



Guidance Note for Noise Action Planning

For the first round of the
Environmental Noise Regulations 2006

July 2009

Updated sections

June 2018 (DRAFT)

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The EPA guidance note for noise action planning issued in 2009¹ outlines the various steps involved in preparing a noise action plan, and includes relevant information to identify the extent of the noise impact as well as outlining some noise mitigation measures.

The EPA has undertaken a review of this action planning guidance note to include some updates on:

1. Round 3 action planning timelines;
2. Review of Round 2 noise action plans;
3. The Strategic policy context;
4. Environmental noise & health related issues;
5. Identification of Priority noise areas;
6. An update on noise planning guidance;
7. Strategic Environmental Assessment;
8. Appropriate Assessment;
9. Dublin Agglomeration noise action plan;
10. Other Related Information.

Appendix 1; Draft Noise Action Plan Review

Appendix 2: Summary of ProPG Guidance approach

Appendix 3: Priority Threshold score

1. Round 3 Action Planning Timelines

Section 1.6: of the 2009 guidance contains some outdated timelines for Round 2. The relevant Round 3 dates for the noise action planning tasks are as follows:

- March 2018: Draft Noise Action Plans to be submitted to the EPA for review;
- April to June 2018: Public consultation (6 – 8 weeks) on Draft Noise Action Plan;
- 18 July 2018: Draft Action Plans (including comments) are to be "drawn up".
- September 2018: Action Plans to be submitted to the EPA for final review – **including the short Summary Noise Action Plan**;
- 18 January 2019: Details of noise control programs and measures to be reported to the EC by the EPA for 3rd round – ENDRM DF9; and
- 18 January 2019: Summary Noise Action Plans to be reported to the EC by the EPA for 3rd round – ENDRM DF10.

The approval of the draft Noise Action Plan (NAP) is considered as an Executive function of the council. However, there is no direct indication in the Noise Regulations as to whether it is an Executive or Reserved function, while the function is not listed under any of the Local Government Acts 1925 -2014. It is also advised that the draft NAP should also be presented to the relevant Special Policy Committees (SPCs) as part of the consultation process and the complete plan can be brought to the full Council via the relevant SPCs for recommendation.

¹ EPA Noise Action Planning guidance: <http://www.epa.ie/pubs/advice/noisemapping/>

2. Review of Round 2 noise action plans

The EPA reviewed the draft Round 2 noise action plans that were submitted in March 2013. During this review process, a few common issues emerged that should be considered by the Action Planning Authorities (APAs) to help in the development of the Round 3 noise action plans.

The original EPA Guidance Note for Noise Action Planning (July 2009) may indicate that it is for the first round of the Regulations, however it remains applicable for the 3rd round action plans now being drawn up, as the Environmental Noise Regulations and the Directive have remained unchanged in the interim.

The noise action plans that are now being drawn up for the 3rd round under the Environmental Noise Directive (END) means that in 27 cases the action planning authorities (APA) have a duty to review and revise where necessary the noise action plans developed under the second round (p.38 of the EPA Guidance). As with the requirement on noise mapping bodies to review and revise where necessary the strategic noise maps, this means that the APAs should provide some discussion within their 3rd Round action plan which sets out the nature and process of the review undertaken, the conclusions drawn, and the subsequent actions undertaken. The review could include aspects such as progress against timetable, changes in noise situation and exposure, details of actions undertaken, costs, dates and numbers of people affected or benefited by actions (see Appendix 1).

The move from the second to the 3rd round also means that certain aspects of the Guidance ought to be considered in a revised context from the 2nd round. Some examples are set out below.

- Noise reduction measures in force or planned (p.18)
 - For Round 3 this should include any measures, steps or programmes which have commenced or have been undertaken as a result of the Round 2 action plan.
- Means by which progress and outcomes of Action Plan will be monitored & appraised (p.19)
 - For Round 3 this should include a report on progress against timetable for the Round 2 action plan, any actions commenced or undertaken, and any costs and outcomes or benefits achieved.
- Details of any noise control programmes carried out in the past (p.63)
 - For Round 3 this should include programmes commenced or undertaken since Round 2.

The move from a Round 2 to a Round 3 noise action plan does not produce a fundamental change in the approach, structure or content of the plan, however it is appropriate to provide an update to indicate progress and actions undertaken as a result of the noise action plan drawn up in 2013.

Any direct comparison of the Rd 3 versus Rd 2 results should be carefully considered, as changes to the model input datasets used between Rd 2 and Rd 3 may be significant. This may especially apply to the terrain model used. For the Dublin agglomeration, a basic Ordnance Survey (OS) 10m contour dataset was used for Rd 2, while a highly detailed LiDAR derived 1m contour dataset was used for Rd 3. This terrain model change would tend to lead to an increase in screening effects.

In addition, there may be improved building height data, & improved traffic flow data with fewer assumed flows. Additional building height data is also likely to increase screening effects, and reduce the extent of noise contours and exposure. Lower % Heavy Goods vehicles (HGVs) would produce a reduction in the basic noise level emission from the road source. There may also be some revisions to the actual road network modelled in Rd 3. The change from Electoral Districts (EDs) to Small Area Population Statistics (SAPS) population data may be another relevant factor, as well as the improved resolution of census data in 2016.

The noise maps are the product of assimilating a collection of digital datasets, and over the past 10 years, Ordnance survey Ire (OSi), Transport Infrastructure Ireland (TII) & the LAs etc. have invested heavily in significant improvements to the quality of the digital datasets describing the natural and built environment in Ireland. This has led to the strategic noise models being based on increasingly detailed and accurate data, which has in turn has led to more reliable noise results *with much less tendency to over predict the impact*.

During the EPA review of the Round 2 draft NAPs, a checklist (see Appendix 1) was used to confirm that the NAP contains the minimum requirements set out within the END & the Regulations, as the recommended aspects discussed within the EPA Guidance. The checklist is provided here to enable APAs to self-screen draft NAPs prior to submission to the EPA.

3. Strategic policy context

In 2018, the Government issued the National Planning Framework 2040², 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. The National Planning Framework and the three Regional Spatial and Economic Strategies (currently being prepared) should be considered by the LAs when developing their noise action plans.

For the Round 3 Noise Action plans, the main Strategic policy documents (as outlined in the 2009 Guidance) that may need to be considered by the Local Authorities would include Local Area Plans, Strategic environmental assessment regulations, Urban regeneration strategies & Noise abatement policy etc. However, some additional policy documents that also need to be considered would include those listed below. In particular, any transport related aspects that could be relevant to noise action planning should be considered;

- Emerging climate change initiatives (as referred to in the 2009 guidance), could be updated to refer to the National Mitigation Plan and National Climate Adaptation Framework, as well as relevant regional and sectoral adaptation plans (including transport).
- Port Company and Harbour Company Masterplans.

² National Planning Framework 2040: <http://www.gov.ie/en/project-ireland-2040/>

- Strategic Development Zones.
- Greater Dublin Area Transport Strategy.

4. Noise & Health:

Sections 3.2 & 3.5.1.1 of the 2009 guidance contains references to human health effects, but it is also important to consider more recent information on noise and health. According to the World Health Organisation 2011³; ‘Environmental noise leads to a disease burden that is second in magnitude only to that from air pollution, among environmental factors in Europe’. A 2014 study for DG Environment on the Health implication of road, railway and aircraft noise in the European Union (EU) found that exposure to noise in Europe contributes to:

- about 910,000 additional prevalent cases of hypertension,
- 43,000 hospital admissions per year, and
- At least 10,000 premature deaths per year related to heart disease & stroke.

Since this study was based on partial data on noise exposure, the overall health effects in the entire EU are likely to be even higher than currently estimated. Meanwhile, WHO-Europe is currently in the process of finalising the WHO Environmental Noise Guidelines which will include a review of evidence on the health effects of environmental noise such as: sleep disturbance, annoyance, cognitive impairment, mental health and wellbeing, cardiovascular diseases, etc. The new WHO guidelines are expected to be published in late 2018.

Since the publication of the EPA guidance, several reports have been published which are considered relevant to providing a broad understanding of the impact of noise on health, and methodologies developed to estimate the burden of disease on the exposed population. These include:

- EEA - Good Practice Guide on Noise Exposure and Potential Health Effects 2010.
- WHO - Burden of Disease from Environmental Noise 2011.
- WHO - Methodological Guidance for Estimating the Burden of Disease from Environmental Noise 2012.
- EEA & JRC - Environment and Human Health 2013.
- RIVM - Health Implication of Road, Railway and Aircraft Noise in the European Union 2014.

Noise and health is also now firmly on the agenda of the European Commission. Over 450 delegates attended a Commission Noise Conference in April 2017, where the WHO outlined the latest findings on the health implications of noise; and the European Commission referred

³ WHO 2011: <http://www.euro.who.int/en/media-centre/sections/press-releases/2011/03/new-evidence-from-who-on-health-effects-of-traffic-related-noise-in-europe>

to activities aimed at reduction of noise pollution in member states. The conference adds to the increasing amount of reports that now highlight noise as a significant pollutant^{4 5 6}.

4.1 Dose response and health impact assessment

A key consideration of the NAPs should be the health impact assessment, and some of the more relevant guidance documents are outlined above. One of key documents here is the WHO - Methodological Guidance for Estimating the Burden of Disease from Environmental Noise 2012. This includes a step-by-step guide for quantitative assessment of disability-adjusted life years (DALYs), and the guidance defines a six-step process to follow and provides examples of the process. Additional advice is also provided on gap-filling missing data and dealing with uncertainties in Environmental Burden of Disease (EBD) assessments.

The policy context has now moved on significantly and the emphasis going forward is likely to be focused on the potential human health impacts rather than on the decibel levels. A health impact assessment would be a useful means for humanising the noise results, but it may be difficult for APAs to undertake this assessment for their 3rd round NAPs in the absence of some additional guidance. For these reasons, it may be more realistic for the health assessment to be considered for Round 4. New research on noise and health funded by the EPA research programme should hopefully feed into this process.

4.2 EPA Environmental Noise & Health Research project

This 3-year EPA research project which started in early 2018, will provide a state of knowledge review of the relationship between environmental noise and health/wellbeing, and provide a national estimate of the burden of disease from environmental noise in disability-adjusted-life-years (DALYs). The plan is to combine noise modelling and health microdata to examine causal relationships between noise exposure and health and wellbeing outcomes at the city-wide scale for Dublin and Cork, and to develop recommendations and guidelines for the integration of noise considerations into relevant policy streams.

5. Identification of Priority noise areas

To assist Local Authorities (LAs) in the preparation of their noise action plans, the EPA arranged a Noise Action Planning Workshop on the 06 December 2017 in Athlone. It was clearly outlined that the development of noise action plans will need to be a collaborative process between environment, planning, roads, and the GIS sections within their organisation. In addition, the LAs are advised to liaise with the noise mapping bodies (i.e. TII, Irish Rail and DAA), where appropriate to ensure that their views and input are considered.

As set out in the Framework for Action Plans (section 3.1), each LA will need to identify their noise sensitive locations that are above the proposed onset levels for noise mitigation measures (see appendix 3). This will involve identifying priority areas using a noise scoring decision matrix (Appendix D of the 2009 Guidance), and then drawing up a short list of

⁴ EC Science for Environment Policy: *Noise abatement approaches* (Apr 2017, Issue 17).

http://ec.europa.eu/environment/integration/research/newsalert/pdf/noise_abatement_approaches_FB17_en.pdf

⁵ EC Science for Environment Policy: *Noise impacts on health* (Jan 2015, Issue 47).

<http://ec.europa.eu/environment/integration/research/newsalert/pdf/47si.pdf>

⁶ EEA *Noise in Europe 2014* <http://www.eea.europa.eu/publications/noise-in-europe-2014>

potential areas for action⁷, both above the onset values, and below the level for preservation (to help identify Quiet Areas). It may be worthwhile to try to establish if the population is exposed to the noise levels (contour bands) as indicated on the noise maps. This ‘validation step’ could be undertaken by carrying out some follow up noise monitoring along some of the identified priority areas, before deciding on whether some noise mitigation measures may be required (section 3.5).

6. Planning Guidance

The EPA Guidance note for Noise Action planning (2009) includes some sections that cover planning aspects and it contains the following observation;

‘Whilst Local Authorities have it within their powers to set conditions relating to noise as part of a planning permission, there is currently no national policy or guidance which addresses the issue of noise during planning. This can lead to inconsistencies in relation to both the assessment and conditioning of planning applications’.

The EPA view is that there is still a need for planning guidance which could outline some of the main noise elements that would need to be considered by planners⁸ such as:

- demonstrating a good acoustic design process;
- observing internal noise level guidelines;
- undertaking an external amenity area noise assessment.

In May 2017, the UK Association of Noise Consultants (ANC), the Institute of Acoustics (IOA) and the Chartered Institute of Environmental Health (CIEH) issued the practical ProPG planning and noise guidance note. This UK Guidance has been produced to provide practitioners with guidance on a recommended approach to the management of noise within the planning system in England, and it encourages improved standards of design⁹.

The recommended approach in the UK provides opportunities to incorporate effective design interventions for noise that will enable residential development to proceed in areas that might otherwise have been considered unsuitable. For those situations where it is not appropriate to build new dwellings, the guidance will assist as it encourages early identification of the risk of refusal and supports early decision making – thereby avoiding unnecessary development and design costs.

The various ProPG documents represent a very good source of guidance and a best practice approach to the assessment and management of noise in a planning context. Although the Foreword specifically references England, it does not have a mandatory or statutory footing. As such, it contains guidance that could be equally valid in Ireland when used for detailed planning assessments or for the purposes of informing policy decisions. The CIEH, IOA and ANC worked together to produce this guidance ‘which encourages better acoustic design for new residential development and aims to protect people from the harmful effects of noise’. The IOA is well established in Ireland, and so ProPG could offer some degree of standardisation if was to be considered by Irish planners and developers (see Appendix 2).

⁷ A priority decision matrix would need to accompany any noise complaint referral from a LA to the TII.

⁸ See also section 3.4.3 Planning in the 2009 EPA action planning guidance note.
<http://www.epa.ie/pubs/advice/noisemapping/>

⁹ ProPG Guidance: www.ioa.org.uk/sites/default/files/14720%20ProPG%20Main%20Document.pdf

In the absence of planning guidance such as ProPG we could end up with a situation whereby the need for and nature of noise assessments varies significantly from county to county. This could in turn give rise to issues with consistency of interpretation and approach to mitigation. All the LAs should be encouraged to follow the same basic approach as this should help to avoid significant discrepancies until such time as specific noise guidance is produced for Ireland. It would also be beneficial for each Local Authority to liaise with other LAs in their area in relation to their noise action plan.

Meanwhile Transport Infrastructure Ireland (TII) is involved in the Conference of European Directors of Roads (CEDR) Noise Group which have produced a number of technical roads reports (see section 10 below). TII is also developing a series of environmental guidelines to facilitate further the integration of various environmental issues into national road scheme planning. <http://www.tii.ie/technical-services/environment/planning/>

7. Strategic Environmental Assessment (SEA)

The SEA Directive requires that assessment of the effects of certain plans and programmes on the environment be carried out. The purpose of the SEA process is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development.

Article 3 of the Directive states that an environmental assessment shall be carried out for all plans and programmes, (a) which are prepared for agriculture, forestry, fisheries, energy, industry, **transport**, waste management, water management, telecommunications, tourism, **town and country planning** or **land use** and which set the framework for future development consent of projects listed in Annexes I and II to Directive 85/337/EEC (the EIA Directive), or (b) which, in view of the likely effect on sites, have been determined to require an assessment pursuant to Article 6 or 7 of Directive 92/43/EEC (the Habitats Directive).

Article 2 of the Directive states that 'plans and programmes' shall mean plans and programmes, including those co-financed by the European Community, as well as any modifications to them:

- which are subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by Parliament or Government, and
- which are required by legislative, regulatory or administrative provisions;

The SEA process includes provision for formal screening, scoping and assessment, where relevant. The SEA Directive is implemented in Ireland through the following Regulations: SI 436 of 2004 (as amended by SI 201 of 2011) for specified land use plans such as development plans, local area plans etc., and SI 435 of 2004 (as amended by SI 200 of 2011) for all other sectoral plans listed in Article 3(a) of the SEA Directive, including Town and Country or Land Use Plans not listed in SI 436.

It is noted that Noise Action Plans are a form of 'Transport' sectoral plan. Therefore, if an SEA is required for NAPs, they would fall under the remit of **SI 435**, and not SI 436 of 2004. In this regard, it is noted that the 2009 Noise Action planning guidance note, in Section 4.1.1 and Appendix B, incorrectly referred to SI 436 of 2004 - the Planning and Development (Strategic

Environmental Assessment) Regs as being applicable. It should have referred to SI 435 of 2004, as amended.

Do the NAPs set a framework for future development consent?

- Noise actions plans may set a framework for development through permitting or limiting certain development types, building heights, layout & land uses.
- A NAP may influence the location of noise-sensitive developments, including the horizontal and vertical layout of apartment schemes (to ensure they are protected from major noise sources where practical).
- The positives of the NAPs can be highlighted as part of the SEA process (if applicable).

Having regard to the above, it is advisable that SEA pre-screening checks are carried out for the NAPs as outlined in Task 1.1 of the EPA report *Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland (2001-DS-EEP-2/5) - Synthesis Report* (Appendix B; SEA Checklist)¹⁰. If it is determined that formal SEA 'screening' is required for the NAPs this will require mandatory consultations with relevant environmental authorities as per SI 435 of 2004, as amended. The EPA's website has contact details for the relevant Environmental Authorities.

www.epa.ie/monitoringassessment/assessment/sea/contacts/

This SEA pre-screening process will assist the competent authority (plan making authority) to determine whether 'SEA' is required for Round 3 Noise Action Plans. A copy of any decision regarding the pre-screening determination should be made available for public inspection at the relevant LA office, on the LA website, and it should also be notified to any Environmental Authorities already consulted.

The SEA Directive and SI 435 of 2004 require a single public consultation process as part of the assessment of the draft plan (to be accompanied by an Environment Report). If 'full' SEA is required, the public consultation on the NAPs could be coordinated with the SEA public consultation to ensure integration between the two consultation processes.

Where there are several LAs involved such as in Dublin, it may be advisable that the final Dublin agglomeration noise action plan is pre-screened (rather than each Dublin LA carrying out their own pre-screenings). The finalised noise action plan for Dublin would then be adopted by each LA¹¹. If one or more of the Dublin LAs decide that 'SEA' or 'AA' will be required following SEA pre-screening, then it is likely that there will be some implications for the adjoining LAs (in Dublin agglomeration). In this situation, the relevant LAs would then need to get some independent advice as to what, if any, the implications might be for them.

8. Appropriate Assessment (AA)

The National Parks & Wildlife Service (NPWS) (currently under the aegis of the Department of Culture, Heritage and the Gaeltacht) provided guidance on Appropriate Assessment of

¹⁰ Refer to the 'Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland (2001-DS-EEP-2/5) - Synthesis Report' https://www.epa.ie/pubs/advice/ea/EPA_development_methodology_SEA_synthesis_report.pdf

¹¹ Each LA should engage with the relevant SEA lead in their respective LAs to incorporate their SEA knowledge and experience. The NAPs are likely to inform land use plans and associated zoning, measures and actions

Plans and Projects for Planning Authorities in 2009. This guidance¹² has been produced with reference to statutory planning processes. However, it is also of relevance to non-spatial/town planning land use plans.

The Guidance notes that the EU Birds and Habitats Directives set out various procedures and obligations in relation to nature conservation management in Member States in general, and of the Natura 2000 sites and their habitats and species in particular. A key protection mechanism, and the subject of this guidance, is the requirement to consider the possible nature conservation implications of any **plan or project** on the Natura 2000 site network **before any decision is made** to allow that plan or project to proceed.

Every new plan or project is captured by this requirement and each plan or project, when being considered for approval at any stage, must take into consideration the possible effects it may have in combination with other plans and projects when going through the process known as appropriate assessment. The concept of plan and project is extremely broad and is not limited to development planning and development management, covered by the Planning and Development Acts 2000, as amended. The obligation to undertake appropriate assessment derives from Article 6(3) and 6(4) of the Habitats Directive, and both involve several steps and tests that need to be applied in sequential order. Article 6(3) is concerned with the strict protection of sites, while Article 6(4) is the procedure for allowing derogation from this strict protection in certain restricted circumstances.

The first test is to establish whether, in relation to a plan or project, that appropriate assessment (AA) is required. This is termed AA screening. Its purpose is to determine, on the basis of a preliminary assessment and objective criteria, whether a plan or project, alone and in combination with other plans or projects, could have significant effects on a Natura 2000 site in view of the site's conservation objectives. The need to apply the precautionary principle in making any key decisions in relation to the tests of AA has been confirmed by European Court of Justice case law. Therefore, where significant effects are likely, uncertain or unknown at screening stage, AA will be required.

Having regard to the considerations set out in the SEA section, it is also advisable that AA screening checks are carried out with reference to the NPWS Guidance.

9. Dublin Agglomeration Noise Action Plans (NAPs)

For the Round 3 Action plans there will be one NAP for the agglomeration of Dublin, and one NAP for 'places near a major airport'. The Dublin agglomeration NAP could include separate sections for the 4 Dublin LA plans, as each of the LAs will ideally have their own policy on noise management, as well as their own internal resources and procedures. There should preferably be a consistent approach to noise from strategic infrastructure which is common to several LAs in Dublin, such as Irish Rail, Luas lines, National Roads and regulated industrial facilities.

The various sections in the Dublin agglomeration noise action plan should ideally have minimal overlap, and the key stakeholders such as TII and Irish Rail should be actively involved in the plan development process. The Action plans should address the most

¹² <https://www.npws.ie/protected-sites/guidance-appropriate-assessment-planning-authorities>.

important areas established by strategic noise maps¹³. It would be beneficial to have specific sections on National Roads, Luas and Irish Rail lines which document the Round 3 results, existing measures and any programmes in place from the key stakeholders. Ideally, the infrastructure operators should be closely involved in drawing up the content with the LAs. The four Dublin LA sections would then each cover industry and Regional/Local roads in their County, along with their individual policy requirements, approach to action planning, available resources, detailed programmes, and contact details etc.

There is a requirement for **Public consultation** on the overall Dublin agglomeration NAP, while the four Dublin LAs may also wish to carry out public consultation for their individual County NAP to ensure there is local involvement. Meanwhile, the Dublin airport NAP may require a separate public consultation process, but this format will need to be agreed between Fingal CC & the Dublin airport authority (daa). A final decision on the nature of the public consultation process to be undertaken should be made by the respective LAs involved (in consultation) with input from the daa, TII and Irish rail as required.

The Department of Public Expenditure and Reform has recently published the 2016 "**Consultation Principles & Guidelines**". The guidelines adopt a principles-based approach to public consultation, and aim is to improve transparency, responsiveness and accessibility of consultations. The key principles adopted in the guidelines are;

- Consultation with citizens must be genuine, meaningful, timely, balanced and with the ultimate objective of leading to better outcomes and greater understanding by all involved of the benefits and consequences of proceeding with a policy or legislation proposals.
- Consultation should be targeted at and easily accessible to those with a clear interest in the policy in question. <http://www.per.gov.ie/en/consultation-guidelines/>

As outlined above, Dublin airport should have its own Round 3 Noise Action Plan (NAP)¹⁴. This should be drawn up by Fingal (and Meath) County Councils in conjunction with the relevant airport authorities such as the Dublin Airport Authority. Under Regulation 598/2014, Fingal County Council are due to be appointed as the Competent Authority – effectively the Airport Noise Regulator. It will be a matter for the Regulator to set out noise mitigation measures or abatement objectives for the airport to follow (in accordance with the ICAO Balanced Approach), and to oversee the implementation of any such measures by the DAA. For Fingal County, the NAP should be developed to be consistent with the 2018 Local Area Plan (LAP), as the NAP is an identified input to the Regulation 598 process.

¹³ See article 11-3(ii) of SI 140 Environmental Noise Regs;
<http://www.irishstatutebook.ie/eli/2006/si/140/made/en/print>

¹⁴ This approach is allowed for under section 11(1) of the 2006 Environmental Noise Regulations, and while section 11(2) does not specify 'places near a major airport' for 2013 and beyond, this omission was unintentional and was subsequently clarified by DG Environment.

10. Other Related Information

Appendix B of the Action planning guidance (2009) provides a bibliography and references for a number of relevant documents and projects. Several recent publications and projects not previously mentioned which may help LAs develop noise action plans or noise mitigation measures:

- Conference of European Directors of Roads (CEDR) Noise Group 3 (2013-2017): In 2017 CEDR published the following three reports.
 - Technical Report 2017-01: State of the art in managing road traffic noise: noise-reducing pavements.
 - Technical Report 2017-02: State of the art in managing road traffic noise: noise barriers.
 - Technical Report 2017-03: State of the art in managing road traffic noise: cost-benefit analysis and cost-effectiveness analysis.

These reports are available at <http://www.cedr.eu>

- In 2017 TII commenced work to produce the following two Standards Documents:
 - A Standards Document regulating the noise impact assessment of 'Proposed National Roads'; and
 - A Standards Document regulating the management of noise and vibration during the construction stage.

These two Standards are scheduled for dissemination in Q4 2018.

- EPA Network
 - Progress report on measures on road traffic noise in the EU, March 2012.
 - Progress report on measures on rail traffic noise in the EU, June 2014.
 - Progress report on aircraft noise abatement in Europe v3, July 2015.

These reports are available at <http://epanet.pbe.eea.europa.eu/fol249409>

- CityHush: <http://www.cityhush.eu/>
- QCity: <http://www.qcity.org/>
- QSIDE: <http://www.qside.eu/>
- Nadia: <http://www.nadia-noise.eu/en>
- Cemobil: <http://www.cemobil.at>
- Quadmap: <http://www.quadmap.eu/>

Cost benefit analysis: Guidance on cost benefit analysis (CBA) has also been updated.

Current guidance on CBA is in: D-03 Guide to Economic Appraisal CBA, 2012, available at:

- <http://publicspendingcode.per.gov.ie/d-standard-analytical-techniques/>

Appendix 1: Draft Noise Action Plan Review¹⁵

Date of review:

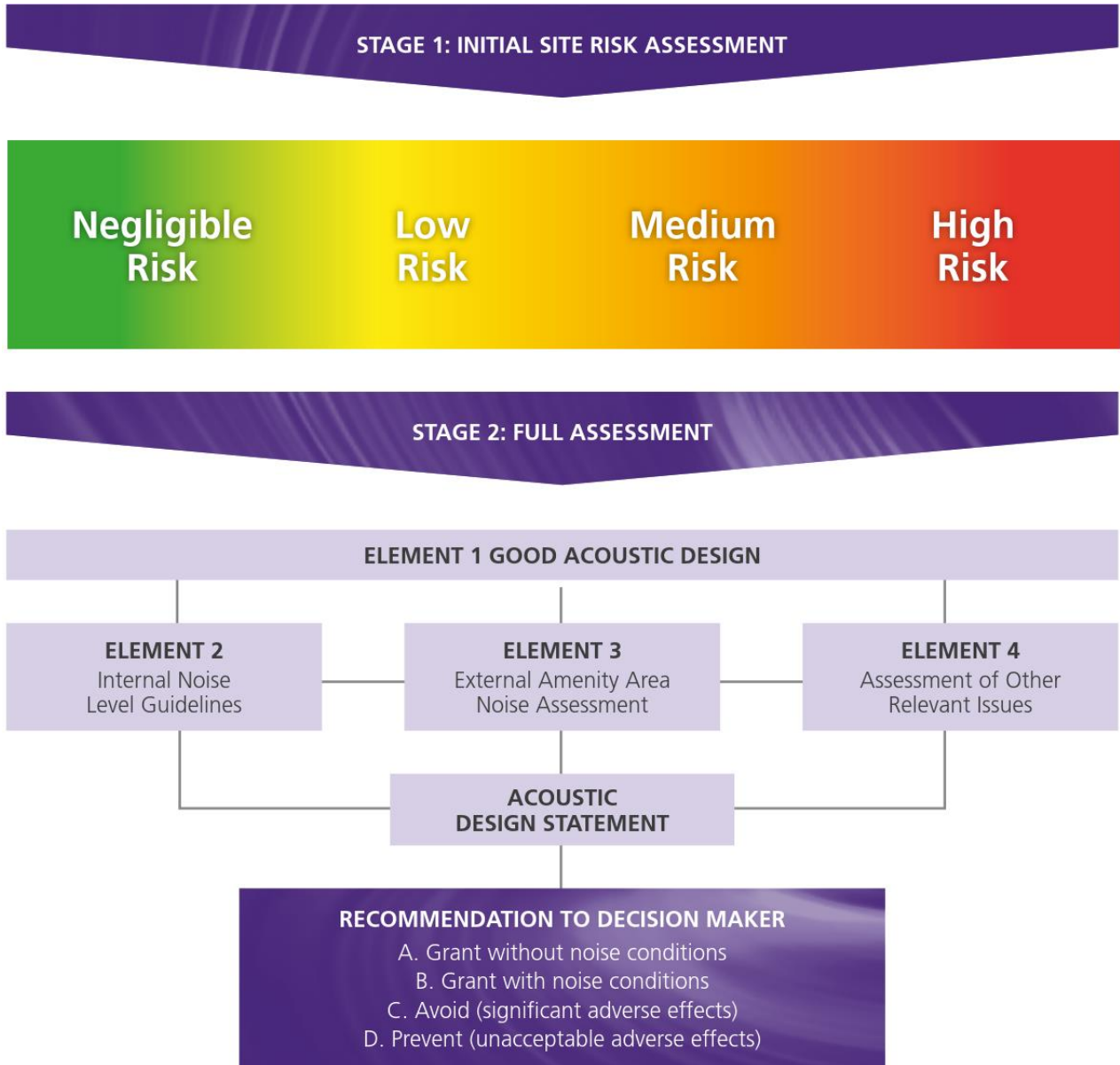
No.	Guidance Page No.	Description	Covered by Action Plan?	Notes
1	P8	Timetable – is timetable proposed which enables Action Plan to be reported to EC in January 19		
2	P11	Statement re policy regarding aims & objectives of using EPA Act		
3	P18	Description of sources considered		
4	P18	Contact details for responsible authority		
5	P18	Local planning guidelines, policies, restrictions, voluntary agreements, noise preferential routes, master plan, strategic policies etc.		
6	P18	Any limit values in place		
7	P18	Summary of results of noise mapping: <ul style="list-style-type: none"> • noise level maps, • area, dwelling & population statistics • do they match EPA/NRA stats? 		
8	P19	List of types of premises / areas considered “noise sensitive”		
9	P19	Noise reduction measures in force or planned (prior to Rd 3 Action Plan) i.e. includes any outcomes of Rd 2 Action Plan: <ul style="list-style-type: none"> • Costs if applicable • Impact assessment guidelines • Noise insulation schemes • Barrier construction projects • Resurfacing etc. 		
10	P19	Proposed timetable of actions over next 5 years		
11	P19	Long term strategy statement		
12	P20	Budgets (if available)		
13	P20	Means by which progress and outcomes of Action Plan will be monitored and appraised <ul style="list-style-type: none"> - For Rd 3 action plans this should include a report on progress against timetable for the Rd 2 action plan (where relevant) and actions undertaken 		
14	P20	Estimate of the numbers of people to benefit from measures		
15	P22	Was 2015 assessment year “typical”, thus are noise mapping results “typical” – consider TII roads and major road flows provided to TII.		

¹⁵ EPA Noise Action Planning guidance: <http://www.epa.ie/pubs/advice/noisemapping/>

16	P25	<p>Quiet Areas (QAs) in agglomerations</p> <ul style="list-style-type: none"> • Policy statement on how QAs would be protected, and what means are available to deliver it – not mandatory outside agglomeration 		
17	P25	<p>Quiet Areas (QAs) in open countryside</p> <ul style="list-style-type: none"> • Designation of QAs away from major sources • Designation of QAs near major sources • Not mandatory inside agglomeration 		
18	P27	<p>Review of current use of planning system to manage noise</p> <ul style="list-style-type: none"> • National & local policies / limits / approaches • Façade insulation / sight layout / development restrictions 		
19	P27	<p>Planning and noise</p> <ul style="list-style-type: none"> • Is local planning guidance on noise in place? • Is planning guidance on noise set out within the Action Plan • Is it proposed to develop local planning guidance on noise under the Action Plan 		
20	P28	<p>Area of coverage of Action Plan</p> <ul style="list-style-type: none"> • Just areas near major sources or whole County 		
21	P29	<p>Onset of assessment values</p> <ul style="list-style-type: none"> • Levels in EPA guidance used? 		
22	P31	<p>Decision support matrix</p> <ul style="list-style-type: none"> • Confirm if matrix to be used or has been used • Undertake analysis • Map high scores & look for “hot spots” or clusters 		
23	P32	<p>How is it planned to confirm the extent of impact</p>		
24	P35	<p>Develop a list of other strategic policy statements /plans / proposals / objectives</p>		
25	P37	<p>Possible requirement for SEA during consultation</p>		
26	P36	<p>Proposed approach to public consultation</p> <ul style="list-style-type: none"> • In line with guidance within “Reaching out” • Is document clear and easily understandable by non-expert • Clear purpose and objectives • Clear questions raised for respondent to consider • Clear on how to make a response, how and to whom • Clear on process following consultation, including access to responses • Respondent information form, or similar, to cover off requirements under FOI and Data Protection 		
27	P36	<p>List of relevant groups to approach during consultation</p>		
28	P38	<p>Revision</p> <ul style="list-style-type: none"> • Is there a review of any changes since the Rd 2 action plan? • Does review include progress against timetable, changes in noise situation and exposures, details of actions undertaken, costs, dates, numbers of people affected or benefited? 		

29	P40	Plan for dissemination		
30	P50	Is process flow diagram in EPA guidance accepted?		
31	P51	Is decision matrix in EPA guidance agreed? <ul style="list-style-type: none"> Needs amending if onset values are amended 		
32	P53	Is Action Planning layout within EPA guidance used?		
33	P64	Details of any noise control programs carried out in the past, including any outcomes from Rd 2 Action Plan		
34	P65	Summary of Action Plan, under 10 pages		
35		Others points		
36	2018 Guidance note	Strategic policy context – any mention of NPF 2040?		
37	2018 Guidance note	Noise and Health –impact assessment undertaken or proposed?		
38	2018 Guidance note	Planning and Noise – local planning policy or use of ProPG		
39	2018 Guidance note	SEA & AA <ul style="list-style-type: none"> Has SEA screening been undertaken or proposed? Has AA screening been undertaken or proposed? 		

Appendix 2: Summary of the ProPG Guidance approach



Appendix 3; Priority Threshold score

The scoring on the matrix tries to identify two scenarios,

- people exposed to high levels of noise where it may be necessary to consider noise mitigation measures, and
- areas of low noise levels where it may be relevant to consider declaring an urban quiet area to help protect this situation.

This dual approach leads to low noise levels being given a high score in order for them to achieve a total above the threshold, which is why the <45 dB scores higher than the 45-49 dB contour.

Appendix D of the EPA Guidance¹⁶ talks about how to use the matrix, but in short you have the L_{den} and L_{night} noise levels for the most exposed facade of each property within the noise mapping, you also know the use of the building, and the noise source which created the levels i.e. road traffic.

- If the $L_{den} = 70-74$ then subtotal = **3**
- if the $L_{night} = 68$ then subtotal = **4**
- It is residential, so L_{den} subtotal = $2 + 3 = 5$
- noise source is roads, so subtotal = $3 + 4 = 7$
- Total score = **19**

So, it may be worth considering this location for noise mitigation.

If you have a house, exposed to road traffic of 46 L_{den} and 43 L_{night} , the scores (using format above) will be:

- $L_{den} = 4$
- $L_{night} = 6$
- residence = 5
- roads = 7
- Total = **22**

So, it may be worth considering if this is in an area which could be declared a "quiet area"

You follow this process for every property within the noise mapping area, and look for the highest scoring locations, these will either be high noise or low noise, and should be the locations which move forward in the action plan process. The EPA Guidance suggests 17 or above should be considered for the shortlist, as this is used in DCC, however this is no "magic number" and you should consider what would be an appropriate threshold once you have completed the scoring and can review the results. It may be that in a less urban area a threshold score of 14, 15 or 16 may be more appropriate to identify the most important areas for possible mitigation.

¹⁶ EPA Noise Action Planning guidance: <http://www.epa.ie/pubs/advice/noisemapping/>