review of guidance values issued in other countries e.g. the UK and the TII guidelines for treatment of noise. The noise maps are plotted in 5dB contour bands, so in order to identify areas which are exposed to exactly 57dB, TII can provide the building facade noise level results, or the grid of noise level results, which makes it possible to identify locations above 57 dB Lnight. Nonetheless these values can be seen as indicative criteria in the decision-making process. This value could be rounded up or down depending on the situation and the location of the exposed properties. Combined with the graphical results of noise...
mapping, consideration of the number of people exposed and the type of property the guidelines provide a useful framework for assessing noise impact.
Current national guidance documents list types of premises/areas considered “noise sensitive” premises as any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels (EPA, 2003).

3 Description of the Action Plan Area

3.1 Description of County Roscommon

Roscommon is an inland county in the province of Connaught covering an area of 2,549 sq. kilometres. The county is predominantly rural, with a settlement density of 23 persons per square kilometre. Roscommon is bordered along the east and west by the River Shannon and the River Suck respectively which meet to the south of the county. Most of the county is flat with the main elevated lands located in the northern fringe of the county. The land of county Roscommon is largely underlain by limestone and forms part of the central plain of Ireland.

3.1.1 Population Data

Roscommon county has a population of 64,544 persons (2016 census), an increase of 0.7% on the 2011 census.
Despite the substantial population growth experienced in Ireland in recent years, population growth in Roscommon has remained relatively low, with some significant growth occurring in and around key towns but the majority of the county experiencing population decline. Population densities vary considerably from low densities in the rural areas in the North and Northwest to relatively high densities in the southern district, which is dominated by the influence of Athlone town.
3.2 Transport Infrastructure in County Roscommon

3.2.1 Road Network

County Roscommon has approximately 3,987 km of roads that consist of approximately:
- Motorway 20 km (12.5 miles) – M6
- National Primary Route 85 km (52.5 miles) - N4, N5 & N6
- National Secondary Route 147 km (91 miles) - N60, N61, N63 & N83
- Regional Routes (Non National) 373 km (231 miles) - R - Various Numbers
- Local Routes (Non National) 3,362 km (2,085 miles) - L - Various Numbers

The National Development Plan (NDP) has stated objectives to upgrade the N5 National Primary

3.2.2 Bus Transport

There are 4 categories of bus transportation currently within county Roscommon:
- Bus Éireann expressway long distance services
- Bus Éireann School Bus services operated on behalf of the Department of Education and Science
- Private bus services
- Community Bus Routes operated under Rural Transport Initiative(s) (RTI)

3.2.3 Route Rail Network

Roscommon is served by 3 rail lines the pass through the county namely;
- Dublin Heuston to Westport Line
- Dublin Heuston to Galway Line
- Dublin Connolly to Sligo Line

Future plans from Iarnród Éireann are to increase the frequency of service on main lines to a minimum of 2 hourly.

3.2.4 General Population Exposed to Traffic Noise

For Roscommon the action planning area covers the sections of roadway as follows:
· The M6 from Athlone (Bogganfin/Monksland) and the Ballinasloe Interchange (Tulrush);
· The N6 from county boundary with Westmeath to junction 13 of M6;
· The R362 from county boundary with Westmeath to round about/junction with L-2047-0 Monksland;
· The N61 from Athlone (Bogganfin) to Roscommon (Ardsallagh Beg/Ballypheasan);
· The N63 from county boundary with Longford through Ballyleague village (speed limit area);
· The N4 from Carrick on Shannon (Cortober/Drishoge) to Boyle (Drumode/Tintagh).

3.4 Location of Noise Sensitive Buildings

Certain locations and building types are considered to be more sensitive to noise pollution than others. The main priority of the END is to reduce noise exposure in residential areas. It is also recommended that competent authorities designate buildings such as educational and health care facilities as being noise sensitive.

In accordance with this guidance and in line with the Action Plan coverage area definitions given above, Roscommon County Council has designated the following as being noise sensitive locations in Co. Roscommon:

- Roscommon University Hospital (N61)
- Oakwood Nursing Home, Roscommon (N61)
- Knockcroghery N.S (N61)
- Kiltoom N.S (N61)
- Ballyleague N.S (N63)
- Costello’s Nursing Home, Ballyleague. (N63)

It should be noted that these locations were chosen because of their proximity to the major road. Some of these buildings have at least one façade directly exposed to the roadway. While other noise sensitive areas exist within the towns such as additional schools, places of worship etc. they
are not located in the immediate vicinity of the major road and should therefore be exposed to lower levels of traffic noise pollution.

Accordingly, these additional locations will not be assessed for priority mitigation activity, but will be considered in the overall strategy for the long term management of noise pollution.

3.5 Review of the existing Noise Action Plan.


The following roads were identified as being above the threshold of 3,000,000 vehicles per annum:

- The M6 from Athlone (Bogganfin/Monksland) and the Ballinasloe Interchange (Tulrush);
- The N6 from County boundary with Westmeath to junction 13 of M6;
- The R362 from County boundary with Westmeath to roundabout/junction with L-2047-0 Monksland;
- The N61 from Athlone (Bogganfin) to Roscommon (Ardsallagh Beg/Ballyheasan);
- The N63 from County boundary with Longford through Ballyleague village (speed limit area);
- The N4 from Carrick on Shannon (Cortober/Drishoge) to Boyle (Drumode/Tintagh).

As a result of strategic noise mapping carried out a total number of 1862 people in 1179 residences were exposed to noise levels in the range of 55 to 64 dB $L_{den}$ and an estimated 1466 persons in 814 residences were exposed to noise levels in the range of 50 to 59 dB $L_{night}$.

A number of goals and mitigation measures were identified in the plan were set under this (2013) noise action plan but due to economic conditions and subsequent prioritisation of local authority funding in the short term, measures which were outlined in the five year plan were not implemented in full. Some works were carried out including traffic calming measures, speed limit reductions, porous asphalt overlays. The sections of roadway detailed in this round two plan are included in the next round (2018) noise action plan. Roscommon County Council will strive in so far as possible to implement and set in place any mitigation measures as may be required under
the next action plan phase to limit and/or reduce amount of noise to which the population in these areas is exposed to.

4  **Summary of the Results of Noise Mapping**

4.1  **Overview of the preparation of the noise map**

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

4.1.1  **Responsible Authorities**

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

In 2017, a centralised approach to the noise mapping of major roads outside agglomerations was adopted. Through this centralised approach, one central body, the TII, developed strategic noise maps for all major roads outside agglomerations, encompassing both national and non-national roads. Non-national roads were mapped by the TII on the behalf of the relevant Local Authority provided that authority participated in the centralised approach and provided ‘model-ready’ data to the central body for calculations.

**Case 1:** Non-national roads are deemed to be a major road when carrying in excess of 3 million vehicles per year
Case 2: No non-national road deemed to be a major road.

4.1.2 Noise Mapping Process

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

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

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

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

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

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

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

- The NANR 93 project report;
- DMRB Volume 11 Section 3 Part 7 HD 213/11 Annex 4,
- Additional advice to CRTN procedures;
TRL Project report PR/SE/451/02, Converting the UK Traffic Noise Index $L_{10,18h}$ to EU Noise Indices for Noise Mapping, 2002; using traffic count information, particularly for the night period, wherever practicable.

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

4.1.4 Data Sources

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

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

Aerial LiDAR
In 2009, the NRA published a notice for tender for an aerial LiDAR survey of approximately 3,019km of the Irish national road network. The survey corridor was 1,200m in width. The survey was completed in early 2011 and outputs included 1 metre contours for the entire survey area, building height information for buildings within the survey corridor and a digital terrain model (Figure 2).
GeoDirectory
The GeoDirectory data products are developed by OSI and An Post to provide a single point location object for each building in Ireland. The GeoDirectory dataset provides the definitive address database for the country and is an essential component in calculating the population exposed to the various noise bands, information that is required to be submitted to the EU as part of this work.

Corine Database
The European Environment Agency’s (EEA) CORINE Land Cover 2012 dataset is a European-wide vector land parcel product derived from satellite imagery R2V processing. The CORINE dataset was developed in the framework of the CORINE programme to establish a computerised inventory on land cover. The dataset was used for making environmental policy as well as for others such as regional development and agriculture policies. For noise calculation, the dataset can be used to provide information on the land cover distribution.

Ordnance Survey of Ireland (OSI)
OSI maintain a wide range of mapping products that are available for use within strategic noise mapping. Some datasets required additional licensing to be taken out. Some datasets included for analysis.
- Prime 2 which was introduced in 2015.
- OSI Boundaries:
  - County, ED and Townlands boundaries.
  - OSI High Resolution Ortho Photography:

**Central Statistics Office (CSO)**
The CSO publish statistical information on population based upon Census returns. The most recent Census was held in 2016, and some of this information is now publically available. The information available on population is issued according to various political boundaries, namely Province or County, Province County or City, Regional Authority, Constituency or Electoral Division. Small Area Population Statistics (SAPS) was also used for R3, in line with EPA guidance issued in 2017.

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

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

**4.1.5 Software and Hardware**

All datasets were prepared and collated in a GIS Environment prior to importing them to the noise mapping programme. All attributes were consistent through the datasets thus ensuring an efficient export.
Details of the noise mapping system are presented in Tables 1 - 3.

<table>
<thead>
<tr>
<th>Modelling Hardware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Windows 10</td>
</tr>
<tr>
<td>Standard x64 Edition</td>
</tr>
<tr>
<td>Intel (R), Core(TM) i5-4590 @3.30GHz with 19.9 GB of RAM</td>
</tr>
</tbody>
</table>

**Table 1: Hardware Specifications**

<table>
<thead>
<tr>
<th>Modelling Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predictor V11.21</td>
</tr>
<tr>
<td>Predictor Calculation Client V11.20</td>
</tr>
<tr>
<td>Predictor Analyst V3.40</td>
</tr>
</tbody>
</table>

**Table 2: Software Specifications**

<table>
<thead>
<tr>
<th>Calculation Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fetching Radius 1,500m</td>
</tr>
<tr>
<td>Standard Tile Size 10km x 10km</td>
</tr>
<tr>
<td>Standard Tile Buffer 2,000m</td>
</tr>
</tbody>
</table>

**Table 3: Calculation Settings**

4.1.6 **Population Exposure Estimates**

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

- population data from the CSO
- address data from the geo-directory
- façade points output by the noise model (describing the noise level at the facade of every building),
building polygons, used by the noise model

The population data used was from Census 2016 and is using the ‘small areas’ geographies which are areas of between 50 and 200 dwellings, downloaded from the CSO website, as well as ED’s, and Administrative counties. The address data used was Geo-Directory from quarter 2 2017. Façade points were the outputs of noise modelling. For the noise mapping 2017 project a noise model was created with a 2km buffer on each county. By analysing all these datasets together it was possible to estimate the average number of people for each residence in the test area (the small area) and assign a noise level to that building. These estimates were collated to derive an overall exposure level for the County. Full details of this process are presented in Chapter 10 of the EPA’s Guidance Note for Strategic Noise Mapping 2017.

4.2 Presentation of Results

The results of the noise map analysis for entire County for the Action Plan Area is as follows, please refer to Appendix D attached to this report:
### ROSCOMMON POPULATION EXPOSURE

<table>
<thead>
<tr>
<th>L&lt;sub&gt;den&lt;/sub&gt;</th>
<th>Approximate Number of People</th>
<th>L&lt;sub&gt;night&lt;/sub&gt;</th>
<th>Approximate Number of People</th>
</tr>
</thead>
<tbody>
<tr>
<td>55-59</td>
<td>1,206</td>
<td>50-54</td>
<td>765</td>
</tr>
<tr>
<td>60-64</td>
<td>665</td>
<td>55-59</td>
<td>689</td>
</tr>
<tr>
<td>65-69</td>
<td>594</td>
<td>60-64</td>
<td>91</td>
</tr>
<tr>
<td>70-74</td>
<td>64</td>
<td>65-69</td>
<td>0</td>
</tr>
<tr>
<td>&gt;75</td>
<td>0</td>
<td>&gt;70</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>L&lt;sub&gt;den&lt;/sub&gt;</th>
<th>Approximate Area (Km&lt;sup&gt;2&lt;/sup&gt;)</th>
<th>L&lt;sub&gt;night&lt;/sub&gt;</th>
<th>Approximate Area (Km&lt;sup&gt;2&lt;/sup&gt;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;55</td>
<td>30</td>
<td>&gt;50</td>
<td>16</td>
</tr>
<tr>
<td>&gt;65</td>
<td>6</td>
<td>&gt;60</td>
<td>3</td>
</tr>
<tr>
<td>&gt;75</td>
<td>1</td>
<td>&gt;70</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>L&lt;sub&gt;den&lt;/sub&gt;</th>
<th>Approximate Number of Dwellings</th>
<th>L&lt;sub&gt;night&lt;/sub&gt;</th>
<th>Approximate Number of Dwellings</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;55</td>
<td>1,033</td>
<td>&gt;50</td>
<td>648</td>
</tr>
<tr>
<td>&gt;65</td>
<td>265</td>
<td>&gt;60</td>
<td>36</td>
</tr>
<tr>
<td>&gt;75</td>
<td>0</td>
<td>&gt;70</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>L&lt;sub&gt;den&lt;/sub&gt;</th>
<th>Approximate Number of People</th>
<th>L&lt;sub&gt;night&lt;/sub&gt;</th>
<th>Approximate Number of People</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;55</td>
<td>2,529</td>
<td>&gt;50</td>
<td>1,545</td>
</tr>
<tr>
<td>&gt;65</td>
<td>658</td>
<td>&gt;60</td>
<td>91</td>
</tr>
<tr>
<td>&gt;75</td>
<td>0</td>
<td>&gt;70</td>
<td>0</td>
</tr>
</tbody>
</table>

The results in the tables above indicate that there are 64 people in County Roscommon exposed to noise levels in excess of proposed onset levels for assessment of noise mitigation measures based on L<sub>den</sub> levels. The data used in delineating the L<sub>night</sub> noise zones is based on bands of 5 dB, banding of zones by this method indicates that 91 persons are exposed to excess of 60 dB. While the next band range is from 55 dB to 59 dB indicates that 689 persons are exposed to noise levels in this range. This band as shown does not allow for the delineation of persons exposed to noise levels in excess of the 57 dB range, however as stated in section 2.3 an accurate account of persons may be determined using the facade receivers from TII (Note: These figures are a reduction on the figures in the 2013 Action Plan)
4.3 Limitations of Results/Maps

The data used to generate the noise maps was obtained from computer modelling rather than from actual noise measurement. This approach is in accordance with the Noise Regulations. This noise mapping method makes it difficult to quantify the reduction in noise levels achieved by specific mitigation measures implemented at a local level. Without “before” and “after” noise monitoring results, improvements cannot be quantified. Data obtained from computer modelling is somewhat limited in that it provides a single annual average noise level and does not identify changing noise profiles over time.

The strategic noise maps are based on averaged data sets that best describe the defining parameters of the noise model. While these predictive models are extremely complex, they only provide estimates of the likely noise levels resulting from these conditions. It is possible that, in some cases, factors outside the scope of the predictive model could influence the levels of environmental noise.

The results of the noise mapping process display noise levels attributed only to a single source i.e. traffic noise. While this may by far be the most predominant source of environmental noise, the maps may not always be fully representative of the noise exposure levels in the given area.

In relation to the assessment of quiet areas in open country the maps become inapplicable. By definition these areas are undisturbed by noise from traffic, industry or recreational activity. As such, they will not be located in the vicinity of major roadways and will lie outside even the lowest contour bands of the noise maps. In addition, the identification of quiet areas within a built up environment becomes difficult when the mapping results for the area are attributed to a single major road passing through the development. Areas identified by the noise maps as being ‘quiet’ may be subject to traffic noise from smaller roads within the built up area that do not qualify under the requirements of the noise mapping process. These areas may in fact experience levels of environmental noise that are higher than indicated due to traffic flows that are outside the scope of the mapping process.

Nonetheless, the mitigation of noise levels from the major sources will still be of benefit to these areas and will at least provide relatively perceived benefits regardless of absolute levels.
4.4 Identification of Areas to be Subject to Noise Management Activities

Strategic noise maps provide an indication of which locations are subject to undesirably high levels of environmental noise. However, not all of these noise “hotspots” require priority action. Various factors must be taken into account when deciding if noise management is necessary, such as, the type of buildings and land use in the area, the source of the noise and of course the level of noise itself. For the purpose of identifying problem areas for action planning, the EPA has proposed the use of a 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. An example of this decision support matrix is given in Appendix C.

A total score of approximately 17 or above in this matrix indicates that the location in question should be included in a shortlist for further assessment. When combined with the guideline values for the onset of noise assessment presented in Section 2.3 the support matrix allows for a more comprehensive evaluation of the impact of noise pollution at a given location.

4.5 Confirmation of Onset of Assessment Thresholds

The guideline values presented in Section 2.3 were used as a preliminary indicator of the need for noise assessment and possible mitigation activity. The estimated population exposure figures indicate that there may be up to 64 people exposed to noise levels above the assessment threshold of 70dB $L_{den}$. The night time noise figures indicate that there may be up to 780 people subject to noise levels above the guideline threshold value of 57dB $L_{night}$.

The predicted exposure levels at these residences give rise to the need for further detailed noise assessment.

4.6 Protection Thresholds for Quiet Areas

Under the Regulations it is required to delimit quiet areas in agglomerations. As there is no qualifying agglomeration within Roscommon County, there is no statutory requirement to identify quiet areas within County Roscommon.
4.7 Quiet Areas in Open Country

Under the Regulations it is required to delimit quiet areas in the open country as defined by “an area, delimited by an action planning authority following consultation with the Agency and approval by the Minister, that is undisturbed by noise from traffic, industry or recreational activities.”

By definition the areas covered by the strategic noise mapping will not include any areas which may be considered undisturbed by noise, and it would be more appropriate to consider research work undertaken on tranquillity which addresses the interaction between noise and other factors such as visual amenity, cultural, historic, ecological, landscape and presence of natural sounds.

In support of this aspect of the regulations the EPA commissioned research work undertaken by Waugh and Durcan to evaluate baseline noise levels in areas of rural Ireland.

The complex interrelationships between the various factors which build up an impression of tranquillity means that the classification of quiet areas in open countryside may not be defined on acoustic measurement alone, but should incorporate criteria which balance the various associated aspects.

It is proposed that during the implementation of the Action Plan a review will be undertaken of the research in this area, and the findings referenced across to Roscommon County Council policies set out in the Development Plans on landscape character areas, protected views and scenic routes and heritage conservation; which will need to be balanced with the projected demands for rural development, tourism and the extractive industries. As appropriate, quiet areas in open countryside would then be identified and consultation undertaken prior to any recommendation for approval by the Minister. Although a similar review was included in the R2 action Plan, it was not carried out.

4.8 Application of the criteria

With the thresholds for onset of assessment and onset of preservation defined the decision support matrix could be developed to help provide a rating scheme which would initially help to identify locations beyond the assessment thresholds, but also assist in the process of ranking the locations to help develop an initial prioritisation for further investigation.
The decision support matrix has been used to assess all noise sensitive locations within the strategic noise mapping area during the first phase of the implementation of the Action Plan.

### 4.9 Results of the analysis

An analysis has been undertaken in 2018 using the Decision Support Matrix in order to establish areas which should be subjected to further analysis and assessment. The results of this assessment is outlined in the table below. Those areas which are recommended for further assessment will be appraised in 2019.

**Decision Support Matrix (2018)**

<table>
<thead>
<tr>
<th>Location</th>
<th>Decision Support Matrix Score</th>
<th>Comments and Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitive Buildings as Defined in Section 3.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roscommon University Hospital</td>
<td>20</td>
<td>Score 17 or above - Proceed for Further Assessment</td>
</tr>
<tr>
<td>Oakwood Nursing Home, Roscommon</td>
<td>19</td>
<td>Score 17 or above - Proceed for Further Assessment</td>
</tr>
<tr>
<td>Knockcroghery N.S</td>
<td>17</td>
<td>Score 17 or above - Proceed for Further Assessment</td>
</tr>
<tr>
<td>Kiltoom N.S</td>
<td>19</td>
<td>Score 17 or above - Proceed for Further Assessment</td>
</tr>
<tr>
<td>Ballyleague N.S</td>
<td>16</td>
<td>Score below 17</td>
</tr>
<tr>
<td>Costello’s Nursing Home, Ballyleague.</td>
<td>18</td>
<td>Score 17 or above - Proceed for Further Assessment</td>
</tr>
</tbody>
</table>

Further assessment will be carried out in relation to exposed dwellings.
5 Mitigation and Protection Measures

5.1 Sources of Road Noise

The level of environmental noise generated by a particular road is dependent on a range of factors including the number and type of vehicles, the speed of the vehicles, the road surface and the incline. The extent to which the noise travels from the road is affected mainly by the following parameters: distance, weather, the presence of acoustic barriers, buildings, road width, road incline, nature of the topography and whether the ground is acoustically absorbent or reflective. The most significant factor in terms of noise generation is the noise produced by the vehicle.

Vehicle noise arises from three sources:
· Propulsion noise (engine, exhaust and intake systems).
· Tyre/road contact noise.
· Aerodynamic noise.

Engine noise is the dominant source at lower speeds (under 30kph for passenger cars/under 50kph for lorries), tyre/road noise dominates above that and aerodynamic noise becomes louder as a function of the vehicle speed (ref. European federation for transport and environment). Vehicle noise limits are set in EU legislation and address propulsion noise for new vehicles. Current limits are shown in Appendix E. Noise emissions are determined by means of a vehicle drive-by test, which measures the noise emitted as the vehicle is driven by at 50kph and accelerates in front of the microphone position. The current drive by test does not include provision for evaluating noise performance in typical urban stop-start traffic situations at lower speeds, where engine noise is the dominant source. Another failing is that the test parameters are set in such a way that vehicles can be designed to pass the test but are considerably louder when driven on the road. A new type of vehicle test has recently been introduced which corrects for these limitations.

The EU noise limits are a valuable tool for ensuring that noise emissions are minimized for new vehicles. However, they only apply to new vehicles. As vehicles age, the level of noise produced by the engine increases with wear and tear on the parts but there is presently no requirement in Ireland to assess noise emissions from older vehicles. Another practical limitation to the noise
emission limits is that while a newly purchased vehicle may comply with its emission limit, modifications to or removal of the vehicle silencer will result in an excessively noisy vehicle. Installation of a sports exhaust on a vehicle is not illegal at present and is a major contributor to nuisance noise from road vehicles.

Tyre rolling noise emissions have increased over time, predominantly due to the trend towards wider and heavier tyres. Tyre/road contact begins to dominate the noise emission above 30km/h for passenger cars and above 50km/h for lorries. For this reason, it was deemed necessary to regulate tyre/road noise separately at EU level. The rolling noise emissions of tyres are regulated under the following EU regulations.

**Type-approval requirements for the general safety of motor vehicles, their trailers and systems, components and separate technical units intended there for – Regulation No 661/2009**

Under the framework of Directive 2007/46/EC this regulation establishes new maximum permissible rolling noise limits for tyres available on the market across Europe. This noise limits replace the previous limits set out within Directive 2001/43/EC. The new Regulation requires tyres to comply with more stringent limits on rolling noise emissions. Compliance with these new noise limits is mandated from 1st November 2012 for new types of tyre, from 1st November 2013 for new types of vehicle and from 1st November 2016 for all new tyres and vehicles. The new rolling noise limits are between 3 and 4 dB(A) lower than the previous limits.

**Labelling of tyres with respect to fuel efficiency and other essential parameters – Regulation 1222/2009**

In support of Regulation 661/2009 this Regulation establishes a framework for the provision of harmonised information on tyre parameters through labelling, allowing end-users to make informed choice when purchasing tyres.

As from 1 November 2012 the EU Energy labels for tyres must be available at point of sale and show information on fuel consumption, wet grip and rolling noise levels, as shown in Figure 3.
5.2 Measures to Reduce Noise from Major Roads

5.2.1 Existing Developments

There are a limited number of approaches that can be taken to reduce noise from major roads for existing dwellings:

· Where areas are identified by further assessment as requiring possible mitigation, it may be possible to install noise barriers on major roads away from residential areas (where pedestrian access is an issue).

· Traffic calming measures can be employed where the major road passes through a built up area.

· Roscommon County Council did not prioritise noise action plan measures from the second action plan as part of a short term strategy due to a change in the economic conditions. However, as part of a long term strategy Roscommon County Council envisages that all future noise action plans shall be adopted and integrated into the County Development Plan and incorporated into the planning process and road maintenance programmes within the county.
5.2.2 Future Developments

The measures available for the protection of future developments from exposure to noise from major roads include acoustical planning measures in land use zoning and development layout, design and specifications, such as: locating residential developments away from major roads; using the lands around major roads feeding into towns for commercial/industrial development; incorporating noise issues into the design of housing developments by locating the access roads and green areas on the major road side of the development, thus increasing the separation distance between the houses and the roads; using a higher standard of insulation for new dwellings adjacent to major roads and also using higher standards of insulation for the exposed façades of new dwellings.

Roscommon County Council will endeavour to protect the future noise climate by the early incorporation of noise action planning into the planning and operational stages of future developments. In accordance with Section 9.1.4 of Roscommon’s County Development Plan 2014-20, the Council will seek to ensure that new development does not cause an unacceptable increase in the noise and pollution levels affecting surrounding properties. In considering planning applications for residential development in areas adjoining major roads, the Council will have regard to any Noise Maps and Noise Action Plans relating to the site location in accordance with the EU Directive on Assessment and Management of Environmental Noise as implemented by the Environmental Noise Regulations (Department of Environment, Heritage and Local Government, 2006).

It is envisaged that under the forthcoming review and any future reviews of the Roscommon County Development Plan; the planning authority will consider designating quiet areas in open country side in accordance with guidance issued for noise action planning.

In addition, there are no current projects within the Action Plan Area whereby noise mitigation measures may need to be considered.

Public transport improvements, fall under the control of other agencies such as the transport providers. However, as the Roads Authority and as a key player in the development arena with a remit for the promotion of sustainable development, Roscommon County Council has the potential to influence the decisions of other relevant public transport infrastructure. The Council acknowledges the importance of the provision of a high quality public transport service provision.
6. **Going forward – Plans of Action**

The aim of the Action Plan is to “prevent and reduce environmental noise where necessary and particularly where exposure levels can induce harmful effects on human health and to preserving environmental noise quality where it is good”. The Action Plan will endeavour to manage the existing noise environment and protect the future noise environment within the action planning area.

Management of the existing noise environment may be achieved by prioritising areas for which further assessment and possible noise mitigation may be required. Protection of the future noise environment may be achieved by acoustical planning, which further incorporates noise into the planning process via measures such as land-use planning, development planning, sound insulation measures, traffic planning and control of environmental noise sources.

In this regard Roscommon County Council aims to undertake the following actions within the action planning area:

**Final NAP/Year 1**

The results of the strategic noise mapping provide information on the assessed noise levels at properties within the assessment area, along with an estimate of the number of inhabitants. These resultant datasets may then be used in combination with the recommended onset of assessment noise levels to develop a noise scoring decision matrix. This decision matrix is used to draw up a short list of potential areas for action, both above the onset level where mitigation measures are deemed appropriate, and below the onset level for the preservation of Quiet Areas.

Roscommon County Council shall use such a decision matrix to assess the properties within the Action Plan Area to determine a shortlist of properties that may require attention.

**Year 2**

Prior to the review of potential noise mitigation measures, and any subsequent commitment of budget to undertake any necessary actions, Roscommon County Council aim to confirm that the noise levels indicated by the strategic noise maps are being experienced by the population within the study area. This monitoring will be carried out in accordance with relevant national and international standards. Once the extent of the existing noise impact has been confirmed for the
locations under review, the potential noise mitigations measures will be investigated, and a cost benefit analysis undertaken for each with the aim of developing a selection matrix which leads towards a recommendation for action.

Liaise with Planning Section as part of the preparation for next County Development plan 2021-2026

**Year 3**

Following on from Year 2 a priority of actions shall be agreed to form a list of beneficial, achievable actions for noise mitigations. Each action shall be designed, budgeted and programmed by the relevant Department for consideration within their future work plans.

Continue liaising with Planning Section as part of the preparation for next County Development Plan 2021-2026

Carry out a mid-plan review of this noise action plan

**Year 4/5**

Roscommon County Council shall undertake a review in years 4/5 of the current action plan and prepare for revised Action Plan. Roscommon County Council’s Environment Department will oversee the implementation of the Noise Action Plan. The plan will form part of the section’s Team Development Plan which is reviewed on a quarterly basis. All outcomes from the Plan shall be reviewed in year 5 and shall feed into the process for all subsequent plans. Specific mitigation measures, if any, may be implemented and reviewed by the relevant section of the Local Authority

Ensure financial provisions are in place to produce the next Noise Action Plan.

Prepare Draft Noise Action Plan 2023 (Round 4)

7. **Long-Term Strategy**

The Local Authority as the Planning Authority can have a significant influence on the control of exposure to environmental noise and shall play a key role in the improvement of amenity. The
appropriate use of the planning system can be used to help avoid or minimise the adverse impacts of noise without placing unreasonable restrictions on development.

In order to successfully use the planning process to help avoid or minimise noise exposure in a consistent manner it is considered appropriate for guidance on noise exposure levels to be considered within the proposal and design stage of planning applications.

Roscommon County Council identifies the planning system as a key instrument going forward to help avoid or minimise the adverse impacts of environmental noise. Early intervention in the planning process is important to identify the noise impact of future developments. Planning permission can be used in a positive manner to preserve areas below or within the protection thresholds.

Roscommon County Council will consider utilising the planning process where necessary:

- To integrate Noise Action Plans into the County Development Plan.
- To ensure current guidelines where they exist relating to noise limit values and mitigation are considered during the planning process.
- To ensure future developments are designed and constructed so as to avoid or minimize noise exposure.
- To ensure compliance with current and future policy and guidelines relating to environmental noise.

8 Financial Information

Financial provisions have not been made available at national level to fund any noise assessment measures, mitigation measures or additional noise mapping requirements resulting from implementation of this action plan. Roscommon County Council is committed to implementing the provisions of this Noise Action Plan in as far as it is practical within existing financial and staff resources. As part of the actions contained within the Plan, any proposed noise mitigation measures shall require detailed estimates prior to formal approval along with a cost benefit analysis to determine the effectiveness of the proposal.
9 Public Consultation

9.1 General

The Regulations require the Action Planning Authorities to consult the public when drawing up and revising Action Plans. The public was consulted about the proposals in the draft action plan and given early and effective opportunities to participate in the preparation and review of the plan. The results of the public consultation have been taken into account in finalising the plan. Reasonable time must be provided for each stage of public participation.

9.2 Public Consultation Process

The public consultation process was be carried out in accordance with national guidelines. Roscommon County Council made the Draft Noise Action Plan available for public display for a three week period, from the 16th Nov 2018 to 7th Dec 2018,. A further week was allowed for submissions from the public (14th Dec). The draft plan was placed on Roscommon County Council’s website www.roscommoncoco.ie and was available for inspection at Roscommon County Council’s Environment Offices at Aras an Chontae, Roscommon. A notice was placed in the local newspapers inviting the public to submit their views on the draft plan. Submissions and observations were invited from the general public in the preparation of the final Noise Action Plan. Submissions received have been considered and incorporated, where appropriate, into the finalised Noise Action Plan.

9.3 Consultation with Statutory and Other Bodies

In addition to the general public, the following stakeholders have been asked to comment on this noise action plan:

· Department of the Communications, Climate action & Environment
· Department of Transport, Tourism & Sport
· Environmental Protection Agency
· TII
· Westmeath County Council
· Longford County Council
· Leitrim County Council
· Sligo County Council
· Mayo County Council
· Galway County Council
· Environment and Water Services Strategic Policy Committee
· Planning and Economic Development Strategic Policy Committee
· Roads and Transportation Strategic Policy Committee

**Next stage in the process**
After the Noise Action Plan has been amended, the final report will go to the Chief Executive for approval. Thereafter copies of the Noise Action Plan will be made available for access by the public within all Public Libraries across County Roscommon, and by placing an electronic version on the Council website [www.roscommoncoco.ie](http://www.roscommoncoco.ie) and will also be available at a reasonable cost from the Environment Section.
Appendix A – Glossary of acoustic and technical terms

**Acoustical Planning**: 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.

**Agglomeration**: A dense urbanized area having a population greater than 100,000 persons (population greater than 250,000 for the first round of the Environmental Noise Regulations 2006).

**Decibel (dB)**: A unit of measurement of sound. When measuring environmental noise, an “A” weighting network is used (called dB(A)) which filters the frequency of the sound to mimic human hearing, which is most sensitive to frequencies between 500Hz and 5,000Hz. The decibel scale is logarithmic. If two noise sources emit the same sound level e.g. 80dB(A), the combined sound level from the two sources is 83dB(A) and not 160dB(A). The human perception of “loudness” is that a 10dB increase in sound level is perceived as being twice as loud. A 3dB increase, which is a doubling of the sound level, is perceived as a barely perceptible change in loudness. A decibel level of zero represents absolute silence. A level of 140dB(A) would cause ear pain.

The table below gives examples of the relationship between the subjective valuation of noise and the actual objective levels (taken from the END Briefing note of the 07/02/08):

<table>
<thead>
<tr>
<th>Noise Level dB (A)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>Threshold of pain</td>
</tr>
<tr>
<td>95</td>
<td>Pneumatic drill (at 7m distance)</td>
</tr>
<tr>
<td>83</td>
<td>Heavy diesel lorry (40km/hr at 7m distance)</td>
</tr>
<tr>
<td>81</td>
<td>Modern twin-engine jet (at take-off at 152m distance)</td>
</tr>
<tr>
<td>70</td>
<td>Passenger car (60km/hr at 7 m distance)</td>
</tr>
<tr>
<td>60</td>
<td>Office Environment</td>
</tr>
<tr>
<td>50</td>
<td>Ordinary conversation</td>
</tr>
<tr>
<td>40</td>
<td>Library</td>
</tr>
<tr>
<td>35</td>
<td>Quite bedroom</td>
</tr>
<tr>
<td>0</td>
<td>Threshold of hearing</td>
</tr>
</tbody>
</table>
**Daytime:** Between the hours of 7am and 7pm.

**dB(L_{max}) peak:** Instantaneous Maximum Peak sound pressure measured in decibels on a sound level meter, without the use of a frequency weighting system - used to measure air overpressure levels from blasting.

**Evening time:** Between the hours of 7pm and 11pm.

**Environmental Noise:** Shall mean 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 such as integrated pollution prevention and control licensed industries.

**Hertz:** Unit of frequency of sound.

**IPPC Licence:** Integrated Pollution Prevention and Control Licence (obtained from EPA).

**L_{den}:** (day-evening-night noise rating indicator) shall mean the noise indicator for overall annoyance. This comprises of adding the average value for the 12 hour day time period with the average value of the 4 hour evening period plus a 5 decibel weighting or penalty, and the average value for the 8 hour night time period with a 10 decibel weighting or penalty.

**L_{day}:** (day-noise indicator) shall mean the noise indicator for annoyance during the day period. This is the average value in decibels for the daytime period.

**L_{evening}:** (evening-noise indicator) shall mean the noise indicator for annoyance during the evening period. This is the average value in decibels for the evening time period.

**L_{night}:** (night-time noise indicator) shall mean the noise indicator for sleep disturbance. This is the average value in decibels for the night-time period.

**Major road:** A national or regional road with more than 3 million vehicles per annum.

**Major railway:** A railway line, which has more than 30,000 train passages per year.

**Major Airport:** 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.

**Night time:** Between the hours of 11pm and 7am
**Noise annoyance:** Noise annoyance is defined by the World Health Organisation (WHO) as 'a feeling of displeasure evoked by noise'. Ref UK DOT, Transport analysis guidance, Noise, TAG unit 3.3.2 November 2006.

**Peak Particle Velocity (ppv):** Peak particle velocity is a measure of vibration magnitude, which is the maximum rate of change of ground displacement with time, usually measured in mm/sec.
Appendix B - Bibliography and References

Bibliography and References

Environmental Protection Agency, Johnstown Castle Estate, Wexford, Ireland.
EPA Guidance Note on Noise Assessment of Wind Turbine Operations at EPA Licensed Sites (NG3)
Environmental Protection Agency, Johnstown Castle Estate, Wexford, Ireland.
Environmental Protection Agency, Johnstown Castle Estate, Wexford, Ireland.
Environmental Protection Agency, Johnstown Castle Estate, Wexford, Ireland.
Roscommon County Council, Aras an Chontae, Roscommon.
TII website: http://www.tii.ie/
EPA website http://www.epa.ie/
Appendix C: Decision/Selection 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 table presents the prioritisation decision support matrix to be used to support the action planning decision making process.

*Table 12-1: Example decision support matrix*

<table>
<thead>
<tr>
<th>Priority Matrix</th>
<th>Location:</th>
<th>Decision Selection Criteria</th>
<th>Score Range Lden</th>
<th>Score Range Lnight</th>
<th>SubTotal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Noise Band</strong></td>
<td></td>
<td>&lt;45</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>45 - 49</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 - 54</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>55 - 59</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>60-64</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>65-69</td>
<td>2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>70-74</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;75</td>
<td>4</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td><strong>Type of Location</strong></td>
<td></td>
<td>City Centre</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Residential</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Noise Sensitive School</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Quiet Area</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recreational open space</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>Type of Noise Source</strong></td>
<td></td>
<td>Air</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Industry</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rail</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Road</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td><strong>Total Score</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>
Each noise sensitive premises is allocated to one of the “Type 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”.

An example of the use of the matrix for a residential property exposed to road traffic noise levels of 71 dB $L_{DEN}$ and 63 dB $L_{night}$ is shown in the following table.

Table 12-2: Example of use of decision support matrix

<table>
<thead>
<tr>
<th>Priority Matrix</th>
<th>Score Range</th>
<th>Score Range</th>
<th>SubTotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision Selection Criteria</td>
<td>L$_{DEN}$</td>
<td>L$_{night}$</td>
<td></td>
</tr>
<tr>
<td>Noise Band(dB(A))</td>
<td>5</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>&lt;45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45 - 49</td>
<td>4</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>50 - 54</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>55 - 59</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>60-64</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>65-69</td>
<td>2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>70-74</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>75 - 79</td>
<td>4</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>City Centre</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Residential</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Noise Sensitive</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>School</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Quiet Area</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Recreational open space</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Type of Location</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Industry</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Rail</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Road</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Type of Noise Source</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Score</td>
<td>18</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A score of approximately 17 or above indicates that the threshold levels have been exceeded and the location should be included in the shortlist for further assessment.

Similarly, a location with low noise levels may also score above 17, which then indicates that it should be short listed for consideration as a location where environmental noise levels are currently considered good.
Appendix D - Strategic Noise Maps

If anyone requires to view these maps at a larger scale please visit http://www.tii.ie/
Appendix E – EU Noise Emission Limits for Road Vehicles

Overview of EU Environmental Legislation

Noise from Vehicles and Machinery

Existing noise control legislation can be divided into four categories. The noise emissions from **motor vehicles** are covered by two directives introducing sound level limits. Three directives limit noise emissions from **aeroplanes** by reference to the Convention on international Civil Aviation. Noise emission from **household appliances** has been the object of a framework directive on household appliances. The last sector, **construction equipment**, is based in the EEC conformity assessment procedure framework directive which led to the adoption of seven daughter directives on particular types of equipment.

Noise Control

Motor Vehicles

Directive 70/157/EEC introduces limits on the sound levels of noise for road vehicle and gives requirements for measuring sound levels and exhaust systems and silencers. Several amendments, the latest by Directive 96/20/EC, have reduced these permissible sound levels. Limit values for eight types of passenger and goods vehicles range from 74 dB(A) to 80 dB(A). It applies a system of optional harmonisation to the approval of motor vehicles and exhaust system. The Member States may not refuse to grant EEC or national type-approval to vehicles which meet the requirements of the directive.

Motorcycles

Directive 78/1015/EEC on motorcycles establishes limits for the permissible sound level of motorcycles and requirements for exhaust or intake silencer. It introduces a harmonised testing procedure before issuance of the sound level measurement certificate. A system of optional harmonisation is applied to the checks carried out by the Member States which may not refuse to grant EEC or national type-approvals, although they are not required to adopt these standards for domestic producers. Limit values are given for three categories of motorcycles and range from 75 dB(A) to 80 dB(A). Members are required to respect the validity of each other's certificates.
Appendix F – Submissions received as part of the Public Consultation process.

In addition to the EPA’s review of the draft plan, submissions three submissions were received in relation to the plan.

TII forwarded comments on the 22nd Nov. pointing out references in the draft plan that were incorrect or had been superceded.
All comments by TII have now been incorporated into this final document.

Leitrim County Council requested that Roscommon County Council consult with LCC should any noise mitigation measures be required along the N4 from Carrick on Shannon(cortober/Drishoge) to Boyle (Drumode/Tintagh).
Roscommon County Council have agreed to this request.

Eileen Murray of Kilbryan, Boyle made a submission complaining about a particular noise issue at her dwelling along the N4 at Kilbryan. On approval of the plan follow up noise assessment will be carried out at this location and any proposed mitigation measures/funding will be discussed with TII.