



Llywodraeth Cymru
Welsh Government



Noise and soundscape action plan

2018-2023

Table of Contents

Ministerial Foreword	1
Preface – the noise action planning process	2
Environmental noise legislation.....	2
Environmental noise maps.....	2
A noise and soundscape action plan for Wales	4
Related public consultations held in the last five years	6
Review and update process	6
1 Why noise and soundscape matter.....	9
1.1 Health and well-being	9
1.2 The national well-being goals.....	10
1.3 The role of Public Health Wales.....	13
2 Ways of working	14
2.1 The Well-being of Future Generations (Wales) Act 2015	14
2.2 Dos and don'ts.....	15
3 Integrating noise and air quality policy.....	16
3.1 Review of local air quality and noise management in Wales	16
3.2 What the policy guidance says about noise	16
3.3 What the policy guidance says about green infrastructure.....	17
3.4 What the policy guidance says about annual air quality progress reports	18
3.5 What the policy guidance says about local air quality action plans.....	19
3.6 Clean Air Zones.....	19
4 Planning for new development	21
4.1 A focus on placemaking	21
4.2 What the new planning policy says about air quality and soundscape.....	22
4.3 Making the 'agent of change' principle explicit	23
4.4 Acoustic design.....	24
4.5 Acoustic insulation, energy efficiency and overheating.....	26

5	Tranquil green space in the built environment	29
5.1	Overview	29
5.2	The sustainable management of natural resources.....	30
5.3	What the Natural Resources Policy says about green space	30
5.4	Welsh Government environment grant funding	31
5.5	The role of Natural Resources Wales	32
5.6	Celebrating tranquil urban green space.....	34
5.7	Protecting tranquil urban green space	36
6	Road traffic noise in Wales	39
6.1	Overview	39
6.2	Who is responsible?.....	40
6.3	What the noise maps tell us.....	41
6.4	Priority areas and proximity areas	44
6.5	Noise mitigation works on the motorway and trunk road network	44
6.6	Supporting quieter vehicle technologies	46
6.7	Supporting active travel.....	47
6.8	The role of the police	48
7	Railway noise in Wales	49
7.1	Overview	50
7.2	Who is responsible?.....	51
7.3	What the noise maps tell us.....	51
7.4	Priority areas	53
7.5	Electrification.....	54
7.6	Services provided by the rail industry	54
8	Industrial noise in Wales	55
8.1	Mapping noise from major industry in agglomerations.....	55
8.2	Integrated pollution prevention and control	56
8.3	The All Wales Environmental Permitting Regulations Link Group.....	58
8.4	Statutory nuisance.....	59
9	Other forms of noise	60
9.1	Neighbourhood noise.....	60

9.2	Military noise	62
9.3	Occupational noise and hearing damage.....	65
9.4	Recreational noise and hearing damage.....	66
10	The Cardiff and Penarth agglomeration.....	68
10.1	What the noise maps tell us.....	68
10.2	Quiet areas.....	70
10.3	Cardiff Council	71
10.4	The Vale of Glamorgan Council	75
10.5	Bridgend County Borough Council	79
10.6	Merthyr Tydfil County Borough Council	85
10.7	Rhondda Cynon Taf County Borough Council.....	87
11	The Newport agglomeration	90
11.1	What the noise maps tell us.....	90
11.2	Quiet areas.....	92
11.3	Newport City Council	93
11.4	Caerphilly County Borough Council	96
12	The Swansea and Neath Port Talbot agglomeration	100
12.1	What the noise maps tell us.....	100
12.2	Quiet areas.....	102
12.3	Swansea Council.....	103
12.4	Neath Port Talbot County Borough Council	107
	Annex A – noise maps	111
	Annex B – National Survey for Wales: noise pollution.....	116
	Annex C – checklist of requirements for noise action plans	120
	Annex D – list of abbreviations used in this document	122
	Annex E – contributors to the development of this document	123

Ministerial Foreword



In this fast-paced, digital age we can find ourselves being subjected to information overload, from the moment we wake up to when we settle for sleep. The sights and sounds continually vying for our attention can affect us both when we are awake and when we are sleeping and have impacts on our physical and mental health.

Noise, meaning unwanted or harmful sound, can, in the short term, disrupt sleep and increase levels of stress, irritation and fatigue, as well as interfering with important activities such as learning, working and relaxing. In other words, it reduces the quality of our lives. Exposure to loud sounds can cause hearing damage, while exposure to noise in the long term can increase our risk of hypertension-related illnesses and cardiovascular disease. And yet our lives are enhanced by conversation, laughter and cheering, music and the sounds of nature. A healthy acoustic environment is more than simply the absence of unwanted sound.

The noise action plan for Wales, which we are required to review and update every five years, must have a broader focus than simply clamping down on the decibels. We need to create appropriate soundscapes, meaning the right acoustic environment in the right time and place. The towns and cities, in which most of us live, serve us in a variety of ways, and should therefore contain a variety of soundscapes appropriate to the land use. There should not be a one-size-fits-all urban soundscape, which we experience wherever we go, any more than every street and building should look alike.

Over the coming years, I expect public bodies in Wales to start thinking less in terms of pure noise mitigation and more in terms of creating healthier soundscapes for our communities. In addition, wherever air and noise pollution are both present and their sources are the same or related, they should be considered together rather than as separate problems. Air and noise pollution are both airborne pollutants, which can have a combined effect on the public's health and, in many situations, they can be tackled to greatest effect through shared solutions.

If public bodies in Wales embrace the sustainable development principle and ways of working set out in our Well-being of Future Generations Act, we can break down existing policy siloes and achieve multiple outcomes for the benefit of society.

Hannah Blythyn AM
Minister for Environment

Preface – the noise action planning process

Environmental noise legislation

Environmental noise is unwanted or harmful outdoor sound created by human activities, notably motorised transport and sites of industrial activity. The Welsh Government considers environmental noise as an airborne pollutant.

The aim of the Environmental Noise Directive¹ 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.

It is given legal force in Wales through the Environmental Noise (Wales) Regulations 2006² as amended by the Environmental Noise (Wales) (Amendment) Regulations 2009³ (collectively referred to as the Environmental Noise Regulations).

Environmental noise maps

Under the Environmental Noise Regulations, the Welsh Ministers have an obligation to produce and keep updated noise maps for:

- **agglomerations** (large urban areas with populations of over 100,000);
- **major roads** (roads with over three million vehicles passing each year); and
- **major railways** (railways with over 30,000 trains passing each year).

There are three agglomerations in Wales:

- the Cardiff and Penarth agglomeration;
- the Newport agglomeration; and
- the Swansea and Neath Port Talbot agglomeration.

There are no major airports in Wales busy enough to qualify for noise mapping or action planning under the Environmental Noise Regulations.

¹ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32002L0049:en:NOT>

² <https://www.legislation.gov.uk/wsi/2006/2629>

³ <https://www.legislation.gov.uk/wsi/2009/47>

The noise maps have to be produced by calculation, not measurement.

In 2012 Extrium Ltd, under contract from the Welsh Government, produced noise maps for major roads across Wales, for major railways across Wales, and for all roads, all railways and major industry in the three agglomerations.

In 2015 the Welsh Government carried out a review of its noise maps⁴ to establish which of them required updating in 2017. In accordance with the conclusions of this review, new noise maps were produced in 2017 for major roads across Wales and for major industry in the three agglomerations, but not for major railways or for non-major roads and railways in agglomerations.

The 2012 and 2017 noise maps⁵ may be viewed, and the spatial data sets associated with them downloaded, at <http://lle.gov.wales/catalogue?t=1&lang=en>.

It is expected that the noise maps will inform a range of activities carried out by public bodies in Wales over the next five years, including but not limited to:

- prioritised noise mitigation works, such as noise barriers and resurfacing;
- the planning process;
- air quality, green infrastructure and transport plans and strategies;
- the assessments of local well-being produced by public services boards (PSBs)⁶ under the Well-being of Future Generations (Wales) Act 2015 (the WFG Act)⁷; and
- the State of Natural Resources Report (SoNaRR) and area statements produced by Natural Resources Wales (NRW) under the Environment (Wales) Act 2016⁸.

⁴ <https://gov.wales/docs/desh/publications/151026-review-of-strategic-noise-maps-in-wales-en.pdf>

⁵ It should be noted that changes made to the way in which noise levels were calculated between 2012 and 2017 have resulted in higher noise levels being calculated in 2017 than in 2012 at receivers that are located less than 7.5 metres from a road traffic noise source. This unfortunately means that very close to the road the 2012 and 2017 noise maps are not directly comparable.

⁶ The Well-being of Future Generations (Wales) Act 2015 (Assessments of Local Well-being) Regulations 2017 require PSBs to take into account the most recent noise maps made and adopted by the Welsh Ministers when they carry out their assessments of local well-being.

⁷ <https://www.legislation.gov.uk/anaw/2015/2>

⁸ <https://www.legislation.gov.uk/anaw/2016/3>

A noise and soundscape action plan for Wales

Under the Environmental Noise Regulations, the Welsh Ministers have an obligation to draw up action plans for places near major roads and major railways, and for agglomerations. The Regulations apply to environmental noise to which humans are exposed in particular in built-up areas, in public parks or other quiet areas in an agglomeration, and near schools, hospitals and other noise-sensitive buildings and areas. They do not apply to noise that is caused by the exposed person, noise from domestic activities, noise created by neighbours, noise in workplaces or noise inside means of transport or due to military activities in military areas.

In 2013, the Welsh Government, working collaboratively with other public bodies, prepared a single consolidated five-year noise action plan for Wales⁹. This document included within it the action plans required by the Environmental Noise Regulations, together with information on Wales-wide policies relating to those forms of noise not covered by the Regulations, such as neighbourhood noise. The intention was to give the responsible bodies and others with a specialist interest in noise an overall picture of the state of play at that time and clarity in what was expected from public bodies and other organisations in relation to noise over the five years from 2013 to 2018. Producing a single noise policy document covering the whole of Wales had the added benefit of avoiding the repetition of material that would result from having separate action plans for major roads, major railways and agglomerations.

The statutory requirement to review and, if necessary, revise our noise action plan in 2018 provides us with an opportunity to bring together the loose patchwork of noise regulation described in the 2013 plan into a more coherent whole, using the framework provided by the WFG Act as a common foundation for all future noise and **soundscape**¹⁰ management activities in Wales.

For the purposes of the Environmental Noise Regulations:

- this Preface, together with Chapters 1-6 and Annex A of this document form the 2018 action plan for major roads in Wales;
- this Preface, together with Chapters 1-5 and 7 and Annex A of this document form the 2018 action plan for major railways in Wales;
- this Preface, together with Chapters 1-8 and 10 and Annex A of this document form the 2018 action plan for the Cardiff and Penarth agglomeration;

⁹ <https://gov.wales/docs/desh/publications/131217noise-action-plan-for-wales-en.pdf>

¹⁰ Soundscape is defined in ISO 12913-1:2014 as the acoustic environment as perceived or experienced and/or understood by a person or people, in context.

- this Preface, together with Chapters 1-8 and 11 and Annex A of this document form the 2018 action plan for the Newport agglomeration; and
- this Preface, together with Chapters 1-8 and 12 and Annex A of this document form the 2018 action plan for the Swansea and Neath Port Talbot agglomeration.

Where an action plan has been adopted under the Environmental Noise Regulations and identifies a public body¹¹ as being responsible for a particular action, that public body must treat the action plan as its policy insofar as it relates to that action. A public body may only depart from such a policy if it provides written reasons for departing from that policy and publishes those reasons.

It should be noted that the legal obligation under the Environmental Noise Regulations for public bodies to treat action plans as policy only applies to the elements of the action plan that are within the scope of the Regulations.

Sections 3.2 to 3.5 of this document replicate statutory policy guidance issued to local authorities by the Welsh Ministers in 2017 under section 88 of the Environment Act 1995. Local authorities must have regard to this text when carrying out their local air quality management duties under the 1995 Act.

In addition to the statutory obligations referred to above, the Welsh Government would strongly encourage public bodies to give due consideration to this document to the extent that it aligns with and supports the requirements of cross-cutting legislation such as the WFG Act and the Environment (Wales) Act 2016.

The references to legislation contained in this action plan are intended to illustrate how noise is regulated in Wales, and should not be taken as advice on the precise application of the law. For full and detailed information on noise and the law, readers should refer to the legislation itself or seek advice from their own legal advisors.

¹¹ The Environmental Noise Regulations use the term ‘public authority’ rather than ‘public body’, and this includes any person who exercises functions of a public nature, but does not include (a) either House of Parliament or a person exercising functions in connection with proceedings in Parliament, (b) courts or tribunals, or (c) the National Assembly for Wales.

Related public consultations held in the last five years

13 September 2016 to 16 December 2016 – Air quality and noise management in Wales

<https://beta.gov.wales/air-quality-and-noise-management-wales>

12 February 2018 to 18 May 2018 – Planning Policy Wales: Edition 10

<https://beta.gov.wales/planning-policy-wales-edition-10>

25 April 2018 to 19 June 2018 – Clean Air Zone Framework for Wales

<https://beta.gov.wales/clean-air-zone-framework-wales>

11 July 2018 to 3 October 2018 – Noise and soundscape action plan 2018-2023

<https://beta.gov.wales/noise-and-soundscape-action-plan-2018-2023>

Review and update process

The Welsh Government has hosted at least two meetings for noise regulators in Wales every year since the publication of the 2013 noise action plan, usually back-to-back with meetings of the Welsh Air Quality Forum in order to avoid unnecessary travel. These are regularly attended by environmental health and/or pollution control officers from the majority of Welsh local authorities, as well as by NRW and Public Health Wales (PHW). Guest speakers, including representatives of non-governmental organisations and noise consultancies, have led discussions on topics such as the Wales noise maps, the new British Standard (BS) on industrial and commercial sound, the WFG Act, the Building Regulations, the planning process in Wales, Noise Action Week and the concept of soundscape.

The Welsh Government published a partial review of the 2013 noise action plan in Chapter 4 of its public consultation on local air quality and noise management in Wales in 2016. This resulted in some additional actions being taken forward. A full update of the 2013 noise action plan is now being undertaken in 2018.

The Welsh Government will continue to host meetings open to all public bodies having responsibilities under this action plan at least twice yearly during the lifetime of the plan, to help develop policy and take forward actions and long-term strategy.

The Welsh Government will update the plan itself as and when it deems necessary, including carrying out at least one review incorporating a full public consultation no more than five years after its first adoption.

Consultation responses: soundscape

Soundscape is defined in ISO 12913-1:2014 as the acoustic environment as perceived or experienced and/or understood by a person or people, in context. The public consultation on this noise and soundscape action plan received a number of responses building upon this definition.

Dr Yiyang Hao wrote, on behalf of Wood E&IS UK:

“Sound is perceived as a resource rather than waste in soundscape management. Soundscape management focuses on sounds of preference and requires differentiation between sound sources. Enhancing wanted sounds and reducing unwanted sounds are both important in soundscape management. The environmental noise assessment and soundscape approaches to management and design of the acoustic environment vary substantially, but they are not mutually exclusive. The traditional noise control and the soundscape approaches are complementary methods rather than alternative or conflicting.”

Philip Dunbavin, convenor of International Organization for Standardization Working Group ISO TC43/SC1/WG54, noted that soundscape is a developing science, which is still at the beginning of its development. Parts 1 and 2 of the ISO standard¹² have been published, and the group is now working on Part 3, which covers the analysis of data from soundscape studies. The group plans that there will be a fourth part covering the interpretation of the results of the analysis.

Stephen Turner wrote, on behalf of the Institute of Acoustics:

“Although the document introduces the concept of soundscape into Government policy, it is important to recognise that this should be regarded as a first step. There is the scope for more guidance, one key point being the users' involvement in the management and design of the acoustic environments. The action plan provides a framework for such involvement and could include recommendations for public awareness and engagement campaigns, establishment of noise and soundscape local action teams, etc.”

The Welsh Government is grateful for these and all other technical contributions received on this subject, and will continue to draw upon such advice, as further guidance is developed.

¹² <https://www.iso.org/standard/52161.html> and <https://www.iso.org/standard/75267.html>

1 Why noise and soundscape matter

1.1 Health and well-being

1.1.1 Most people cannot imagine living in a world devoid of sound. Speech, music, the sounds of nature and so on are greatly valued. Wales is a nation of song, and the last thing the Welsh Government wants is a Wales that is silent. But noise, unwanted or harmful sound resulting from human activities, is a pollutant.

1.1.2 At its least intrusive, traffic noise is an undesirable continuous background rumble that most people are not normally conscious of because it is considered part and parcel of urban living. However, it could spoil people's appreciation of the beauty and tranquillity of nature if experienced at the top of a mountain or in the middle of a national park. At its worst, noise can cause hearing loss, contribute to raised blood pressure and increase the risk of heart attacks. The negative impact of noise on people mostly takes the forms of annoyance, which includes its ability to mask and detract from the enjoyment of positive sounds, and sleep disturbance. Exposure to moderate levels of noise over long periods of time can amount to a reduction in well-being or quality of life.

1.1.3 In 2011 the World Health Organization (WHO) published the report *Burden of disease from environmental noise: Quantification of healthy life years lost in Europe*¹³. The report estimated that at least one million **healthy life years**¹⁴ are lost every year from environmental noise in the western part of Europe, specifically:

- 61,000 years for ischemic heart disease;
- 45,000 years for cognitive impairment of children;
- 903,000 years for sleep disturbance;
- 22,000 years for tinnitus; and
- 654,000 years for annoyance.

¹³ <http://www.euro.who.int/en/what-we-do/health-topics/environment-and-health/noise/publications/2011/burden-of-disease-from-environmental-noise.-quantification-of-healthy-life-years-lost-in-europe>

¹⁴ Healthy life years or disability-adjusted life years are the sum of the potential years of life lost due to premature death and the equivalent years of 'healthy' life lost by virtue of being in states of poor health or disability.

- 1.1.4 In 2017 the WHO published a fact sheet¹⁵ on reducing noise to promote health. It concludes with a set of recommendations that closely align with the five ways working under the WFG Act, discussed in more detail in Chapter 2 of this noise and soundscape action plan.
- 1.1.5 Chapter 4 of the Chief Medical Officer for England's annual report 2017¹⁶ contains a summary of the evidence for the health effects of noise pollution, authored by Professor Stephen Stansfield of the Wolfson Institute of Preventive Medicine, Queen Mary University of London. The report recommends that, in order to prevent ill health, local authorities should broaden current environment strategies, which may or may not cover air pollution or noise, that these strategies should be cognisant of all forms of pollution, and that they should consider risk at both consistent low-level exposure and intermittent high-level exposure.
- 1.1.6 Chapter 3 of the Chief Medical Officer for Wales' annual report 2016/17¹⁷ highlights local noise pollution as an environmental health inequality and states that investment in environmental public health surveillance can help to shape priorities for future action and facilitate joined-up working to protect and improve the health of current and future generations.
- 1.1.7 In 2018, the WHO published its updated *Environmental Noise Guidelines for the European Region*¹⁸. The main purpose of these guidelines is to provide recommendations for protecting human health from exposure to environmental noise originating from various sources. They are underpinned by evidence reviews¹⁹ relating to the specific health endpoints chosen by the guideline development group.

1.2 The national well-being goals

- 1.2.1 Tackling noise and improving soundscapes contribute to achieving all seven of the well-being goals specified in the WFG Act:

¹⁵ http://www.euro.who.int/_data/assets/pdf_file/0015/341133/Fact-Sheet-6-Reducing-Noise-to-Promote-Health.pdf

¹⁶ <https://www.gov.uk/government/publications/chief-medical-officer-annual-report-2017-health-impacts-of-all-pollution-what-do-we-know>

¹⁷ <https://gov.wales/docs/phhs/publications/cmo-report2017en.pdf>

¹⁸ <http://www.euro.who.int/en/publications/abstracts/environmental-noise-guidelines-for-the-european-region-2018>

¹⁹ https://www.mdpi.com/journal/ijerph/special_issues/WHO_reviews

- **A prosperous Wales:** Noise can sometimes be an inevitable consequence of economic activity. However, noise levels have a well-demonstrated and quantifiable negative effect on property prices. It is also accepted that noise affects productivity in a number of ways including through educational attainment, tiredness, and distraction in the workplace, although these effects are not currently quantified. Areas not subject to excessive noise are more attractive places to live and work. The Defra-led Interdepartmental Group on Costs and Benefits noise subject group²⁰ has estimated the social cost of road traffic noise in England alone at between £7 and £10 billion per year.
- **A resilient Wales:** Soundscape interventions through green infrastructure can achieve multiple environmental outcomes, particularly where they are native and bio-diverse. For example, soft ground and green walls on buildings absorb rather than reflect sound, natural sounds soften harsh mechanised soundscapes, and trees scatter and reduce the perception of noise. Airborne environmental noise is known to affect terrestrial wildlife as well as people, although much further research is needed in this area²¹.
- **A healthier Wales:** Environmental noise has been ranked by the WHO as the second biggest environmental contributor to the burden of disease in Europe after ambient air pollution. Our own noise maps suggest that the homes of more than 200,000 people across Wales are exposed to road traffic noise levels exceeding the WHO's 2009 night noise guidelines (and an even greater number of homes exceed the WHO's updated 2018 guidelines).

²⁰ <https://www.gov.uk/guidance/noise-pollution-economic-analysis>

²¹ In Wood E&IS UK's consultation response, Dr Yiyang Hao wrote: "Airborne environmental noise reduces the biodiversity of the urban areas partially by masking the communication signal of the fauna. Every organism has its own acoustic signal and calendar. Soundscape work by R. Murray Schafer has in part led to the development of a field called **acoustic ecology** – study of the relationships between organisms (people, animals, etc.) and the environment through sound. The research on the influence of environmental noise on wildlife is mainly from the field of animal behaviour, e.g. homogenisation of avifauna in the urbanised areas. There is a need to investigate the influence of sound environment on the wildlife within the scope of soundscape study."

- **A more equal Wales:** Some people are fortunate enough to live and work in tranquil surroundings, but many are not in a position to make this choice. Targeting interventions to help those most seriously affected²², while recognising and protecting existing soundscapes that support health and well-being, can reduce these and other environmental inequalities.
- **A Wales of cohesive communities:** The UK's National Noise Attitude Survey 2012²³ repeated a survey carried out in 2000. Among its key findings were that people in the UK ranked noise fourth in a list of environmental problems personally affecting them, after dog fouling, litter and rubbish, and losing green belt land. Over the 12 years between the two surveys, the proportion of people “bothered, annoyed or disturbed to some extent by road traffic noise” rose from 40% to 55%, while the proportion of people “‘very’ or ‘extremely’ bothered, annoyed or disturbed by road traffic noise” held steady at 8%. The proportion of people “bothered, annoyed or disturbed to some extent by noise from neighbours and/or other people nearby” rose from 37% to 54%, while the proportion “bothered, annoyed or disturbed to some extent by noise from building, construction, demolition, renovation and road works” almost doubled from 15% to 29%. These increases in annoyance are likely to be the result of a combination of factors, including increased population density in urban areas and changes in the attitudes and expectations of society.
- **A Wales of vibrant culture and thriving Welsh language:** A poor acoustic environment in school can make it hard for children to concentrate and understand what their teacher is saying, particularly when trying to learn a new language. Appreciation of historic locations and the natural environment can be spoilt by excessive noise, and this may also have adverse economic consequences in terms of tourism. Conversely, the right soundscape can enhance educational and cultural experiences.
- **A globally responsible Wales:** Noise tends not to carry far from one country into another, but good practice may do so. Encouraging the development of quieter technologies and promoting standards developed in the UK can assist the development of noise policies in other countries.

²² In Wood E&IS UK's consultation response, Dr Yiyang Hao wrote: “Noise effects can be offset through careful design and application of soundscaping principles to external amenity space. Combining soundscaping concepts with environmental noise control can enable the creation of more pleasant acoustic environments in areas traditionally considered blighted by noise. These areas of environmental inequality frequently exist alongside busy infrastructure corridors, where property values are lower, with properties more likely to be occupied by those with lower income. Soundscaping there has the ability to provide improved conditions, leading to reduction in this environmental inequality.”

²³ <http://randd.defra.gov.uk/Default.aspx?Module=More&Location=None&ProjectID=18288>

1.3 The role of Public Health Wales

The information in this section has been provided by PHW.

- 1.3.1 PHW provides a specialist public health advice to a broad range of partner agencies and members of the public in Wales in relation to non-occupational noise exposures. This advice is intended to give people power to protect and improve health and well-being in its broadest sense and to reduce inequities and variations in exposure.
- 1.3.2 The ambition of the Welsh Government, public health agencies, local health boards and local authorities in Wales is to achieve a healthier, happier and fairer Wales. They are working together to ensure that decision-makers at all levels are informed by the latest evidence regarding the effects of noise on health and the uncertainties associated with that evidence.
- 1.3.3 Environmental noise may occur in combination with other environmental hazards, notably other types of emissions from road traffic and industry. Interventions to tackle noise should also aim to improve health from reduced exposure to other pollutants, and/or have indirect health co-benefits, for example, from reduced congestion, improved road safety and active travel.
- 1.3.4 PHW recognises the importance of appropriate soundscapes to the health and well-being of people and the environment. PHW supports the need to ensure a long-term approach to placemaking to prevent the creation of new, or worsening of existing environmental hazards and to encourage integrated solutions that aim to reduce noise and average levels of airborne pollution generally and mitigate climate impacts.

Box 1.1

Wherever possible, PHW will continue to influence and support work to scope and understand the health burden of environmental noise. PHW will advocate for action to reduce environmental noise and the consideration of appropriate soundscapes, for example, by providing advice to inform local planning decisions, in order to maximise opportunities to protect and improve health.

2 Ways of working

2.1 The Well-being of Future Generations (Wales) Act 2015

2.1.1 Noise policy in Wales now sits, not in a vacuum, but within the cross-cutting policy framework set by the WFG Act. This requires public bodies such as local authorities, local health boards, NRW, PHW and the Welsh Government to carry out **sustainable development**. This is the process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the **sustainable development principle**, aimed at achieving the seven well-being goals.

2.1.2 The sustainable development principle defined in the WFG Act is a fundamental part of how public bodies and PSBs must now operate. They must act in a manner that seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs.

2.1.3 The principle is made up of five ways of working public bodies should follow when carrying out sustainable development. These are:

- looking to the **long term** so that we do not compromise the ability of future generations to meet their own needs;
- taking an **integrated** approach;
- **involving** a diversity of the population in the decisions affecting them;
- working with others in a **collaborative** way to find shared sustainable solutions; and
- acting to **prevent** problems from occurring or getting worse.

Box 2.1

The Welsh Government expects public bodies subject to the WFG Act to follow the five ways of working when managing noise and soundscapes.

2.2 Dos and don'ts

2.2.1 In light of the above, noise and soundscape management in Wales **should not** be carried out in the following ways:

- Seeking only short-term solutions to instances of noise nuisance;
- Seeking to manage noise and soundscapes separately from the pursuit of other, related outcomes such as clean air, energy efficiency, safer roads, healthier lifestyles and more resilient ecosystems;
- Letting the experts decide what's best, and informing the public only after it's all been settled;
- Environmental health and pollution control teams trying to do it all on their own; or
- Waiting for a statutory nuisance or noise action planning priority area to be identified before starting to do something about it.

2.2.2 Instead, noise and soundscape management **should** be carried out by:

- Pursuing long-term, enduring solutions to any existing instances of noise nuisance;
- Seeking to manage noise and soundscapes at the same time as achieving other, related outcomes;
- Taking opportunities to talk to the public about the challenges associated with exposure to noise and unhealthy soundscapes, listen to their concerns and seek their views on potential solutions and their involvement in delivering them;
- Working actively with internal and external partners to mutual benefit in the delivery of desired outcomes; and
- Keeping exposure to noise (that is, unwanted or harmful sound) as low as reasonably practicable across the whole of the population, looking out in particular for areas where noise levels might qualify as a statutory nuisance or noise action planning priority area, or where public amenity might be adversely affected by noise at some point in the future, and acting pre-emptively to prevent those things from happening.

3 Integrating noise and air quality policy

3.1 Review of local air quality and noise management in Wales

3.1.1 From September to December 2016, the Welsh Government carried out a wide-ranging public consultation on ways to improve local air quality and noise management in Wales. On 15 June 2017, Clean Air Day, the Welsh Government issued new statutory policy guidance²⁴ under section 88 of the Environment Act 1995, implementing many of the consultation's proposals. Local authorities in Wales must now have regard to this guidance when carrying out their local air quality management functions under Part IV of the 1995 Act²⁵ insofar as it relates to those functions.

3.2 What the policy guidance says about noise

3.2.1 Airborne environmental noise pollution, meaning unwanted or harmful sound from transport and industry, has much in common with air pollution. The sources of air and environmental noise pollution tend to be either identical or else closely linked, their transmission pathways are similar, and the most affected receptors are also often the same, typically the people situated closest to the source.

3.2.2 For road traffic travelling at a fixed speed, emissions of both air and noise pollution increase or decrease in proportion to the number of vehicles. The noisiest and dirtiest vehicles are often the same, as are the quietest and cleanest. The levels of both air and noise pollution are highest at the road itself and fall off with distance. Buildings and terrain can obstruct or channel both air and noise pollution. Traffic travelling at very high speeds and congested traffic can result in high levels of both air and noise pollution. In addition, some adverse health effects have been linked to both air and noise pollution, for example increased risk of cardiovascular disease.

3.2.3 For all these reasons, it makes sense to consider both forms of airborne traffic pollution together. Pursuing them separately would at best result in duplication of effort and missed opportunities, at worst in the implementation of conflicting policies.

²⁴ <https://gov.wales/docs/desh/publications/170614-policy-guidance-en.pdf>

²⁵ <https://www.legislation.gov.uk/ukpga/1995/25/part/IV>

3.2.4 Whenever developing local air quality action plans or wider policies with a view to improving air quality, local authorities should ask themselves the following questions:

- Are there existing environmental noise pollution issues associated with the known air quality issues? If so, can we address them at the same time?
- Is there a risk of some of our proposed air quality actions making the environmental noise pollution situation worse? If so, how can we mitigate this risk?

Box 3.1

The purpose of local air quality management is to improve human health and quality of life. This improvement to health and quality of life will be greater if improved soundscapes are achieved alongside reductions in air pollution.

3.3 What the policy guidance says about green infrastructure

3.3.1 Green infrastructure refers to natural or semi-natural areas partially or completely covered by vegetation or water in or near built-up areas. It includes parks and gardens, woodlands, allotments, nature reserves, ponds, lakes, rivers, canals, wetlands and off-road paths bordered by vegetation or water, which provide habitat for wildlife and can be used for recreation, education or active travel.

3.3.2 Trees, hedgerows and green infrastructure more broadly can contribute to reducing the harmful effects of air and noise pollution in a number of ways:

- By removing pollution from the air and aiding its dispersion, and by absorbing, scattering and reducing the perception of noise.
- By putting a buffer distance between sources and receptors.
- By enabling off-road active travel and making it an attractive alternative to motor vehicle use, thereby reducing both the user's vehicular emissions and their personal exposure.
- By providing tranquil environments and positive soundscapes, which reduce the stress levels associated with busy roads.

- By encouraging sport and other outdoor recreation, improving people's overall state of health and thereby building their resilience to the health risks posed by air and noise pollution.

3.3.3 In addition, the presence of trees and hedgerows by the roadside or along a central reservation may have a calming effect, causing motorists to drive more smoothly.

Box 3.2

Through implementing the Natural Resources Policy (NRP), the Welsh Government is prioritising the delivery of nature-based solutions to improve our social, ecological and economic resilience. Such solutions should be given due consideration in the development of any plan or strategy to address air and/or noise pollution at a local or regional level.

3.4 What the policy guidance says about annual air quality progress reports

3.4.1 Members of the public have a right to know not only the extent to which they are exposed to airborne pollution, but also whether the relevant public bodies are treating it as a priority. From 2018 onwards, in addition to reporting progress in relation to air quality management areas, each annual progress report should also state:

- whether air and/or environmental noise pollution are addressed in the local authorities' well-being objectives under the WFG Act, and if so, in what form, and what progress has been made in meeting those well-being objectives to date; and
- what policies, if any (e.g. relating to land use and transport planning, green infrastructure and active travel), local authorities have in place to reduce overall levels of nitrogen dioxide, particulate matter and environmental noise pollution for the population as a whole, taking into consideration the Welsh air quality exposure indicators and national noise maps.

3.4.2 Each annual progress report should state whether and how air quality monitoring, the Welsh air quality exposure indicators and national noise maps have informed or will inform public services boards' assessments of local well-being.

3.5 What the policy guidance says about local air quality action plans

- 3.5.1 Any new or updated local air quality action plan from 2017 onwards should state how actions are being taken forward not solely with a view to achieving technical compliance with the national air quality objectives, but also with a view to maximising their contribution to reducing overall levels of nitrogen dioxide, particulate matter and environmental noise pollution for the population as a whole, so as to achieve the greatest public health benefit.
- 3.5.2 To be clear, the Welsh Government is not suggesting local authorities should be able to demonstrate reductions in air and noise pollution across their entire territory through measurement and attribute those reductions to local air quality action plans. They are, however, being asked to factor any potential benefits in terms of more widespread airborne pollution reduction into the selection and prioritisation of measures in their action plans. This way of thinking should come naturally over time as the ways of working set out in the WFG Act become more prevalent within local authorities. In working in accordance with the sustainable development principle, local authorities should, as a matter of course, be looking to exploit any opportunities for wider benefits arising from their activities, including the public health consequences of how they select and prioritise actions in their local air quality action plans. Narrative on these wider considerations should be included in action plans.

3.6 Clean Air Zones

- 3.6.1 The designation of a Clean Air Zone (CAZ) is seen as a much stronger commitment to achieve real improvements in air quality in an area than the designation of an air quality management area under the Environment Act 1995, which local authorities are required to do wherever they find non-compliance with one of the national air quality objectives. Declaring an air quality management area triggers a requirement to produce a local air quality action plan “in pursuit of the achievement of air quality standards and objectives in the designated area”. Whereas in an air quality management area the principal requirement is to pursue compliance with the national air quality objectives, in a CAZ it is to ensure air quality improvements in the soonest time possible.
- 3.6.2 The draft Clean Air Zone Framework for Wales states that a CAZ should:
- consider the full range of sources of air pollution and environmental noise (not restricted to road use);

- apply targeted action in a specific area to improve air quality and soundscapes and thereby improve the health and well-being of the population;
- aim to reduce all types of airborne pollution, including environmental noise;
- ensure that the environmental improvements achieved are long-lasting; and
- act against potential increases in pollution arising through population growth, new development, or changes in land or building use.

3.6.3 Although compliance with air quality legislation may be a key driver for local authorities considering introducing a CAZ, the health benefits generally of reduced public exposure to airborne pollution that should arise from the operation of a CAZ will also be a significant consideration.

3.6.4 The draft Framework states that when undertaking engagement activity, the health and environmental benefits of improved air and soundscape quality should be made clear, and the reasons for the proposed CAZ explained in this context. Raising awareness of the health problems associated with poor air quality and environmental noise is important in ensuring that the public are informed, and understand the imperative for action. Reducing congestion on roads, and making streets safer, cleaner, and more pleasant places to be, is a generally positive aspiration that the public can be expected to engage with. Utilising these messages in public engagement activity can help influence public behaviour to support the move towards cleaner modes of travel.

3.6.5 The draft Framework states that if noise benefits are anticipated as an additional benefit arising from the CAZ, baseline noise measurements should be taken so that those improvements can be measured. Readings should continue to be taken over time following the launch of the CAZ in order to monitor changes in target pollutants and to provide a robust evaluation of environmental and health impacts against forecasts.

Box 3.3

By defining environmental noise as an airborne pollutant within its Clean Air Programme, the Welsh Government will create and pursue any opportunities to further align noise/soundscape and air quality policy and regulation in Wales over the course of the next five years, in order to achieve multiple benefits from our actions.

4 Planning for new development

4.1 A focus on placemaking

- 4.1.1 The role of **placemaking** as part of town and country planning is a key focus of Planning Policy Wales (PPW), the Welsh Government's main planning policy document. Placemaking is a multi-faceted approach to the planning, design and management of spaces and is closely integrated with the wider objectives of the WFG Act. PPW requires those engaged in the planning system to think about places and well-being in a joined-up way rather than addressing single issues in isolation. Overriding issues will always be given appropriate protection, but the new PPW should also set the basis for thinking and behaving differently as part of arriving at desired outcomes. A placemaking approach should have at its heart the intention of capitalising on a local community's assets, inspiration and potential, with the intention of creating development that promotes health, happiness and well-being.
- 4.1.2 PPW has been completely reworked to take account of the WFG Act. The seven well-being goals and five ways of working provide links throughout the document, in terms of both its structure and its content. PPW is now based around four main themes that together promote placemaking and sustainable development. These themes are placemaking, active and social places, productive and enterprising places, and distinctive and natural places. The use of the four themes enables the common linkages between policy areas to be identified, but does not coerce policy into the seven discrete areas of the well-being goals. It is a practical application of the goals that suits the purpose of the planning system, while still emphasising the need for all aspects of the goals to be considered at the same time and, where practical, in an integrated way.
- 4.1.3 Each theme contains information on how it links with the well-being goals, the long-term trends that each theme needs to address and an illustration of how joined-up policy formulation can contribute to the making of good, sustainable places. Within the text of the document, linkages to the five ways of working in the WFG Act are also identified.

- 4.1.4 Overall, the revised PPW has a strong focus on recognising, understanding and valuing the different characteristics of places as part of maximising the contribution of the planning system towards the well-being goals. This includes those characteristics relating to environmental quality as well as social, cultural and economic aspirations. The way that places function can have an impact on the choices people make in their everyday lives, and therefore securing environmental improvements in the built environment, as well as addressing impacts, should be the aim. Good design is a fundamental part of this. Design is about the relationships between elements of the natural and built environment. Good design, as well as ensuring high environmental quality, should be an effective way of linking dwellings, workplaces and community facilities, ensuring the provision of accessible open space and enabling the sensitive management of risks, including exposure to airborne pollution.
- 4.1.5 Placemaking outcomes should reflect the importance of clean air and appropriate soundscapes alongside a raft of other integral qualities of places. For example, a new section in the consultation draft specifically promotes healthier places, which will ensure that development plans and individual developments strive to achieve positive impacts on public health and well-being. The need to reduce pollution and address other environmental risks is key, at the same time as recognising the role that these environmental qualities play in promoting physical and mental well-being and creating areas of tranquillity in busy environments.

4.2 What the new planning policy says about air quality and soundscape

- 4.2.1 Air quality and soundscape are addressed as a key component of the natural and built environment, placing the issues on an equal footing with other objectives such as housing, transport and economic development. The revisions to PPW recognise the importance of air quality and appropriate soundscapes to the health and well-being of people and the environment. PPW will ensure that long-term approaches are taken to prevent the creation of new, or worsening of existing, problems and seek to encourage integrated solutions that aim to reduce average levels of airborne pollution.
- 4.2.2 The final policy recognises that the national air quality objectives are not 'safe' limits and the aim is not to tick boxes relative to these thresholds, though it is still the case that they will feature in decision-making. The concept of soundscapes is introduced into planning policy, recognising the positive role that they play in creating a sense of place, rather than solely focusing on noise as a form of pollution.

- 4.2.3 Notwithstanding the overall placemaking aims of PPW, the key means of conveying the specific issue of air quality and soundscape in the new policy is through a guiding framework, supplemented by more detailed considerations. The framework rests on a long-standing key policy, namely that all those participating in the planning process will need to consider the effects that proposed developments have on air or soundscape quality and the effects that existing air or soundscape quality may have on proposed development. It is then possible to filter down into more detailed considerations, such as the relationship between pollution sources and receptors, identifying the choices available in existing problematic areas, and more generally seeking the incorporation of measures to reduce overall exposure to airborne pollution and the maintenance or creation of appropriate soundscapes. The detailed text flags issues such as the importance of incorporating green infrastructure into the built environment as well as utilising best practice in acoustic design.
- 4.2.4 The key difference in this draft of PPW is the parity given to these issues and the encouragement of behaviours that will need to be employed by all actors in the planning process to drive the desired change. It will no longer be acceptable to 'park' these issues as technical matters to be addressed at the end of the process. They are factors that should affect initial policy choices when preparing development plans and, similarly, they must feature as considerations in the initial choice of location of development, where appropriate, and in the early design stages of developments and projects.

4.3 Making the 'agent of change' principle explicit

- 4.3.1 The **agent of change** principle is a common sense rather than a complex principle. It says that a business or person responsible for introducing a change is responsible for managing that change. It is claimed that it can result in better planning, better developments and greater encouragement for people to think about what exists where they want to live and how they will live with it. It also encourages businesses, such as music venues and others, to think more about their neighbours.
- 4.3.2 It became increasingly evident during the revision of PPW that in supporting the night-time economy there is a need to give particular consideration to the compatibility of different uses and competing agendas. Trying to sleep whilst coping with night-time noise is a very real issue and there are health and well-being considerations to take into account when promoting housing near sources of noise.

- 4.3.3 Equally, the night-time economy is important in economic terms as well as providing for popular cultural experiences and entertainment, which feature highly as part of modern lifestyles. The right balance needs to be struck between providing homes, enabling visitor experiences, protecting venues that may have noise associated with them, for example, live music venues or churches, and ensuring the health and well-being of local residents.
- 4.3.4 As a result, PPW includes a clear and explicit reference to the agent of change principle as part of recognising different soundscapes, and specifically requires the principle to be considered as part of all development plan and development management decisions concerning the compatibility of uses and soundscape. It also allows for the compatibility of uses relative to soundscape to be given specific attention when preparing development plans, including whether there is a need to identify areas of cultural significance or areas where soundscape consideration is particularly sensitive.
- 4.3.5 Making the principle explicit as a matter of policy in PPW means that a developer would have to ensure that solutions to address noise from nearby pre-existing infrastructure or businesses can be found and implemented as part of ensuring that the development is acceptable. This is essentially what planning policies already amount to, but by explicitly making reference to the principle there are wider behavioural benefits to be gained in terms of improved planning practice and promoting a wider appreciation of the nature of places.
- 4.3.6 The different characteristics that give identity to places need to be recognised fully as part of plan preparation and in relation to decisions on planning applications, and appropriate solutions must be implemented. The changes in the revised PPW are about redressing the balance, ensuring that all issues are given equal consideration and ensuring that air quality and noise issues are not relegated to being just a technical matter or an afterthought.

4.4 Acoustic design

- 4.4.1 The Building Regulations, which are now devolved in Wales, relate to the protection against sound transmission from parts of a building and adjoining buildings, sound within a dwelling house, sound reverberation in common internal parts of buildings containing flats or rooms for residential purposes, and acoustic conditions in schools. The Robust Details Scheme provides accredited standard construction details as an alternative to the pre-completion testing otherwise required under the Building Regulations.

- 4.4.2 The Building Regulations relate to sound transmission within the internal areas of buildings. They do not apply to sound transmission from the external environment into the internal areas of buildings. When noise-sensitive buildings such as residential properties are introduced into an area subject to high levels of environmental noise, planning authorities should protect the future occupants by imposing appropriate conditions or obligations on the developer at the planning stage, for example, to avoid placing bedrooms, living rooms and gardens on the exposed side of a property. In many cases, this could lead to a higher value property at little or no extra cost.
- 4.4.3 Ventilation requirements are an important consideration in the design of buildings, as this can affect the acoustic comfort of the internal occupants. This is particularly relevant to inner city areas where there may be excessive external noise. In these situations, the ventilation design may have to be through mechanical rather than natural means.
- 4.4.4 BS 8233:2014 provides information on the design of buildings that have internal acoustic environments appropriate to their functions. It deals with control of noise from outside the building, noise from plant and services within it, and room acoustics for non-critical situations. It is intended for use by non-specialist designers and constructors of buildings and those concerned with building control, planning and environmental health. It should be noted, however, that this guidance relates to anonymous noise, and specialist advice may be required to determine appropriate criteria for the mitigation of particular noise sources.
- 4.4.5 BS 5228:2009+A1:2014 refers to the need for the protection against noise and vibration of persons living and working in the vicinity of, and working on, construction and open sites. Noise and vibration can cause serious disturbance and inconvenience to anyone exposed to them and to processes and activities in neighbouring buildings. In extreme circumstances vibration can cause or contribute to building damage. BS 5228 recommends procedures for noise and vibration control in respect of construction operations and aims to assist architects, contractors, site operatives, designers, developers, engineers, environmental health officers and planners.

4.4.6 Building Bulletin 93 (BB93), *Acoustic design of schools: performance standards*²⁶, published by the Department of Education in England, has been adopted for use in Wales. Approved Document E of the Building Regulations 2010²⁷ makes reference to the use of BB93, and the normal way of satisfying Requirement E4 of those Regulations²⁸ will be to meet the values for sound insulation, reverberation time and indoor ambient noise given in BB93.

4.4.7 **Good acoustic design** is, however, about more than just the numbers. It is a holistic design process that creates places that are both comfortable and attractive to live in, where acoustics is considered integral to the living environment. For more information on the principles of good acoustic design, readers are referred to Professional Planning Guidance (ProPG) Supplementary Document 2, produced by the Association of Noise Consultants, the Institute of Acoustics and the Chartered Institute of Environmental Health²⁹. ProPG has been written principally to assist with the planning process in England, but the design principles put forward in Supplementary Document 2 may also be adopted in Wales.

4.4.8 Tranquil places may be created by combining building layout design, green building design, the presence of vegetation and screening from urban noise. See the next chapter for further discussion on tranquil green space in the built environment.

4.5 Acoustic insulation, energy efficiency and overheating

4.5.1 Choice of construction method(s) can have a considerable effect on overall acoustic performance. The balance of materials, voids and joints combine in a way that can give a high performance acoustically. Different material types that perform as a composite construction need critical detailing, particularly where there is a requirement for both energy conservation and acoustic performance.

²⁶ <https://www.gov.uk/government/publications/bb93-acoustic-design-of-schools-performance-standards>

²⁷ <https://gov.wales/docs/desh/publications/170403building-regs-approved-document-e-resistance-to-sound-en.pdf>

²⁸ <https://www.legislation.gov.uk/ukxi/2010/2214/schedule/1>

²⁹ <http://www.association-of-noise-consultants.co.uk/propg>

- 4.5.2 Improving a building's energy efficiency can have the added benefit of reducing noise levels within the property. In particular, double- or triple-glazed windows prevent both heat loss and the transmission of sound from the road outside into bedrooms and living rooms. However, opening the windows in warm weather to ventilate the property may result in a noticeable increase in noise, particularly if they are left open at night, so in very noisy areas other forms of ventilation may be required, which may have an associated energy cost. If the residence has a quiet façade, good design will make provision for adequate ventilation through windows on that side of the building rather than on the noise-exposed side, to reduce the need for energy-consuming mechanical ventilation.
- 4.5.3 Loft and cavity wall insulation whose main purpose is to prevent heat loss may also reduce noise levels within a property, but only in cases where it addresses the main route of sound propagation. Where noise primarily enters a property through windows or from an adjoining property via solid joints rather than by crossing air gaps, filling those gaps with a sound absorber will bring little if any acoustic benefit.
- 4.5.4 The Association of Noise Consultants' draft *Acoustics, Ventilation and Overheating Guide*³⁰ observes that while local planning authorities may be responsible for assessing and enforcing mitigation against outdoor sound, ventilation is addressed through the Building Regulations, and while there is no statutory requirement to assess the potential for overheating in dwellings, such an assessment may be undertaken to meet planning and/or the developer's requirements. Hence, as well as being undertaken by different designers, the adequacy of the provisions for each aspect may be assessed by different bodies and potentially based on different requirements. The draft guide recommends an approach to acoustic assessments for new residential development that takes due regard of the interdependence of provisions for acoustics, ventilation, and overheating.

³⁰ <http://www.association-of-noise-consultants.co.uk/wp-content/uploads/2018/02/AVO-Guide-draft-for-consultation.pdf>

Box 4.1

The Welsh Government will build upon the new air quality and soundscape content of PPW as we take forward Wales' first statutory National Development Framework and produce further guidance on air and soundscape quality to assist local planning authorities in Wales.

In particular, the Welsh Government will conduct a detailed review of Technical Advice Note (TAN) 11: Noise³¹ with a view to replacing it with a new TAN addressing air quality and soundscape.

³¹ <https://gov.wales/topics/planning/policy/tans/tan11/?lang=en> and <https://gov.wales/topics/planning/policy/policyclarificationletters/2015/cl-01-15/?lang=en>

5 Tranquil green space in the built environment

5.1 Overview

- 5.1.1 **Tranquillity** means different things to different people, but it is generally understood to refer to an untroubled state, characterised by peace and calm and free from unwanted disturbances. This may refer to either a state of mind or the quality of a particular environment. It can be quantified either in terms of the absence of unwanted intrusions or by a balancing of positive and negative factors.
- 5.1.2 Excessively high noise levels where human beings are present are a problem to be avoided or addressed regardless of an area's other qualities, but quiet on its own does not make an area good. If a space open to the public is ugly or feels unsafe, then relatively little benefit will be felt from its being quiet.
- 5.1.3 An area may offer peace and quiet, or a positive soundscape where natural sounds such as flowing water, birdsong, the wind in the trees and human conversation are more prominent than background traffic noise. However, the benefits of such qualities of place may be fully realised only when they coincide with visual beauty, a sense of security and ease of access. The presence of nature within towns and cities also provides a welcome contrast to and relief from the built environment.
- 5.1.4 Areas where these qualities all exist side by side (for example, Green Flag Award-winning sites) should receive the greatest protection from noise intrusion that would risk compromising the place's overall sense of tranquillity.
- 5.1.5 By the above reasoning, an area may possess a good soundscape but require specific improvements in terms of landscape, nature, safety or access before it can act as an effective refuge from traffic noise. In such cases, addressing those deficiencies may be just as beneficial in tranquillity terms as seeking to quieten a noisy space.
- 5.1.6 Healthy, resilient and diverse urban green infrastructure that is valued for its contribution to tranquillity will deliver the widest range of benefits, including soaking up water from rainstorms, trapping air pollution particles, reducing the effect of heat waves and providing places for healthy exercise. Tranquil urban green spaces should therefore be seen as a very cost-effective way to deliver all seven well-being goals, not just as providers of respite from excessive noise.

5.2 The sustainable management of natural resources

5.2.1 The Environment (Wales) Act 2016 puts in place the legislation needed to plan and manage Wales' natural resources in a more proactive, sustainable and joined-up way. Our aim is to sustainably manage our natural resources in a way and at a rate that can maintain and enhance the resilience of our ecosystems whilst meeting the needs of present generations without compromising the ability of future generations to meet their needs.

5.3 What the Natural Resources Policy says about green space

5.3.1 The NRP, which the Environment (Wales) Act 2016 requires the Welsh Government to produce, sets out national priorities to address the challenges that face Wales' natural resources and to realise the benefits from them, to maximise their contribution to achieving the well-being goals. One of these national priorities is the delivery of nature-based solutions, including delivering urban green infrastructure.

5.3.2 The NRP recognises air and noise pollution as key public health issues, and the regulation of noise as one of the benefits derived from Wales' natural resources. Areas with more accessible green space are associated with better mental and physical health, and health inequalities can be significantly reduced in greener areas. Attractive and accessible green and blue spaces, such as country or community parks, provide a focus for community activities and identity and can be a stimulus to regeneration and investment. However, many of our most deprived communities live close to natural assets from which they are disconnected and which currently provide very little benefit to those communities.

5.3.3 The NRP states that in taking forward our action for our local environmental quality and communities we will:

- Ensure that our communities benefit from healthy environments, by identifying opportunities to take actions that improve respiratory conditions, inactivity and mental health. These include increasing green space and tree cover and improving public access to green infrastructure. We will support communities to improve places where they live and work, tackling local environmental issues such as litter and fly tipping, which affect mental and physical health.
- Work with communities to protect and enhance green spaces that bring people together, helping communities take ownership of assets in their area.

- Plan the development of green infrastructure at the heart of our communities to deliver space for recreation, transport corridors for cycling and walking and resilience against flooding and heat, and to provide important spaces for nature.
- Promote 'green prescribing'.
- Promote community ownership or management of natural resources.
- Support the development of allotments and community food growing, particularly in support of deprived communities.

Box 5.1

A thematic working group set up through the Environment (Wales) Act Implementation Group is exploring enablers and mechanisms for taking this work forward. Area statements produced by NRW must also facilitate the implementation of the NRP.

5.4 Welsh Government environment grant funding

5.4.1 In view of learning over recent years and changes that have taken place in policy and legislation, the Welsh Government has taken a fresh look at the grant schemes it provides to support environmental activity, and is now working with its partners to implement a new approach to the provision of future environment grants. Enabling Natural Resources and Well-Being in Wales 2019-2023³² replaces previous grant schemes, and aims to enhance the development and delivery of cross-sector collaborative projects, maximising the use of the resources available.

5.4.2 Themes of action have been identified for the scheme in line with the Programme for Government and the NRP as follows:

- Developing, regenerating and broadening access to sustainable green infrastructure;
- Improving the quality of the urban and rural built environment; and
- Developing resilient ecological networks, areas and nature-based solutions.

³² <https://gov.wales/topics/environmentcountryside/environment-grants/enabling-natural-resources-and-well-being-in-wales-2019-2023-call-for-grant-proposals>

5.4.3 The guidance for applicants³³ makes clear that this includes green infrastructure projects that contribute towards reduced air and noise pollution, and built environment projects that address air quality management areas and noise action planning priority areas. The potential measures that may be funded include both reduced noise levels (measurable decibel reduction) and change in understanding of and behaviour towards the natural environment and local environment quality (as may be demonstrated, for example, through surveys and questionnaires), so soundscape projects are also within scope.

Box 5.2

The first call for grant proposals under Enabling Natural Resources and Well-Being in Wales 2019-2023 closed on 3 December 2018. Further calls for proposals will follow in due course.

5.5 The role of Natural Resources Wales

The information in this section and the next has been provided by NRW.

5.5.1 NRW brings together in a single body the former functions of the Countryside Council for Wales and the Welsh devolved functions of the Environment Agency and the Forestry Commission. The Countryside Council for Wales recommended, prior to the creation of NRW, that no person should live more than 300 metres from their nearest natural green space. This is roughly the equivalent of a six-minute walk. The Countryside Council for Wales recommended that provision should be made for accessible natural green space following a system of tiers into which sites of different sizes fit as follows:

- Tier 1: no person should live more than 300 metres from their nearest natural green space.
- Tier 2: there should be at least one accessible 20-hectare site within two kilometres of each home.
- Tier 3: there should be at least one accessible 100-hectare site within five kilometres of each home.

³³ <https://gov.wales/docs/desh/publications/180907-call-for-proposals-and-grants-guidance-en.pdf>

- Tier 4: there should be at least one accessible 500-hectare site within ten kilometres of each home.

5.5.2 The majority of Welsh local authorities have mapped the natural green spaces accessible to residents of their towns and cities and assessed the provision of green space against standards advocated by the Countryside Council for Wales. This helps them to identify areas that are deficient in green space or where existing green space is of insufficient quality and plan remedial action.

5.5.3 Trees bring multiple benefits to the built environment, including reducing the urban heat island effect and absorbing air pollution. They have only a limited ability to absorb or scatter noise, but much more significant is their ability to reduce the perception of noise by hiding the noise source from sight and making a place feel more tranquil, both visually and by introducing natural sounds to soften an otherwise purely mechanical soundscape. When the trees are bare in winter these effects are lessened, but at this time of year people are less likely to be outside or to have their windows open. The Trees and Design Action Group³⁴, CIRIA³⁵ and the European HOSANNA project³⁶ have produced guides to help maximise the benefits brought by urban trees and other forms of vegetation.

5.5.4 Since the 2013 noise action plan, NRW has assessed the extent of tree canopy cover for all of our 220 urban areas in Wales (a world first) and published the results on-line together with county-by-county breakdowns³⁷. Key conclusions include the high level of coincidence of areas of multiple deprivation and areas with the least urban tree canopy, which should be considered in relation to the many health and well-being benefits that regular contact with nature, and especially urban trees as a principal component of urban green infrastructure, bring. The work also illustrates how and where some of the greatest benefits that urban trees provide are actually in the noisiest, busiest places with the most hard surfaces such as town centres. Further studies, using the 'i-Tree-Eco' method, have calculated the ecosystem benefits of urban trees in Wrexham, Bridgend, the Swansea-Tawe areas, and Cardiff.

³⁴ <http://www.tdag.org.uk/trees-in-the-townscape.html>

³⁵ <http://www.ciria.org>

³⁶ <http://www.greener-cities.eu>

³⁷ <http://naturalresources.wales/guidance-and-advice/environmental-topics/your-neighbourhood/green-spaces/urban-trees?lang=en>

5.5.5 All this work provides much specific evidence of the degree to which urban trees play a prominent role in providing multiple benefits for people's health and well-being, both through their physical actions (to improve microclimate) and through their contributing to tranquillity in urban areas. Urban trees form a principal component of urban green infrastructure, and require positive planning as part of local green infrastructure plans.

Box 5.3

NRW will continue to keep an up-to-date GIS data set of urban green spaces in Wales, and will make this available to local authorities to help them maintain their existing green space inventories. NRW continues to refine this data set by incorporating local authority data and linking it to other relevant data sets such as the new Ordnance Survey urban green space product.

NRW is investigating how noise mapping data for urban areas can be included in area statements under the Environment (Wales) Act 2016 and presented in the context of urban green space management, including setting out the wider tranquillity context necessary for the appreciation of soundscapes.

5.6 Celebrating tranquil urban green space

5.6.1 The objective of the **Green Flag Award** scheme³⁸ is to encourage the provision of good quality public parks and green spaces that are managed in environmentally sustainable ways. The Green Flag Award helps to create public recognition of good quality green spaces, and in doing so aims to rebuild people's confidence in them. The Award aspires to raise expectations of what a public green space can offer and reassure people that the high regard they have for their public parks and green spaces is justified. The Award acts like an MOT test for a green space. It does not specify what features should be present, but assesses all features present to ensure that the site is fit for purpose.

5.6.2 Any corporate body or public institution may apply for a Green Flag Award for any freely accessible public open space. The Green Flag Community Award, as its name suggests, is for any freely accessible public open space that is managed by a community or voluntary group. Both Awards are judged to the same criteria, and only the requirements for a management plan differ between them. A visitor to an Award-winning site should expect the same quality of experience whether the site holds a Green Flag or a Green Flag Community Award.

³⁸ <https://www.keepwalestidy.cymru/Pages/Category/greenflag>

5.6.3 The criteria by which a site will be judged for a Green Flag Award are grouped under eight main headings that together make for a comprehensive definition of what a good green space might be. They outline the standards that a Green Flag site must achieve and they set targets for improvement. The headings define:

- how to create a sense that people are positively welcomed into a green space;
- how best to ensure that the site is a safe and healthy environment;
- what people can expect to find in the way of standards of cleanliness, facilities and maintenance;
- how a green space can be managed in environmentally sensitive ways;
- the value of conservation and care of historic heritage;
- ways of encouraging community involvement;
- methods of promoting or marketing a site; and
- how to reflect all the above in a coherent and accessible management plan, statement or strategy.

5.6.4 Award-winning sites are not required to reach a specified level of tranquillity, but by their very nature properly managed green spaces will help people to relax and therefore begin to combat the effects of noise-induced stress. However, a site will be more likely to win an Award if it can demonstrate that measures have been taken to reduce noise pollution (see section 4.14 of *Raising the standard: The Green Flag Award guidance manual*³⁹).

5.6.5 Judges are especially encouraged to check for seating provided for contemplation, physical rest, solitude, and enjoyment of nature (see section 2.5 of *Raising the standard*).

5.6.6 The most important contribution that a Green Flag Award-winning site will make to tranquillity, even if it is subject to noise, is in providing a green space that helps reduce users' perceptions of noise. Often the sound of flowing water, or wind in the leaves of trees and shrubs, will mask artificial sounds from off-site, thereby offering respite to visitors.

³⁹ <http://www.greenflagaward.org/media/1019/green-flag-award-guidelines.pdf>

5.6.7 Evidence suggests that views of green space begin to measurably reduce the clinical signs of stress within three minutes, so the health effects of even a short exposure to, for example, an urban pocket park may be significant. The presence of a Green Flag Award shows potential users that the site is safe, welcoming and well-maintained, thereby encouraging them to use rather than avoid the site, and thus increasing their chances of receiving these health benefits.

Box 5.4

NRW would like to see ‘quiet areas’ (which in Wales we interpret as meaning tranquil green spaces) managed to a high standard so that they continue to be used and provide the respite for which they are intended. The Green Flag Award would be the ideal standard to use to measure whether the management of a site is of sufficiently high quality.

NRW will continue to work with the Green Flag sub-licence holder for Wales, Keep Wales Tidy, to ensure that judges trained in Wales have a proper understanding of tranquillity as it relates to the Green Flag Awards.

5.7 Protecting tranquil urban green space

5.7.1 The 2018 consultation draft of PPW says that formal and informal open green spaces should be protected from development, particularly in urban areas where they fulfil multiple purposes, not only enhancing the quality of life, but contributing to biodiversity, the conservation of the historic environment, nature and landscape, air quality and the protection of groundwater, and providing places of tranquil respite from the busy built environment. Green infrastructure is capable of providing several functions at the same time, and as a result offers multiple benefits, which are particularly important in urban environments where they can facilitate health and well-being-related benefits of open space, clean air and improved tranquillity, as well as creating a sense of place and improved social cohesion.

5.7.2 The draft notes that certain sounds, such as those created by trees, birds or water features, can contribute to a sense of tranquillity, whilst others can be reassuring as a consequence of their association with the normality of everyday activities.

5.7.3 The consultation draft of PPW says that planning authorities will need to consider the effects that proposed developments may have on air or soundscape quality and the effects that existing air or soundscape quality may have on proposed developments. In doing so, they should seek to incorporate measures that reduce overall exposure to airborne pollution and create appropriate soundscapes, including using best practice in terms of acoustic design and safeguarding tranquillity. Particular consideration is required where air pollution or noise-generating development is likely to affect a protected species, or is proposed in or near to statutorily designated areas such as Natura 2000 sites, SSSIs, tranquil urban green spaces (including but not limited to formally designated ‘quiet areas’) valued for the restorative respite and contact with nature that they offer to residents of busy towns and cities, and other sensitive locations such as schools, nurseries, hospitals and care homes.

Box 5.5

Building upon the new air quality and soundscape content of PPW, the Welsh Government will conduct a detailed review of TAN 11: Noise with a view to replacing it with a new TAN addressing air quality and soundscape.

Consultation responses: light pollution

In its response to the public consultation on this noise and soundscape action plan, the Clwydian Range and Dee Valley Area of Natural Beauty Joint Committee suggested that, in many cases, there will be synergy with the management of excessive light, which is a related component of tranquillity. This issue is being increasingly recognised, and many of Wales’ protected landscapes (National Parks and Areas of Natural Beauty) have already secured or aspire to be recognised and managed as formal Dark Sky areas.

Consultation responses: rural tranquillity

In its consultation response, NRW added the following:

“Those visiting remoter, rural areas, especially where natural aspects of the environment are experienced in abundance, seek a much higher threshold of tranquillity, absolute tranquillity, to gain their solace. Absolute tranquillity is an irreplaceable resource and is distinct from the relative tranquillity gained in accessible natural urban green space. According to evidence, from the former Countryside Council for Wales, absolute tranquillity is in a trend of decline, for example from increases in road traffic.

“In Scotland they have designated ‘Wild Land’ areas, of which absolute tranquillity is a feature, for their protection from such disturbance. In Wales we have far fewer places that would equate to Scotland’s Wild Land areas. This makes what we do have, and our near absolute tranquil places, a more critical resource to conserve, because of their scarcity and because of the pressures, such as development, that cause disturbance on them.”

Peter Rogers, responding on behalf of Sustainable Acoustics Ltd, observed that a space can be tranquil and still have high levels of natural sound, such as on a deserted beach, so it need not be quiet unless it is linked with man-made sound such as traffic.

6 Road traffic noise in Wales

6.1 Overview

- 6.1.1 The best way to deal with unacceptable levels of road traffic noise is to prevent them from occurring in the first place through good planning, while at the same time recognising the essential social and economic functions of the road network. When residential properties are built, noise to which occupants will be exposed should be kept to acceptable levels, and when road layouts are to be changed, Welsh Transport Planning and Appraisal Guidance (WelTAG)⁴⁰ and the Noise Insulation Regulations 1975 are there to ensure that affected properties are suitably protected from the resultant increase in noise.
- 6.1.2 Stricter legislation limiting the sound levels of new motor vehicles and tyres at the point of sale can make a major contribution to keeping noise levels down in the longer term. So can a gradual modal shift to electric vehicles, the further development of low noise road surfaces and tyres, and, where appropriate, reductions in the speed limit. When proposing residential developments near existing noise sources such as busy roads, appropriate mitigation, such as adequate sound insulation or appropriate internal design to keep living areas away from the most exposed building façades, will also help to keep levels of population exposure down. However, noise levels to which people are subject can increase over time as a result of increased road use, degradation of the road surface, removal of screening objects and deterioration in driver behaviour.
- 6.1.3 Mitigating noise issues after they have arisen can be a lot more expensive than avoiding them in the first place. It is therefore desirable to seek interventions that bring multiple benefits, such as reducing people's exposure to air pollutants, making buildings more energy-efficient, encouraging safer driving and improving the road surface for drivers and cyclists at the same time as decreasing noise levels. It is also crucial that any intervention be properly targeted. On a road where traffic is slow-moving and revving of engines is the main form of noise, acting to reduce noise from the tyres on the road surface will result in little if any noticeable improvement, whilst at higher speeds tyre and aerodynamic noise may be dominant and reductions in engine noise of limited benefit.

⁴⁰ <https://beta.gov.wales/welsh-transport-appraisal-guidance-weltag>

6.2 Who is responsible?

- 6.2.1 Public roads in Wales fall into two categories – the motorway and trunk road network, which is the responsibility of the Welsh Government’s Network Management Division, and all other public roads, which are managed by local authorities.
- 6.2.2 Each authority is accountable to the public and must identify for itself the appropriate level of resource and the most appropriate strategy for managing noise from the roads for which it is responsible. The Welsh Government will do what it reasonably can to assist, by making the data derived from the noise maps available in a form that is helpful to the responsible authorities and offering grant funding to local authorities where appropriate (see section 5.4).
- 6.2.3 Road users are also responsible for the way in which they operate their vehicles. Unnecessary rapid acceleration, particularly in residential areas, exposes people in nearby buildings or open areas to noise that could easily be avoided, and can also be dangerous. In general, driving safely, driving quietly and driving in a fuel-efficient manner amount to much the same thing.
- 6.2.4 Vehicle engine idling can be a cause of noise nuisance as well as an unnecessary contributor to poor air quality. Sometimes engines are left idling in order that car heating/cooling systems can still operate, or in order to continue to power an entertainment system. Buses also tend to idle unnecessarily during lengthy waits at bus stops.
- 6.2.5 Local authorities have the powers to issue fixed penalties for stationary idling under the Road Traffic (Vehicle Emissions) (Fixed Penalty) (Wales) Regulations 2003⁴¹. They should work with bus operators to encourage them to introduce non-idling policies. Sensitive receptor locations, such as schools and hospitals, are areas where the public are likely to be more susceptible to the adverse effects of exposure to air and noise pollution. Engagement should make clear the potential harm caused by engine idling, and the potential for fixed penalty fines to be issued.

⁴¹ <https://www.legislation.gov.uk/wsi/2003/300>

6.3 What the noise maps tell us

6.3.1 The estimated numbers of people whose homes are exposed to a range of noise levels from major roads in Wales, according to the most recent noise mapping exercise, are shown Tables 6.1 and 6.2 below. Noise levels are expressed in decibels (dB).

Table 6.1 Residential population exposure to noise from major roads in Wales using the day-evening-night noise indicator L_{den}

Data source	Number of people whose homes are exposed to these noise levels				
	55-59 dB	60-64 dB	65-69 dB	70-74 dB	> 75 dB
2017 noise map and population model	254,100	112,500	74,500	54,800	6,600

Table 6.2 Residential population exposure to noise from major roads in Wales using the night-time noise indicator L_{night}

Data source	Number of people whose homes are exposed to these noise levels				
	50-54 dB	55-59 dB	60-64 dB	65-69 dB	> 70 dB
2017 noise map and population model	159,700	90,000	62,000	8,200	1,600

6.3.2 Viewed in isolation, the figures in the tables above are not particularly enlightening. The numbers would carry more meaning if we were able to compare, side by side, the figures from two consecutive rounds of noise mapping, carried out five years apart, to see how the number of people exposed to noise from major roads in Wales had changed over time. Unfortunately, this is not possible owing to changes to the calculation environment, which mean that for residential properties located very close to the roadside, the calculated noise levels are higher on the 2017 noise maps than on the 2012 noise maps, even where nothing has changed in the real world, and this skews the resultant population figures.

6.3.3 However, we can do the next best thing, which is to fix the noise levels as they were calculated in 2012 and use them first with the 2012 residential population model and then with the 2017 residential population model to give an indication of how the numbers of people exposed to noise are likely to have increased over time purely as a consequence of residential population growth in the vicinity of major roads in Wales, assuming that the road traffic noise itself remains largely unchanged.

Table 6.3 Residential population exposure to noise from major roads in Wales using the day-evening-night noise indicator L_{den}

Data source	Number of people whose homes are exposed to these noise levels				
	55-59 dB	60-64 dB	65-69 dB	70-74 dB	> 75 dB
2012 noise map and population model	232,500	113,900	76,300	44,600	4,000
2012 noise map, 2017 population model	239,900	116,900	78,500	48,200	4,400

Table 6.4 Residential population exposure to noise from major roads in Wales using the night-time noise indicator L_{night}

Data source	Number of people whose homes are exposed to these noise levels				
	50-54 dB	55-59 dB	60-64 dB	65-69 dB	> 70 dB
2012 noise map and population model	160,600	86,900	54,800	5,100	1,400
2012 noise map, 2017 population model	166,100	88,900	58,800	5,700	1,500

6.3.4 Of course, an increasing population being subjected to road traffic noise in their homes also means more people using the roads, so, even where the road layout remains unaltered, noise levels will not remain unchanged over a five-year period. Indeed, the length of road qualifying as major road (i.e. carrying more than three million vehicles per year) increased from 2,470 km to 2,590 km between the 2012 and 2017 noise mapping exercises.

6.3.5 Unsurprisingly, the area of Wales contained within each of the principal major road noise contours has also increased between the 2012 and 2017 noise mapping exercises. The change in calculation environment affecting noise levels at properties very close to the roadside should have a minimal effect, if any, on these figures, and so they are compared side by side in Tables 6.5 and 6.6 below.

Table 6.5 The area of Wales exposed to noise from major roads in Wales using the day-evening-night noise indicator L_{den}

Noise level	Area (km ²)	
	2012 noise map	2017 noise map
≥ 55 dB	905	942
≥ 60 dB	461	476
≥ 65 dB	216	224

Table 6.6 The area of Wales exposed to noise from major roads in Wales using the night-time noise indicator L_{night}

Noise level	Area (km ²)	
	2012 noise map	2017 noise map
≥ 50 dB	576	593
≥ 55 dB	272	283
≥ 60 dB	122	127

6.3.6 Because buildings act as effective noise barriers, the spread of noise across land adjacent to a major road is greatest where there are no buildings present. The numbers in Tables 6.5 and 6.6 are therefore more indicative of the presence of noise from major roads on open land in Wales than they are of residential population exposure.

Box 6.1

The Welsh Government will amend its Environmental Noise Regulations to bring them into line with new European legislation mandating the use of a common noise mapping method in the next round of noise mapping. Through its membership of the British Standards Institution committee on transport noise, the Welsh Government will also participate in work to explore options for a new, improved UK road traffic noise calculation method.

The Welsh Government is establishing an Air Quality Monitoring and Assessment Centre to help provide the evidence needed for timely, coherent and effective decision-making on air quality matters in Wales, at both the local and the national government level. It will help target actions to achieve the greatest benefits in terms of public health and well-being. This means improving soundscapes at the same time as reducing air pollution, and we will consider what role the Centre might usefully play in any future noise mapping.

6.4 Priority areas and proximity areas

6.4.1 A new map of road traffic noise **priority areas** in Wales (areas where people's homes are exposed to a day-evening-night noise level exceeding 73 dB according to the 2017 noise maps, or where people live alongside concrete trunk roads) is being produced in consultation with local authorities.

6.4.2 Priority areas highlighting situations such as those where noise levels at all the highly exposed residential properties have effectively been calculated within 7.5 metres of the noise source will be referred to as **proximity areas**. These are typically areas where residents might say they have the traffic going right past their window. In such areas, engineering solutions such as noise barriers are not really an option. However, it is still important to understand where these highly localised situations exist, so that public bodies can take them into account when making traffic management or land use planning decisions that may increase or decrease public exposure to road traffic noise.

6.5 Noise mitigation works on the motorway and trunk road network

6.5.1 The following lists noise barriers installed on the trunk road network in Wales since those reported in the previous noise action plan:

- A483 Ruabon Bypass northbound carriageway – January 2013

- A55 eastbound carriageway at Broughton – February 2013
- A55 eastbound carriageway at Bodtegwel – February 2013
- A55 eastbound carriageway at Terfyn – February 2013
- A55 eastbound carriageway at Bodelwyddan – March 2013
- A55 westbound carriageway at St Asaph – March/April 2013
- A55 eastbound carriageway at Ewloe – November 2013
- A55 eastbound carriageway at Abergele – December 2013
- A55 eastbound carriageway at St Asaph – February 2015
- A55 westbound carriageway at Abergele – March 2015
- A55 westbound carriageway at Abergele, to the west of Sea Road Bridge – February/March 2018

6.5.2 Noise barriers along the A55 at Abergele have recently been completed, and low noise surfacing will be laid adjacent to this new barrier soon. Other current projects include a feasibility study into options for the treatment of the concrete carriageway on the A40 near Monmouth, and a study into options for the treatment of the concrete carriageways along the A55 at Ewloe and the A483 Wrexham Bypass.

6.5.3 The Welsh Government is currently undertaking surfacing material trials, which should enhance the longevity of low noise surfacing. The Welsh Government acknowledges that previous materials and processes have not managed to achieve desired design life. This has caused disruption during maintenance interventions, and potentially led to further noise through deterioration of the carriageway surfacing. New materials will hopefully achieve or exceed design life, whilst maintaining low noise levels.

Box 6.2

The Welsh Government will review the 2017 noise maps and the identified priority and proximity areas, and prioritise sites for treatment. Prioritisation will be based on ranking the sites according to noise values, numbers of homes affected, complaints received in the five years to June 2018, proximity of network improvement works, cost and deliverability. The Welsh Government will develop a programme of works to treat the most pressing locations with mitigation measures such as noise barriers and low noise surfacing.

The Welsh Government will look for opportunities to treat priority and proximity areas during routine maintenance activities and road improvement schemes, and will actively look to engage with stakeholders during the design of developments alongside the motorway and trunk road network, so as to avoid potential adverse effects.

6.6 Supporting quieter vehicle technologies

- 6.6.1 Low emission vehicles tend to have quieter engines than older, more polluting vehicles.
- 6.6.2 The Welsh Government is developing policies and proposals to help Wales meet its carbon budgets and targets provided for within the Environment (Wales) Act 2016. These include policies and proposals in relation to transport. We will engage with stakeholders to help develop these policies and proposals, which will encompass all transport modes and will include measures to help promote the uptake of low emission vehicles in Wales.
- 6.6.3 The Welsh Government has already committed to providing £2 million to help secure a network of electric vehicle charging points throughout Wales. This funding will be released in 2018/19 and 2019/20. A key priority will be the installation of a network of points along/near our trunk road network for longer through journeys.
- 6.6.4 The Welsh Government is installing electric vehicle charging points in its offices and scoping the potential for installing them across the wider Welsh Government estate.
- 6.6.5 The Welsh Government has and will continue to advise local authorities, bus operators and other businesses on opportunities to bid for UK Government funding that extends to Wales, including the Low Emission Bus Fund and Workplace Charging Scheme.

6.6.6 The Welsh Government is working with the UK Government's Department for Transport following the UK Chancellor's Budget commitment to invest more money in low carbon vehicles, in terms of how this will extend to Wales.

6.7 Supporting active travel

6.7.1 **Active travel**, by which we mean walking and cycling as an alternative means to motorised transport for the purpose of making everyday journeys, can directly reduce road congestion and traffic emissions and improve health and well-being. It has the potential to reduce individual and population susceptibility to the adverse health effects of exposure to air and noise pollution, and could reduce health inequalities.

6.7.2 In densely populated areas, where air and noise pollution are often most concentrated, average journey distances are shorter and active travel offers a viable alternative to motorised transport.

6.7.3 The Active Travel (Wales) Act 2013⁴² is intended to make it easier for people to walk and cycle, making these the modes of choice for short-to-medium journeys. Local authorities must map and plan suitable active travel routes in the largest 142 settlements in Wales, and publish integrated network maps. They need to build and improve walking and cycling infrastructure every year.

6.7.4 The Active Travel (Wales) Act 2013 is supported by statutory guidance:

- Statutory guidance for the delivery of the Active Travel (Wales) Act 2013⁴³
- Design guidance – Active Travel (Wales) Act 2013⁴⁴

6.7.5 All walking and cycling infrastructure should be planned in a consistent and comprehensive manner that enables convenient and safe active travel journeys, as set out in the statutory design guidance. Routes and facilities should comply with the published standards, which are regularly updated.

6.7.6 The health benefits of active travel are considered to far outweigh the resultant exposure to pollution except in the most extreme scenarios. However, it is still preferable to identify and prioritise walking and cycling routes with lower pollution levels, and this will be reflected in the forthcoming update to the statutory design guidance.

⁴² <https://www.legislation.gov.uk/anaw/2013/7>

⁴³ <https://beta.gov.wales/active-travel-statutory-guidance-local-authorities>

⁴⁴ <https://beta.gov.wales/active-travel-design-guidance>

6.8 The role of the police

- 6.8.1 The police service within Wales has a responsibility along with partners to tackle anti-social behaviour. This can present itself in many forms, but noise is frequently a common factor. Motor vehicles, used both on and off road, are common contributors to complaints made directly to, or encountered by, the police. Practical examples include the use of non-compliant exhaust systems fitted to high-powered motorcycles or performance cars, with the intention of creating a louder noise through harsh acceleration. This causes distress and annoyance to communities and other road users whilst being used on public roads. Linked to this is an activity often referred to as ‘off-roading’, which takes place on land other than roads or highways, particularly in rural areas and along footpaths and bridleways, often within national park areas. This activity frequently causes significant damage to the environment and involves use of 4x4 type vehicles and scrambler-style motorcycles.
- 6.8.2 The four Welsh police forces are both reactive and proactive in responding to community concerns in relation to these issues. Specialist officers from roads policing teams frequently conduct campaigns and operations using both enforcement and education tactics to target those responsible. Legislation utilised is varied and includes various components of the Road Traffic Act 1988⁴⁵ and also section 59 of the Police Reform Act 2002⁴⁶, which permits the seizure of vehicles used in the circumstances described above.
- 6.8.3 The police specifically target excessive noise made by motorcycles as part of ‘Operation Darwen’, a joint operation between the four Welsh police forces and the Wales Road Casualty Reduction Partnership, which runs from early spring until the autumn. The campaign is aimed at reducing the risk of motorcycle-related deaths and serious injuries on the roads. Officers often come across motorcycles fitted with non-approved after-market exhausts, which are not legally compliant. These can be dealt with by either a vehicle defect rectification notice, where a rider has to get the exhaust changed and checked by an MOT garage within 14 days, or a fixed penalty. As well as prosecuting offenders, the police seek to educate and encourage riders to take further training to make them safer on the roads.

⁴⁵ <https://www.legislation.gov.uk/ukpga/1988/52>

⁴⁶ <https://www.legislation.gov.uk/ukpga/2002/30/section/59>

Consultation responses: quiet(er) deliveries

Responding to the public consultation on this noise and soundscape action plan, both the Institute of Acoustics and the Noise Abatement Society called for the inclusion of integrated, quiet(er) delivery and servicing plans, including routing and timing, for goods vehicles (of all sizes and types) to assist with the management of the cumulative impacts of noise from these activities, especially in urban centres.

The Noise Abatement Society added:

“Extensive information on trials, driver training, equipment and management options for these activities are available from the Department for Transport⁴⁷ and Transport for London⁴⁸. The aim of these programmes is to support the elimination of unnecessary and excessive noise from such activities at all times, as the particular character of delivery and servicing noise can be highly disruptive to residents, businesses and other sensitive receptors regardless of the duration and/when they take place.”

⁴⁷ <https://www.gov.uk/government/publications/quiet-deliveries-demonstration-scheme> and https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/306851/freight-operators.pdf

⁴⁸ <https://tfl.gov.uk/info-for/deliveries-in-london/delivering-efficiently/retiming-deliveries>

7 Railway noise in Wales

7.1 Overview

- 7.1.1 Railway noise affects relatively few people in their homes compared to road traffic noise. Most homes face onto roads, but only a small proportion face onto railways. In general, railway noise causes less annoyance than equally loud noise from road or air transport⁴⁹. Where there may be exposure to railway noise, the planning process, WelTAG and the Noise Insulation (Railways and Other Guided Transport Systems) Regulations 1996⁵⁰ are there to prevent noise problems from arising in the first place where practicable. But high levels of exposure may still occur, owing, for example, to increases in night-time services or blocks of flats being built close to railway depots.
- 7.1.2 Electrification and the increased use of rail grinding have the potential to significantly reduce the noise of individual vehicles on the main lines. On the other hand, the Welsh Government hopes (for environmental, economic and social reasons) and expects to see further significant growth of the railways in Wales. Modal shift away from road and air transport, towards rail, has an important role to play in the holistic transport noise solution, but it is likely to mean more services and longer, faster trains. At the same time, demand for housing has led to a greater number of residential properties being built close to existing railways and railway infrastructure. If the railways are to be seen as a truly sustainable, environmentally friendly mode of transport, responsible bodies cannot be complacent about future railway noise.
- 7.1.3 The rail industry is required to respond to noise complaints. These often occur where the noise has an attention-catching character, for example, train horns, curve squeal and rail joints. The response to complaints requires a different approach to that for responding to noise maps. There can be a complex relationship between the measureable noise exposure and a complainant's strength of feeling. In some situations just hearing a noise, even at low levels, can be enough to generate a complaint, particularly where there is a perception that the cause of the noise is unnecessary or unexpected. Noise complaints require consideration on a case-by-case basis. Where action is appropriate, the rail industry seeks to follow the principle of best practicable means.

⁴⁹ For further discussion, readers are referred to reports on the subject produced by the International Union of Railways (https://uic.org/IMG/pdf/railway_noise_in_europe_2016_final.pdf, https://uic.org/IMG/pdf/the_railway_noise_bonus_report-2.pdf).

⁵⁰ <http://www.legislation.gov.uk/ukxi/1996/428>

7.2 Who is responsible?

- 7.2.1 Network Rail is the infrastructure owner and operator of the national rail network. A number of individual passenger and freight train operating companies provide the train services. Passenger and freight train companies are represented collectively by the Rail Delivery Group (RDG). Noise issues may be the responsibility of one individual organisation or the joint responsibility of a number of these parties.
- 7.2.2 Network Rail is also a member of the RDG. Network Rail's responsibilities include line-side maintenance, track quality, infrastructure renewal and maintenance, engineering work, speed restrictions and property issues.
- 7.2.3 The Office of Rail and Road is the independent safety and economic regulator for Great Britain's railways. Its functions include licensing the companies that operate Great Britain's trains, stations, light maintenance depots and networks.
- 7.2.4 A noise policy working group representing the rail industry in Great Britain was established in response to the first round of noise action plans, to provide a co-ordinating and facilitating role in the development of a cross-industry approach to noise policy and legislation. It is guided by the principle that the railways should aim to be the most sustainable mode of transport in relation to noise and its impacts. The secretariat is provided by the Rail Safety and Standards Board (RSSB), a not-for-profit organisation, owned and funded by major stakeholders in the railway industry but independent of any one party. The Welsh Government sits on the group to ensure that the interests of Wales are factored into all its activities.

7.3 What the noise maps tell us

- 7.3.1 There are a number of noise sources associated with the operational railway. The current noise mapping under the Environmental Noise Directive focuses on pass-by noise (engine/traction and rolling noise) as this is responsible for the highest emissions. The railway noise maps do not currently include noise from depots, horns or stations or squeal from curves and braking, although they will be required to consider curve squeal in the round of noise mapping due to be carried out in 2022. The noise from these omitted sources is often difficult to model as it requires detailed local knowledge, such as depot operations, or the occurrence may be intermittent and difficult to predict, as is the case with curve squeal.

Table 7.1 Residential population exposure to noise from major railways in Wales using the day-evening-night noise indicator L_{den}

Data source	Number of people whose homes are exposed to these noise levels				
	55-59 dB	60-64 dB	65-69 dB	70-74 dB	> 75 dB
2012 noise map, 2017 population model	23,700	15,600	11,900	5,800	3,500

Table 7.2 Residential population exposure to noise from major railways in Wales using the night-time noise indicator L_{night}

Data source	Number of people whose homes are exposed to these noise levels				
	50-54 dB	55-59 dB	60-64 dB	65-69 dB	> 70 dB
2012 noise map, 2017 population model	20,500	13,200	7,400	5,200	1,200

Box 7.1

The Welsh Government will amend its Environmental Noise Regulations to bring them into line with new European legislation mandating the use of a common noise mapping method in the next round of noise mapping. Through its membership of the British Standards Institution committee on transport noise, the Welsh Government will also participate in work to explore options for a new, improved UK railway noise calculation method.

The Welsh Government will consider what role its new Air Quality Monitoring and Assessment Centre might usefully play in any future noise mapping.

7.4 Priority areas

7.4.1 The map of railway noise priority areas in Wales (areas where people's homes are exposed to a day-evening-night noise level exceeding 73 dB according to the 2012 noise maps) has been updated in 2018 to take account of any new residential development occurring close to major railways in the last five years.

7.5 Electrification

7.5.1 Electrification represents the first step towards achieving the Welsh Government's vision for a modernised rail infrastructure across Wales. An electrified rail network is more economical to operate and maintain, thereby delivering value for money to the taxpayer. Passengers will travel in a lower carbon, more sustainable way and experience a quieter, faster journey. Electrification will allow quieter trains to replace diesel trains, including potentially the use of electric locomotives for freight trains. Electric locomotives are considerably quieter than the equivalent diesel locomotives, and electric freight locomotives would provide a particular benefit at night-time, as this is when freight movements often occur. The latest information from the Welsh Government regarding electrification of the railway network in Wales is available on the Welsh Government website.

7.6 Services provided by the rail industry

7.6.1 Network's Rail website⁵² informs members of the public of how noise issues are being addressed and how to make a complaint, either to Network Rail itself on its 24-hour helpline⁵³, if it relates to the condition of the track, or else to one of the train operating companies⁵⁴.

7.6.2 Train operating companies often designate 'quiet carriages' on longer trains, particularly on long-distance intercity routes, in recognition of the preference of many passengers for a tranquil travelling environment, free from loud mobile phone conversations and other noisy distractions.

Box 7.2

Where budgets for noise mitigation works on the railways are identified by responsible bodies with Great Britain remits, priority areas in Wales will continue to be considered on an equitable basis with equivalent areas in England and Scotland. Any such proposed interventions will be subject to an assessment of costs and benefits, and evaluation of their effectiveness following implementation.

The Welsh Government will continue to work with the rail industry through its noise policy working group to explore avenues for further developing railway noise policy in Great Britain over the course of the next five years.

⁵² <https://www.networkrail.co.uk/communities/lineside-neighbours/noise-and-vibration>

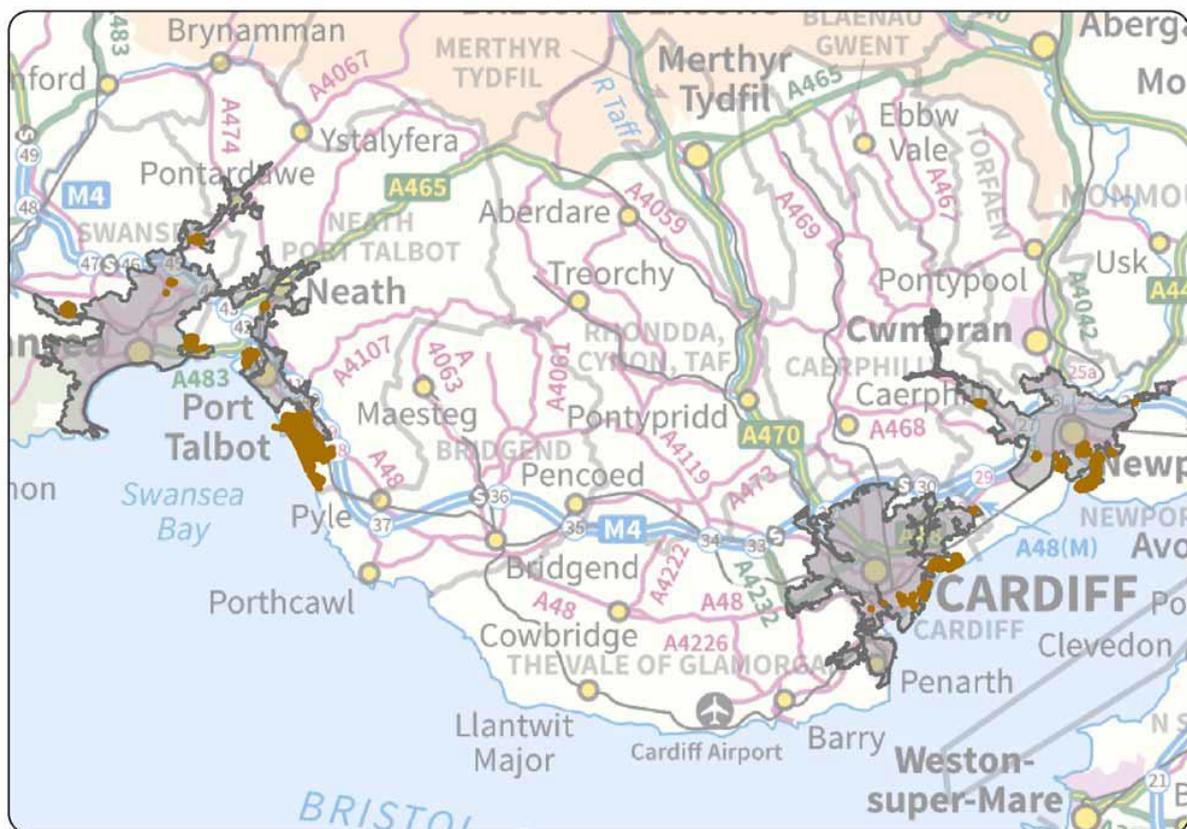
⁵³ <https://www.networkrail.co.uk/communities/contact-us>

⁵⁴ <https://www.networkrail.co.uk/running-the-railway/train-operating-companies>

8 Industrial noise in Wales

8.1 Mapping noise from major industry in agglomerations

8.1.1 New noise maps for major industry in agglomerations were produced in 2017 to reflect changes to the spatial distribution of industrial sites since the 2012 round of noise mapping. However, human response to industrial noise is highly dependent on the nature of the sound being heard and on the level of masking by road traffic, and these factors are not reflected in the industrial noise maps, making them of limited practical value to regulators.



© Crown Copyright and database right 2018. Ordnance Survey 100021874. Welsh Government.

Box 8.1

The Welsh Government will amend its Environmental Noise Regulations to bring them into line with new European legislation mandating the use of a common noise mapping method in the next round of noise mapping.

The Welsh Government will consider what role its new Air Quality Monitoring and Assessment Centre might usefully play in any future noise mapping.

8.2 Integrated pollution prevention and control

The information in this section has been provided by NRW.

- 8.2.1 Sound emitted from major industrial sources is regulated by NRW ('A1 permits') and local authorities ('A2 permits') through the Environmental Permitting (England and Wales) Regulations 2016 (EPR)⁵⁵.
- 8.2.2 UK guidance on meeting the requirements of industrial noise regulation under EPR is provided to operators in the 'Horizontal Guidance Note' IPPC H3. This is in the process of being reviewed by the UK's environment agencies to reflect current practices.
- 8.2.3 The commonly used methodology for assessing the adverse impacts of industrial noise, BS 4142, was updated in 2014. This standard now requires a broader consideration of the adverse impacts of noise and the context within which emissions occur, in particular:
- the absolute level;
 - the character of the noise, in particular whether it is tonal or impulsive, which can be as much a feature in any adverse impact as the level; and
 - the nature of the receptor, for example whether there are particular vulnerabilities, and whether the exposure is time-limited.
- 8.2.4 There are a number of ways that potential adverse noise impacts arising from industrial sites can be avoided or at least minimised to such an extent that they do not impact upon people or the natural environment. These include:
- locating new developments, whether noise-generating or noise-sensitive, to avoid noise issues arising in the first instance (in other words, through the planning system);
 - increasing the distance between the source and receptors;
 - preventing noise at source by good design and maintenance;
 - using barriers or enclosures to prevent noise travelling, including through the use of green infrastructure;

⁵⁵ <https://www.legislation.gov.uk/ukxi/2016/1154>

- minimising or containing noise at source by observing good working and management practices; and
- avoiding noisy operations at certain times, such as at night.

8.2.5 Under EPR, noise is regulated through the use of standard noise conditions and each site's environmental management plan, rather than through the use of specific limits. This provides greater flexibility for adaptation to a changing soundscape.

8.2.6 The enactment of the WFG Act and the Environment (Wales) Act 2016 provides a new dimension to the consideration of the adverse effects of industrial noise under EPR in Wales. The 2016 Act sets out the statutory purpose of NRW, and states that in the exercise of its functions, as far as is consistent with their proper exercise, NRW must pursue sustainable management of natural resources in relation to Wales, and apply the principles of sustainable management of natural resources. (This means that whilst there are opportunities in order to encourage operators to pursue actions beyond statutory limits to deliver the sustainable management of natural resources, the determination of permits under EPR is still bound by those statutory limits.)

8.2.7 Site operators are encouraged to undertake discussions with planners and regulators prior to the submission of an application for either planning permission or an environmental permit. This allows any potential issues to be identified early in the process, so that measures can be put in place to avoid adverse outcomes for operators, regulators and local communities. It also provides the greatest scope for building in aspects to the operation that can help to achieve the seven well-being goals and deliver the sustainable management of natural resources.

Box 8.2

The Welsh Government will continue to work through its membership of the British Standards Institution committee on residential and industrial noise to ensure that environmental regulators in Wales get clear and appropriate technical guidance to help them do their job.

8.3 The All Wales Environmental Permitting Regulations Link Group

The information in this section has been provided by Carmarthenshire County Council.

8.3.1 The All Wales EPR Link Group is a specialist subdivision of the All Wales Pollution Technical Panel of Welsh local authorities and provides:

- An all Wales local authority response to consultations;
- Permit templates for common industrial sectors such as minerals processes;
- Member training and information exchange including workshops;
- Direct links with Welsh Government specialists for sharing of technical information and emerging policy;
- Representatives to attend relevant UK-wide groups;
- Links with national regulators; and
- Lobbying based on evidence gained through actual practice and experience.

8.3.2 The Group works to improve consistency of regulation across local authorities in Wales and provides a platform for the transfer of knowledge, skills and experience between officers, which in turn leads to a better level of service to local businesses across Wales.

8.3.3 Members of the group are multi-skilled and often work in other areas such as planning consultations, local air quality management, statutory nuisance investigation and environmental noise.

Box 8.3

NRW will remain a member of the All Wales EPR Link Group, to enable regular sharing of best practice and training opportunities with local authority industrial regulators on matters of mutual interest such as industrial noise.

8.4 Statutory nuisance

- 8.4.1 Noise complaints concerning industrial activities that are not subject to integrated pollution prevention and control under EPR (and that are therefore outside the scope of the Environmental Noise Directive and Regulations) should be handled by local authorities. They are empowered to take action in relation to noise nuisance under the Environmental Protection Act 1990. See the next chapter for further details.

9 Other forms of noise

9.1 Neighbourhood noise

- 9.1.1 **Neighbourhood noise** includes noise arising from within the community, such as from trade and business premises, construction sites, localised industry, entertainment premises, domestic noise and noise in the street.
- 9.1.2 Noise is an inevitable consequence of a busy society, and many people now live in quite high-density residential communities. As a result, individuals are now far more likely to be aware of and affected by neighbourhood noise, and it accounts for most of the complaints received by local authorities in Wales.
- 9.1.3 Neighbourhood noise is addressed primarily through the **statutory nuisance** regime set out in Part III of the Environmental Protection Act 1990⁵⁶. Noise qualifies as a statutory nuisance when it is emitted from premises or emitted from or caused by a vehicle, machinery or equipment in a street, so as to be 'prejudicial to health or a nuisance'.
- 9.1.4 The Environmental Protection Act 1990 places a duty on each local authority to take reasonable practicable steps to investigate complaints made by residents. In so doing, an officer from the local authority will consider, amongst other things, the type of noise, how loud it is, and how often and at what times it occurs. When a local authority is satisfied that a statutory nuisance exists, or is likely to occur or recur, it must issue an abatement notice on the person, prohibiting or restricting its occurrence or recurrence.
- 9.1.5 Powers are also provided by the Noise Act 1996⁵⁷, which aims to deal with excessive night noise coming from licensed premises or a residential dwelling between the hours of 11 pm and 7 am. These powers use a noise level to judge acceptability, and local authority officers may enter premises where there is noise beyond the prescribed levels and remove any equipment responsible for the noise.
- 9.1.6 The Anti-social Behaviour, Crime and Policing Act 2014⁵⁸ provides a range of additional noise control powers, including the civil injunction, the community protection notice and the public spaces protection order. Statutory guidance⁵⁹ has been issued to aid local authorities in the use of these new powers.

⁵⁶ <https://www.legislation.gov.uk/ukpga/1990/43/part/III>

⁵⁷ <https://www.legislation.gov.uk/ukpga/1996/37>

⁵⁸ <https://www.legislation.gov.uk/ukpga/2014/12>

⁵⁹ <https://www.gov.uk/government/publications/anti-social-behaviour-crime-and-policing-bill-anti-social-behaviour>

- 9.1.7 Section 62 of the Control of Pollution Act 1974⁶⁰ provides a method for controlling noise from loudspeakers in the street. Using loudspeakers in the street is restricted to the hours between 8 am and 9 pm, and using a loudspeaker for advertising, entertainment, trade or business is banned unless the loudspeaker is used in an emergency, or to advertise a perishable commodity for human consumption. Furthermore, under section 62(3) of the 1974 Act, action may be taken if ice-cream van chimes sound after 7 pm or before midday, or at any time as to cause an annoyance. The Code of Practice on Noise from Ice-Cream Van Chimes Etc. 1982⁶¹ makes clear that it is an offence under the 1974 Act to sound chimes in such a way as to give reasonable cause for annoyance.
- 9.1.8 The Licensing Act 2003⁶² establishes an integrated scheme for licensing premises that are used for the sale or supply of alcohol, to provide regulated entertainment or to provide late night refreshment. Responsibility for issuing licences permitting such activities rests with local authorities, who should exercise their powers in such a way as to prevent the kinds of noise nuisance often associated with entertainment.
- 9.1.9 Construction site noise is regulated through section 60 of the Control of Pollution Act 1974⁶³, which allows a local authority to place restrictions on working hours and the type of machinery used and set noise levels that it considers to be acceptable. Contractors will be expected to have considered noise impacts related to their operations and use best practicable means as defined in section 79(9) of the Environmental Protection Act 1990⁶⁴ to minimise impacts, for example, by adjusting working times, considering use of quieter methods, silenced machinery and acoustic barriers, and monitoring.
- 9.1.10 Under Part 7 of the Clean Neighbourhoods and Environment Act 2005⁶⁵, local authorities can designate an alarm notification area, within which anyone responsible for premises where an intruder alarm is installed must nominate a key-holder and notify the local authority. The 2005 Act also provides a power of entry for officers of an environmental health department to silence an alarm without the use of force, or with force if supported by a valid warrant of entry, if an alarm has been sounding continuously for 20 minutes or intermittently for more than an hour and the noise is likely to give people living or working nearby reasonable cause for annoyance.

⁶⁰ <https://www.legislation.gov.uk/ukpga/1974/40/section/62>

⁶¹ <https://gov.wales/topics/environmentcountryside/epq/noiseandnuisance/codes-of-practice/ice-cream-van-chimes>

⁶² <https://www.legislation.gov.uk/ukpga/2003/17>

⁶³ <https://www.legislation.gov.uk/ukpga/1974/40/section/60>

⁶⁴ <https://www.legislation.gov.uk/ukpga/1990/43/section/79>

⁶⁵ <https://www.legislation.gov.uk/ukpga/2005/16/part/7>

9.1.11 Working with Extrium Ltd, the Welsh Government reviewed the various guidance documents and codes of practice relating to noise in Wales and prioritised those documents most in need of an update. Acting on this review in 2017, the Welsh Government issued an order⁶⁶ to bring Wales' statutory codes of practice on intruder alarms and construction noise up to date and worked with Defra to produce new guidance⁶⁷ on statutory nuisance and environmental permitting in England and Wales.

9.1.12 The Welsh Government updated its public information booklet, *Sound Advice on Noise*⁶⁸, in 2014 to reflect recent changes to legislation and provide members of the public with an easy-to-digest overview of the formal process for making a complaint about neighbourhood noise to the local authority's environmental health department.

Box 9.1

The Welsh Government will continue to work with noise regulators in Wales to keep legislation and guidance relating to neighbourhood noise up to date and provide clear and accurate information to members of the public on how to make a complaint about noise nuisance in their area.

9.2 Military noise

The information in this section has been provided by the Ministry of Defence (MOD).

Military aviation

9.2.1 The MOD has an enduring requirement to conduct low flying training⁶⁹ within the United Kingdom in order to remain current and competent to meet Government-directed tasks, including war-fighting operations, peace-support or peace-keeping duties, and humanitarian relief.

⁶⁶ <https://www.legislation.gov.uk/wsi/2017/81>

⁶⁷ <https://www.gov.uk/government/publications/environmental-permitting-guidance-statutory-nuisance>

⁶⁸ <https://gov.wales/docs/desh/publications/141127noisesoundadviceen.pdf>

⁶⁹ Military fixed wing aircraft are judged to be low flying when they are operating at less than 2,000 feet above ground level. Light propeller-driven aircraft and helicopters are judged to be low flying when operating below 500 feet above ground level.

- 9.2.2 Low flying is a perishable skill which can only be maintained through rigorous training and continuous practice in a realistic environment. To ensure that military requirements are met, whilst managing air safety risks, and mindful of the need to minimise disturbance to the general public, military low flying training is spread as widely and equitably as possible within the UK Low Flying System, which utilises all Class G airspace below 2,000 feet above ground level, with the exception of certain designated areas.
- 9.2.3 Wales falls within Low Flying Area 7, with a small area in the north-east of Powys falling within Low Flying Area 9. RAF Valley, MOD St Athan, the Air Weapons Range at Pembrey Sands, the Cawdor Barracks at Brawdy, the Royal Artillery Range at Manorbier (where aircraft train in support of ground forces) and Field Training Centres at Castlemartin and Sennybridge are all in the area.
- 9.2.4 Low Flying Area 7 includes the Tactical Training Area 7T where military aircraft may conduct Operational Low Flying training between heights of 250 feet and 100 feet above ground level. Operational Low Flying training is necessary to ensure that aircrew are competent in flying at operational heights, and to prepare them for operational deployments or training exercises overseas. It is carefully controlled and monitored and must be booked and authorised one month in advance. The MOD provides local media with the monthly Operational Low Flying programme, and it is also available to view on the Gov.uk website⁷⁰.
- 9.2.5 Low Flying Area 7 also includes a flow arrow system in the Cambrian Mountains in west Wales, known colloquially as “the Mach-Loop” after the town of Machynlleth in the Dovey valley. This is a roughly circular anti-clockwise flow, put in place so that aircrew can practise contour flying through the valleys without any danger of meeting aircraft coming in the opposite direction.
- 9.2.6 Training objectives involving low flying are met during the day whenever practicable, and a range of measures is in place to provide a balance between training requirements and the need to avoid excessive noise on the ground, such as staggering operating times. Careful consideration goes into the timing of night low flying, and the amount of low flying training conducted at night remains proportional to the operational requirement. However, it is not always possible to avoid some disturbance to those on the ground.

⁷⁰ <https://www.gov.uk/low-flying-in-your-area>

- 9.2.7 As part of the RAF's engagement and public relations commitment in Wales, the Service has an Air Commodore post whose designation is Air Officer Wales. The post-holder's remit is to engage across all sectors of Welsh society promoting the Service as a force for good and maintaining its profile. Along with this comes a responsibility to explain, when necessary, the noise implications associated with the training required to keep the Service operational and at peak readiness. Good relations are also established and maintained with local communities by RAF stations, for example through creating local websites or placing adverts in local newspapers to publicise exercises or any unusual range activity or aircraft movements.
- 9.2.8 The MOD also provides environmental noise contours to local authorities for its air stations to assist with their planning decisions.
- 9.2.9 Members of the public concerned about military low flying activity are advised to contact the MOD's Low Flying Complaints and Enquiries Unit, whose details are available on the Gov.uk website⁷¹.

Noise from artillery ranges

- 9.2.10 At artillery ranges, gunfire noise emissions are managed across the Defence Training estate in accordance with MOD policy, and any local restrictions imposed on the range training area are met in full in order to maintain the MOD's position as a responsible neighbour within the community. At Sennybridge Training Area, noise predictions are carried out using Met Office predictions provided each morning to inform the planning of the artillery exercises, while at Castlemartin Range and Manorbier, noise emissions are monitored using the MOD Gunfire Noise Analysis Tool (GNAT) software. Both systems enable the MOD to ensure that noise emissions do not exceed 130 dB at the range boundary. Should wind direction or atmospheric conditions change so as to affect the noise emissions, the firing is stopped and a change may be made to the firing position or impact area to keep the emissions within the agreed level of 130 dB. Where a significant operational penalty is incurred, mainly arising from tank, artillery or air defence firing, permissions may be sought from the senior chain of command to increase the levels from 130 to 139 dB, but 140 dB is not to be exceeded.

⁷¹ <https://www.gov.uk/low-flying-in-your-area>

9.3 Occupational noise and hearing damage

The information in this section and the next has been provided by the Health and Safety Executive (HSE).

- 9.3.1 Noise at work can cause hearing damage that is permanent and disabling. This can be gradual, from exposure to noise over time, but damage can also be caused by sudden, extremely loud noises. The damage is disabling in that it can stop people being able to understand speech, keep up with conversations or use the telephone.
- 9.3.2 Hearing loss is not the only problem. People may develop tinnitus (ringing, whistling, buzzing or humming in the ears), a distressing condition that can lead to disturbed sleep.
- 9.3.3 Noise at work can interfere with communications and make warnings harder to hear. It can also reduce a person's awareness of their surroundings. These factors can lead to safety risks – putting people at risk of injury or death.
- 9.3.4 There are many ways of reducing noise and noise exposure in the workplace. Nearly all businesses can decide on practical, cost-effective actions to control noise risks if necessary by looking at the advice available, for example on HSE's noise at work website⁷² and in its toolbox for controlling noise risks⁷³.
- 9.3.5 The Control of Noise at Work Regulations 2005⁷⁴ are now in force for all sectors of industry in Great Britain, including the music and entertainment sector. They aim to ensure that workers' hearing is protected from excessive noise in the workplace, which could cause them to lose their hearing and/or to suffer from tinnitus.

'Buy Quiet'

- 9.3.6 HSE's 'Buy Quiet' campaign helps manufacturers, importers, suppliers and users of equipment to work together to reduce the risk of noise-induced hearing loss in the workplace. It supports users in their duty to avoid high noise equipment when suitable lower noise equipment is available, and supports manufacturers in their duty to minimise noise by technical means.

⁷² <http://www.hse.gov.uk/noise>

⁷³ <http://www.hse.gov.uk/toolbox/noise.htm>

⁷⁴ <https://www.legislation.gov.uk/ukSI/2005/1643>

- 9.3.7 Hearing damage caused by long-term exposure to workplace noise has been a concern for many years. Workplace noise exposures have been successfully reduced, but there are still some pockets of industry where noise exposure levels remain high, leading to an unacceptable risk of hearing damage.
- 9.3.8 Employers sometimes find it difficult to achieve adequate noise control through engineering methods and rely on personal hearing protection programmes. This is not appropriate, as the hazard, the noise source, is still present.
- 9.3.9 Improvements in the quality of noise information supplied with work equipment are gradually reaching the market. However, some manufacturers of work equipment could do more to reduce risk from noise at source and improve the quality of noise information supplied with their products.
- 9.3.10 As part of the ‘Buy Quiet’ campaign, HSE has prepared advice⁷⁵ for manufacturers, importers and suppliers of work equipment on the provision of noise information. It has also provided similar material⁷⁶ for purchasers and users of work equipment.

9.4 Recreational noise and hearing damage

- 9.4.1 Music is not considered to be noise by those who choose to listen to it, but when it is so loud that it damages their hearing it fits the definition of noise, being unwanted or harmful sound.
- 9.4.2 Protecting members of the public from hearing loss or tinnitus caused by music and other sounds to which they choose to expose themselves cannot be addressed by legislation alone, and there have been a number of campaigns to raise awareness of the potential risks, particularly among young people. These are run by the likes of Action on Hearing Loss⁷⁷ and the Noise Abatement Society⁷⁸.

⁷⁵ <http://www.hse.gov.uk/noise/buy-quiet/purchasers.htm>

⁷⁶ <http://www.hse.gov.uk/noise/buy-quiet/users.htm>

⁷⁷ <http://www.actiononhearingloss.org.uk/about-us/our-work-across-the-uk/wales>

⁷⁸ <http://noiseabatementociety.com/campaigns/love-your-ears>

- 9.4.3 Working within the context of health and safety law as it currently stands requires employers to conduct their undertaking in such a way as to ensure, so far as is reasonably practicable, that the public is not exposed to risks to health and safety. The law does not prescribe what control measures would be reasonably practicable in each and every case. That is a judgement that has to be made by individual organisers and venue operators based on the particular risks, which they are best placed to assess.
- 9.4.4 Further guidance⁷⁹ is available to organisers, promoters and venue managers to assist in risk assessment and implementation of suitable risk control measures, and to facilitate compliance with health and safety legislation.
- 9.4.5 The Department for Business, Energy and Industrial Strategy (BEIS) formulates and implements consumer safety legislation, but it is the role of local authority trading standards services to perform market surveillance checks and enforce this legislation.

⁷⁹ <http://www.hse.gov.uk/event-safety>

10 The Cardiff and Penarth agglomeration



© Crown Copyright and database right 2012. Ordnance Survey 100021874. Welsh Government.

10.1 What the noise maps tell us

10.1.1 The residential population of the Cardiff and Penarth agglomeration rose from 359,400 to 369,700 between the 2012 and 2017 noise mapping exercises.

10.1.2 Residential population exposure to noise from major roads and industry has been estimated from the 2017 noise maps. Residential population exposure to noise from all roads in the agglomeration, and from railways, has been estimated from the 2012 noise maps, using an updated 2017 residential population model. The exception to this rule is where it gives a higher figure for major roads than for all roads. In these cases, marked by an asterisk in Tables 10.1 and 10.2, the higher major roads figure is used.

Table 10.1 Residential population exposure using the day-evening-night noise indicator L_{den} , based on the 2017 noise maps and population model

Noise source	Number of people whose homes are exposed to these noise levels				
	55-59 dB	60-64 dB	65-69 dB	70-74 dB	> 75 dB
Major roads	35,700	12,900	10,900	13,000	1,500
All roads	47,600	37,700	36,400	16,300	1,500*
Major railways	8,000	5,700	6,600	2,400	2,700
All railways	8,800	5,700	6,700	2,400	2,700
Industry	2,400	300	0	0	0

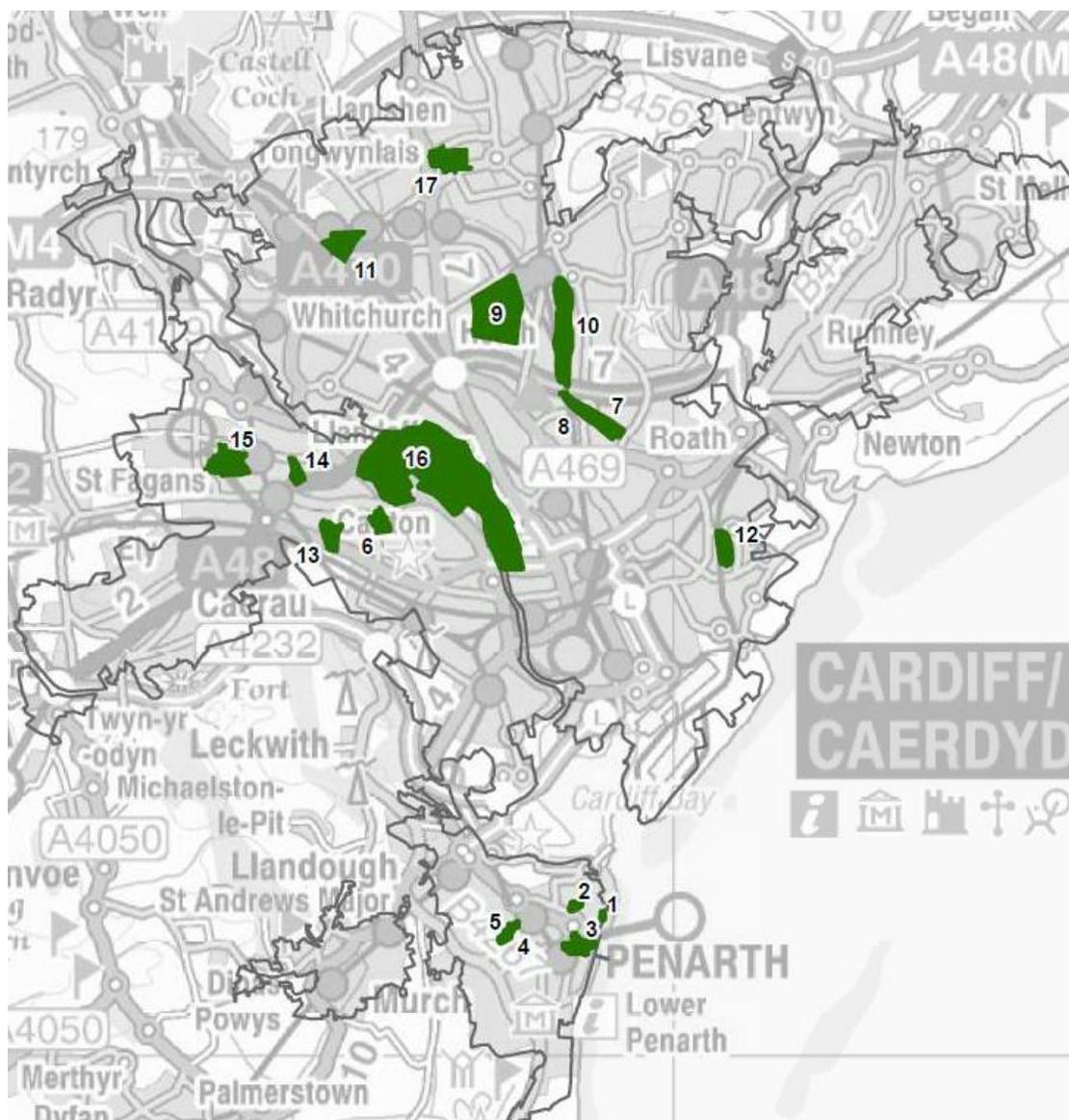
Table 10.2 Residential population exposure using the night-time noise indicator L_{night} , based on the 2017 noise maps and population model

Noise source	Number of people whose homes are exposed to these noise levels				
	50-54 dB	55-59 dB	60-64 dB	65-69 dB	> 70 dB
Major roads	18,800	12,000	13,900	1,800	200
All roads	39,800	41,500	18,300	1,800*	200*
Major railways	6,700	6,500	3,100	2,700	900
All railways	6,800	6,500	3,100	2,700	900
Industry	1,600	200	0	0	0

10.2 Quiet areas

10.2.1 There are 17 designated quiet areas in this agglomeration. Those holding Green Flag Awards are marked by an asterisk.

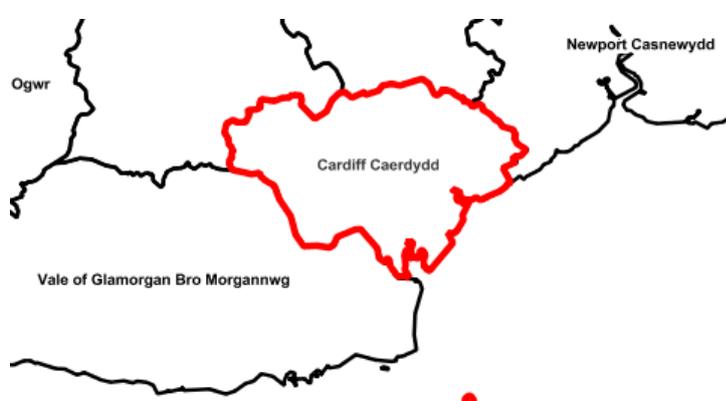
- | | |
|-----------------------------------|---------------------|
| 1 – Penarth Head Lane | 10 – Roath Park* |
| 2 – Belle Vue Park* | 11 – Parc Caedelyn |
| 3 – Alexandra Park* | 12 – Splott Park |
| 4 – Golden Gates | 13 – Victoria Park* |
| 5 – Victoria Playing Fields | 14 – Insole Court |
| 6 – Thompson’s Park | 15 – Fairwater Park |
| 7 – Roath Park Recreation Ground* | 16 – Bute Park* |
| 8 – Roath Park Pleasure Gardens* | 17 – Llanishen Park |
| 9 – Heath Park | |



© Crown Copyright and database right 2012. Ordnance Survey 100021874. Welsh Government.

10.2.2 As well as the relative tranquillity that these outdoor quiet areas provide, there are also various tranquil indoor spaces that are free for people to enter. These include the National Museum and Central Library, both within the centre of the city. In addition, the grounds of Cardiff Castle, surrounded by its high walls, offer a peaceful sanctuary. Such indoor and outdoor tranquil areas can offer a haven from the noise that is a consequence of Cardiff's economic growth, growing visitor numbers and increasing population. With Cardiff's population projected to grow by over 20% in the next 20 years, faster than any other major British city apart from London⁸⁰, the need to preserve and maintain these quiet areas for the well-being of the people of Wales is paramount.

10.3 Cardiff Council



The information in this section has been provided by Cardiff Council.

Noise priorities and services

10.3.1 Staff within Shared Regulatory Services (SRS), a partnership between Bridgend, Cardiff and the Vale of Glamorgan Councils, specifically Neighbourhood Services Team 2, is responsible for investigating service requests relating to noise across Cardiff and the Vale of Glamorgan. As well as the day-time service staffed by SRS, Cardiff Council operates a dedicated night-time noise service that reacts to both ongoing and new noise complaints. The service operates on a Friday and Saturday night from 7 pm until 3 am. Staffed by the 'day staff' on a rota basis in addition to their normal duties, the service deals with complaints relating to both domestic and commercial premises such as clubs, bars and pubs, in a city with a vibrant and diverse night-time economy and a large student population.

⁸⁰ <https://www.cardiffpartnership.co.uk/wp-content/uploads/Wellbeing-Plan-2017.pdf>

- 10.3.2 Alongside the dedicated out-of-hours night-time noise service, a duty officer system operates outside of office hours seven days a week. The duty officer service responds to pre-assessed service requests relating to noise as well as alarms and issues of an emergency nature within the remit of SRS.
- 10.3.3 As well as providing a reactive service in relation to complaints due to amplified music, barking dogs, general disturbance and property alarms, SRS provides a proactive service and responses with regard to planning applications to protect residential amenity, and makes representations in relation to licensing applications, including new licences, variations and temporary event notices, to uphold the objectives of the Licensing Act 2003, including the prevention of public nuisance.
- 10.3.4 Proactive work relating to the planning regime, carried out by officers within SRS, encompasses pre-application advice, responses to full and outline applications, and the proposal and discharge of planning conditions. Such proactive work, along with the policing of section 61 consents granted under the Control of Pollution Act 1974 and the service of section 60 notices under the 1974 Act and abatement notices under the Environmental Protection Act 1990, aims in part to promote the well-being goals established by the WFG Act. Officers consider the importance of the goal of a healthier Wales, noting the negative effect that noise can have on both physical and mental well-being. Officers' engagement with various parties ensures that work to develop within the city and improve infrastructure and transport links, such as the electrification of the main railway line into the city, is carried out with due consideration of noise impact.
- 10.3.5 Officers within SRS Team 2 have close working relationships with partner agencies such as the city's own council housing anti-social behaviour and tenancy teams, and assist in tackling noise-related anti-social behaviour. This support includes a dedicated member of staff who assists by providing information and assistance as necessary. Proactive and reactive work relating to noise is also carried out by close liaison and partnership working with the South Wales Police and universities across the city.

Noise and planning

- 10.3.6 On 28 January 2016 the Council adopted a local development plan (LDP) for Cardiff⁸¹. The LDP became operative on its adoption and will now be the basis for decisions on land use planning in Cardiff.

⁸¹ <https://www.cardiff.gov.uk/ENG/resident/Planning/Local-Development-Plan/Documents/Final%20Adopted%20Local%20Development%20Plan%20English.pdf>

- 10.3.7 The LDP states that development shall be undertaken in a comprehensive manner and in accordance with the key master planning requirements, which include the introduction of measures to reduce the impact of noise from the M4.
- 10.3.8 With a rapidly expanding population there is recognition within the LDP that the subdivision of a residential building into smaller residential units can be an important source of housing. However, such proposals for any conversion to flats, or houses in multiple occupation, will only be permitted where certain requirements are met, including that there would be no material harm to the amenity of existing, nearby residents by virtue of general disturbance, noise or overlooking. The LDP recognises that although such conversions and subdivisions can provide a much-needed source of housing, unsatisfactory conversion work can result in accommodation that is both inadequate and of poor quality, with occupants being exposed to problems such as overcrowding, lack of amenity space, noise and disturbance from neighbouring premises and other external sources. Such housing leads to complaints to officers and undermines the goals of the WFG Act.
- 10.3.9 Such is the recognition of the importance of noise in planning terms that a detailed policy is included within the LDP. Policy EN13 (Air, Noise, Light Pollution and Land Contamination) details that development will not be permitted where it would cause or result in unacceptable harm to health, local amenity, the character and quality of the countryside, or interests of nature conservation, landscape or built heritage importance because of air, noise, light pollution or the presence of unacceptable levels of land contamination. Specific regard is given to developments that would generate unacceptable levels of air, noise or light pollution so as to ensure that they are appropriately located and controlled, and that incompatible land uses and development are not located close to potential sources of pollution. The LDP has specific regard to noise-sensitive receptors such as housing, schools and hospitals, noting that noise can have a harmful impact on people's health and quality of life as well as on the landscape and nature.
- 10.3.10 The LDP recognises that decisions can be informed by information relating to noise complaints, thereby reducing the likelihood of noise nuisance, and that major transport routes (road, rail and air) and some industrial and commercial activities can generate particularly high noise levels.
- 10.3.11 In addition, the LDP recognises and thus takes account of the Welsh Government's statutory duties under the Environmental Noise Directive and the designated noise action planning priority areas within Cardiff. The LDP states that special consideration is required where noise-generating development is proposed in or near special areas such as urban quiet areas.

10.3.12 The LDP acknowledges that proactive noise mitigation is the most beneficial and cost-effective method of dealing with noise. The LDP advocates that proactive interventions can bring multiple benefits, such as reducing people's exposure to air pollutants, making buildings more energy-efficient, encouraging safer driving or improving the road surface for drivers and cyclists at the same time as decreasing noise levels. The LDP also says that where necessary new developments would give rise to high noise levels, including from proposed transport schemes, they should be located and designed to minimise their noise impact. Therefore, where necessary, developers will be required to provide an assessment of noise impact, together with proposals for mitigation. Such assessments are routinely requested and scrutinised by officers within SRS.

10.3.13 Other detailed policies within the LDP such as policy R8 recognise that food and drink uses, including restaurants and hot food takeaways, classified as 'A3' in planning terms, are better located in designated centres than in residential areas because of the impact they can have in terms of vehicular and pedestrian traffic, noise, fumes, litter and late night disturbance. However, concentrations of A3 uses in centres can cause harm, either to residential amenity within or adjoining the centre, or to the predominant shopping role and character of the centre and its vitality, attractiveness and viability. With consideration to the above, SRS officers actively consider A3 applications so as to protect residential amenity and prevent issues such as noise nuisance.

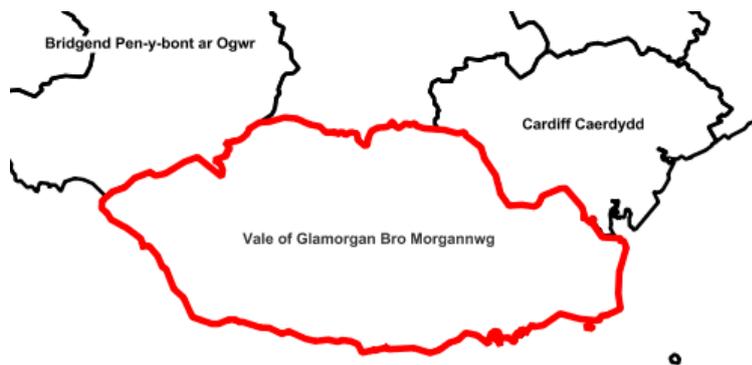
10.3.14 Such is the importance of the consideration of noise and, in turn, quiet areas, that detailed policy C5 (Provision for Open Space, Outdoor Recreation, Children's Play and Sport) advocates that open spaces should be designed in line with Cardiff's open space supplementary planning guidance to create landscaped open space that fulfils its function and a number of roles including minimising vandalism, increasing privacy, providing wildlife habitats and minimising the intrusion of noise and air pollution.

10.3.15 Other detailed policies that consider noise, amongst other issues, include policy M2 (Preferred Order of Mineral Resource Release) and policy W1 (Sites for Waste Management Facilities).

Box 10.1

Cardiff Council will seek to maximise the noise benefits to be gained from local air quality management; take noise maps, priority areas, quiet areas and other tranquil urban green space into consideration when a noise-sensitive or noise-generating development is proposed; and progress and adopt the currently draft Developers Guide to Noise and Planning across SRS.

10.4 The Vale of Glamorgan Council



The information in this section has been provided by the Vale of Glamorgan Council.

Noise priorities and services

10.4.1 Staff within SRS, specifically Neighbourhood Services Team 2, is responsible for investigating service requests in relation to noise across the Vale of Glamorgan and Cardiff.

10.4.2 There is no formal out-of-hours noise service within the Vale of Glamorgan area. However, officers do carry out evening and weekend work as the need arises. Staff who once only worked within the Vale area now work across the Cardiff and Vale geographical areas and participate in Cardiff Council's dedicated night-time noise service that operates on a Friday and Saturday night from 7 pm until 3 am. This work is carried out in addition to their normal duties and the service deals predominantly with noise complaints.

10.4.3 As well as providing a reactive service in relation to complaints due to amplified music, barking dogs, general disturbance and property alarms, SRS provides a proactive service and responses with regard to planning applications to protect residential amenity, and makes representations to licensing applications, including new licences, variations and temporary event notices, to uphold the objectives of the Licensing Act 2003, including the prevention of public nuisance.

10.4.4 Proactive work relating to the planning regime, carried out by officers within SRS, encompasses pre-application advice, responses to full and outline applications, and the proposal and discharge of planning conditions. Such proactive work, along with the policing of section 61 consents granted under the Control of Pollution Act 1974 and the service of section 60 notices under the 1974 Act and abatement notices under the Environmental Protection Act 1990, aims in part to promote the well-being goals established by the WFG Act. Officers consider the importance of the goal of a healthier Wales, noting the negative effect that noise can have on both physical and mental well-being. Officers' engagement with various parties ensures that work to develop within the Vale and improve infrastructure and transport links, such as improvements to the '5 mile lane' and the Northern Access Road in relation to the Aston Martin development at St Athan, is carried out with due consideration of noise impact.

10.4.5 Officers within SRS Team 2 have close working relationships with partner agencies through the Safer Vale Partnership, an organisation made up of representatives including the Vale of Glamorgan Council, South Wales Police, South Wales Fire Service and registered social landlords, amongst others. Through the Safer Vale Partnership, officers assist in tackling noise-related anti-social behaviour. This support includes a dedicated member of staff who attends regular meetings, has access to the anti-social database and provides information and assistance to partners as necessary. Proactive and reactive work relating to noise is also carried out by close liaison and partnership working with the South Wales Police and the Council's Licensing Services and Event Safety Advisory Group.

Aircraft noise in the Vale of Glamorgan

10.4.6 Within the Vale of Glamorgan are two airports: a civilian airport, Cardiff Airport, near Rhoose, purchased by the Welsh Government in March 2013, and a Ministry of Defence site at St Athan. Together they form the Welsh Government's Cardiff Airport Enterprise Zone.

10.4.7 Constructed in the 1940s, Cardiff Airport was originally a military airport established to house a wartime satellite aerodrome and training base for RAF Spitfire pilots. It now handles over a million passengers per year, with a runway that is over two kilometres long and one of the largest maintenance hangars in the world. However, with take-off and landing over either the sea or agricultural land, the airport endeavours to have a low noise impact on the neighbouring community⁸². The noise contour maps available support this opinion.

⁸² <https://www.cardiff-airport.com/media>

10.4.8 Use of the improved navigational capabilities of modern aircraft should, over time, result in less lateral dispersal of flights either side of the inbound routes, meaning that fewer people will experience overflying aircraft. However, those who are directly beneath the flight path are likely to experience a greater number of aircraft over-flights⁸³. Noise complaints in relation to both airports are few, and, if received, both facilities have a positive and co-operative stance.

Noise and planning

10.4.9 On 28 June 2017 the Council adopted its LDP for the period 2011-2026⁸⁴. The LDP became operative on its adoption and supersedes the previously adopted Unitary Development Plan. The LDP is the basis for decisions on land use planning in the Vale of Glamorgan and will be used by the Council to guide and manage new development proposals.

10.4.10 The LDP's emphasis is on re-using previously developed land and minimising the need to develop on green fields. This is evident in Barry where the emphasis is very much on the continued regeneration of the Waterfront.

10.4.11 Nevertheless, the LDP does recognise, as detailed in policy MD2 (Design of New Development), that in order to create high quality, healthy, sustainable and locally distinct places, development proposals should, amongst other matters, safeguard existing public and residential amenity, particularly with regard to privacy, overlooking, security, noise and disturbance. However, it is also recognised that problems such as noise can be overcome by good design.

10.4.12 Policy MD5 advocates that development within settlement boundaries shall have no unacceptable impact on the amenity and character of the locality by way of noise, traffic congestion and parking, thereby addressing the residential amenity of existing and future residents.

10.4.13 Regard is given in policy MD7 to environmental protection. The policy states that development proposals will be required to demonstrate that they will not result in an unacceptable impact on people, residential amenity, property and/or the natural environment from either, amongst other matters, noise, vibration, odour nuisance or light pollution.

⁸³ https://www.caa.co.uk/uploadedFiles/CAA/Content/Standard_Content/Commercial_industry/Airspace/Files/Cardiff%20RNAV%20Replications.pdf

⁸⁴ <http://www.valeofglamorgan.gov.uk/Documents/Living/Planning/Policy/LDP/LDP-Adoption/Adopted-LDP-Written-Statement-June-2017-final-interactive-web-version.pdf>

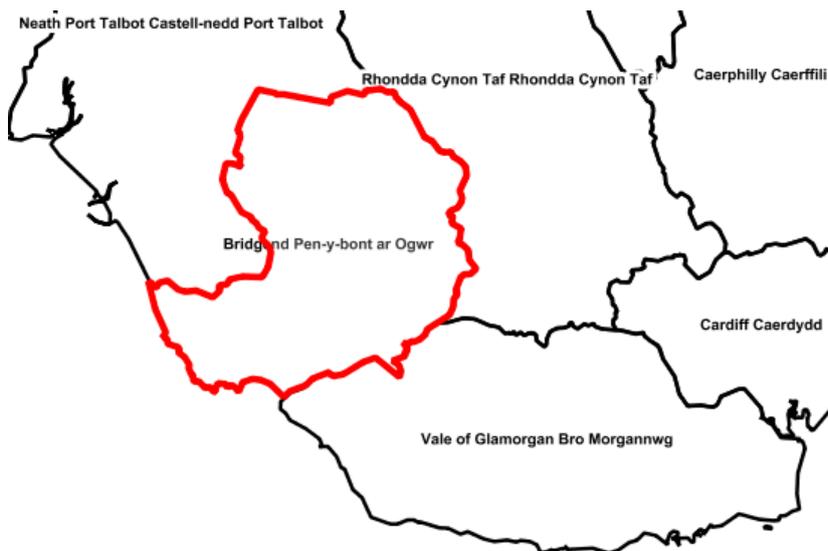
- 10.4.14 Policy MG23 (Quarry Buffer Zones) and policy MG25 (Mineral Working), which includes oil and gas extraction, give specific regard to noise, as it is recognised that the operation of mineral workings frequently conflict with other land uses and impacts such as noise, dust, vibration and air quality that can significantly affect and impact on the amenity of local residents and local communities, which would not be acceptable.
- 10.4.15 The local planning authority utilises TAN 11 in relation to proposed residential development near noise sources, as major transport routes (road, rail and air) and some industrial and commercial activities can generate particularly high noise levels. The LDP, for example, recognises that certain sites should be given specific consideration with regard to noise. Such a site is Higher End in St Athan. Due to the site's proximity to MOD St Athan and the Aerospace Business Park / Enterprise Zone, it is specified within the LDP that a noise assessment will also be required for any future development proposals.
- 10.4.16 Regardless of site-specific allocations, officers also recognise that where necessary new developments would give rise to high noise levels, including from proposed transport schemes, they should be located and designed to minimise their noise impact. Therefore, where necessary, developers will be required to provide an assessment of noise impact, together with proposals for mitigation. Such assessments are routinely requested and scrutinised by officers within SRS.
- 10.4.17 Planning officers work closely with SRS officers and recognise that decisions can be informed by evidence in relation to noise complaints, as well as the acoustic knowledge of SRS officers, thereby reducing the likelihood of noise nuisance and in turn protecting residential amenity.
- 10.4.18 In responding to planning applications, SRS officers take account of the Welsh Government's statutory duties under the Environmental Noise Directive and the designated noise action planning priority areas within the Vale of Glamorgan. Officers also give specific regard to noise-sensitive receptors such as housing, schools and hospitals, noting that noise can have a harmful impact on people's health and quality of life as well as on the landscape and nature.
- 10.4.19 Officers in both SRS and the planning department acknowledge that proactive noise mitigation is the most beneficial and cost-effective method of dealing with noise. Officers advocate that proactive interventions can bring multiple benefits, such as reducing people's exposure to noise and air pollutants.

10.4.20 Noise from existing industrial sources affecting new noise-sensitive developments is best addressed proactively via the LDP, good design and, where appropriate, conditions at the planning stage rather than after construction has commenced or been completed. As necessary, both SRS and planning officers consult regulators and site operators. Smaller and more localised industrial noise sources are also considered.

Box 10.2

The Vale of Glamorgan Council will take noise maps, priority areas, quiet areas and other tranquil urban green space into consideration when a noise-sensitive or noise-generating development is proposed, and continue to work in partnership with other local authorities and external agencies to tackle anti-social behaviour

10.5 Bridgend County Borough Council



The information in this section has been provided by Bridgend County Borough Council (CBC), which lies between the Cardiff and Penarth and the Swansea and Neath Port Talbot agglomerations.

Noise priorities and services

- 10.5.1 Noise-related service requests and advice for Bridgend CBC are investigated by SRS's Neighbourhood Services team. SRS is a new and innovative collaborative service formed between Bridgend, Cardiff and the Vale of Glamorgan Councils on 1 May 2015. SRS delivers a fully integrated service under a single management structure for trading standards, environmental health and licensing functions with shared governance arrangements ensuring full elected Member involvement.
- 10.5.2 The Neighbourhood Services team covering the Bridgend CBC area investigates a range of noise-related service requests including domestic, commercial and industrial noise and noise from construction sites. Officers use both statutory powers and informal action to investigate and resolve these. Barking dogs and neighbourhood noise are the main sources of complaints. An out-of-hours service is operated on behalf of Bridgend CBC to investigate on-going complaints where the noise occurs outside of office hours, and noise monitoring equipment is utilised to assess the noise. The out-of-hours service in respect of noise operates from Friday evenings through to Monday mornings when a team of two officers reacts to ongoing noise complaints, which are on a pre-assessed list, or certain categories of noise complaints such as car or security alarms.
- 10.5.3 In addition to undertaking investigations regarding noise complaints and providing advice, proactive work to minimise disturbance from noise and vibration is undertaken through the planning and licensing regimes. This provides officers, acting in their role as consultees, with an opportunity to scrutinise applications and the information provided to support applications, including noise reports, which are then used to determine existing and predicted noise levels and assess their impacts. Officers regularly recommend the attachment of planning and licensing conditions to control noise impacts from developments or from licensed premises. Noise and vibration at mineral sites are controlled primarily through specific planning conditions that are reviewed from time to time. For major projects, construction management plans, which include noise and vibration control, are usually required.

Noise and planning

10.5.4 Bridgend CBC adopted its LDP⁸⁵ on 18 September 2013. Its land use vision for the LDP is that by 2021, Bridgend County Borough will be transformed to become a sustainable, safe, healthy and inclusive network of communities comprising strong, interdependent and connected settlements that can offer opportunities and an improved quality of life and environment for all people living, working, visiting and relaxing in the area. The plan is based on four themed objectives as follows, which each cover a range of topics:

- To produce high quality sustainable places;
- To protect and enhance the environment;
- To spread prosperity and opportunity through regeneration; and
- To create safe, healthy and inclusive communities.

10.5.5 It also identifies land for different types of development including housing (leading to an identified need to provide 9,690 new dwellings over the plan period of 2006-2021), employment and retailing, in addition to identifying protected land and areas in the countryside. The majority of new development is located within four strategic regeneration growth areas. SRS takes into consideration noise action planning when determining what impact a development will have in terms of noise.

10.5.6 The WFG Act requires PSBs to produce a local well-being plan (LWBP) and Bridgend's LWBP is currently in the process of being finalised. This plan will look at the economic, social, environmental and cultural well-being of the County.

10.5.7 Both the WFG Act and the LWBP will be fully considered throughout the preparation of the revised LDP, and the five ways of working will be followed. This will ensure that any development relates to the well-being objectives and priorities of the Bridgend PSB's LWBP in land use terms.

10.5.8 Planning applications will be dealt with in accordance with national and local policy in relation to noise. LDP policies relevant to noise and related matters that are applied in dealing with planning applications are summarised below:

⁸⁵ <https://www.bridgend.gov.uk/media/1899/written-statement.pdf>

Policy SP3: Strategic Transport Planning Principles

All development proposals should promote safe, sustainable and healthy forms of transport through good design, enhanced walking and cycling provision, and improved public transport provision. To complement this, policy PLA7 safeguards and allocates the strategic transportation improvements that will provide opportunities to reduce congestion and provide enhanced facilities for walking, cycling, and public transport, thus allowing appropriate reallocation of road space to deliver more sustainable travel within the County Borough, and will help reduce exposure to transport-related noise. A number of locally significant schemes have been identified in the plan. These include the provision of a high quality network of dedicated walking and cycle routes, which will promote sustainability and encourage healthier lifestyles and increased physical activity.

Policy ENV7: Natural Resource Protection and Public Health

Development proposals will only be permitted where it can be demonstrated that they would not cause a new, or exacerbate an existing, unacceptable risk of harm to health, biodiversity and/or local amenity due to:

- Air pollution;
- Noise pollution;
- Light pollution;
- Contamination (including invasive species);
- Land instability;
- Water (including groundwater) pollution; or
- Any other identified risk to public health or safety.

10.5.9 Development in areas currently subject to the above will need to demonstrate mitigation measures to reduce the risk of harm to public health, biodiversity and/or local amenity to an acceptable level. Various types of pollution may cause significant damage to human health, biodiversity, quality of life and residential amenity, as well as having an impact on both the natural and the built environment.

10.5.10 Policy ENV7 ensures that developments that would result in unacceptably high levels of noise, light, water or air pollution are located away from residential areas and other sensitive uses. The policy will also ensure that development proposals are not located in close proximity to existing sources of pollution, including noise, which have not previously been addressed.

10.5.11 The following policies help to protect the countryside, landscape, biodiversity and natural resources of Bridgend County Borough and identify areas of environmental protection including green wedges, Special Landscape Areas and local nature reserves:

Policy ENV3: Special Landscape Areas

Development in Special Landscape Areas will only be permitted where it retains or enhances the character and distinctiveness of the area, and the proposed development is accompanied by a landscape assessment that takes into account the impact of the development and sets out proposals to mitigate any adverse effects.

Policy ENV4: Local/Regional Nature Conservation Sites

Development that would have an adverse impact on any Local Nature Reserve, Site of Importance for Nature Conservation or Regionally Important Geodiversity Site will not be permitted unless the benefits associated with the development can be demonstrated to outweigh the harm, and/or the harm can be reduced or removed by appropriate mitigation and/or compensation measures.

Policy ENV5: Green Infrastructure

Green infrastructure will be provided through the protection and enhancement of existing natural assets and the creation of new multifunctional areas of green space. Green infrastructure corridors will connect locations of natural heritage, green space, biodiversity or other environmental interest. They will be safeguarded through:

- Not permitting development that compromises their integrity and therefore that of the overall green infrastructure framework;
- Using developer contributions to facilitate improvements to their quality and robustness; and

- Investing in appropriate management, enhancement and restoration, and the creation of new resources.

10.5.12 The following areas have been specifically identified under policies ENV3-5 in order to protect areas of tranquillity and Special Landscape Areas. However, there are many tranquil areas throughout the Borough in the form of parks and gardens, amenity green spaces, natural and semi-natural urban green spaces and green corridors:

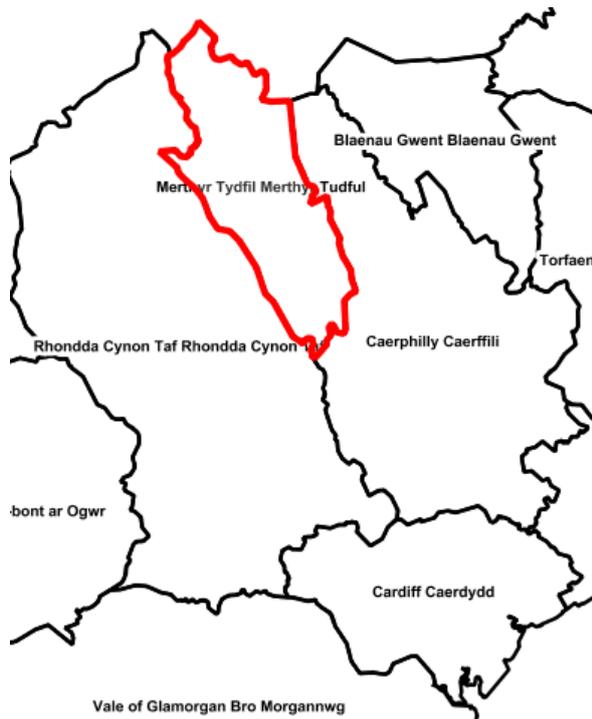
ENV3/2	Feol Y Dyffryn
ENV3/4	Bryngarw Country Park
ENV3/5	Mynydd Y Gaer
ENV3/6	Kenfig Burrows
ENV3/9	Merthyr Mawr Warren
SP4/3	Kenfig and Merthyr Mawr National Nature Reserves

10.5.13 Noise from existing sources that may affect new noise-sensitive developments is addressed through appropriate conditions at the planning stage. Consultation with developers and planners is key to this process and SRS will continue to comment on planning applications and recommend conditions where appropriate to control noise impacts. Where necessary, developers will be required to provide an assessment of noise impact, together with proposals for mitigation.

Box 10.3

Bridgend CBC will seek to maximise the noise benefits to be gained from highway improvement works and local air quality management; and take noise maps, priority areas and tranquil urban green space into consideration when a noise-sensitive or noise-generating development is proposed.

10.6 Merthyr Tydfil County Borough Council



The information in this section has been provided by Merthyr Tydfil CBC, which lies to the north of the Cardiff and Penarth agglomeration.

Noise priorities and services

10.6.1 Merthyr Tydfil has a team of three officers, who deal with the same range of housing and environmental protection duties but each take a lead role in particular specialisms.

10.6.2 The investigation of complaints from the public regarding domestic, commercial and industrial noise is a substantial element of environmental protection activity. This involves issues as diverse as barking dogs, DIY, the playing of music, loading and unloading of delivery vehicles, some road transport and noise from heavy plant and machinery.

10.6.3 The Council does not generally provide a responsive out-of-hours service but will do so where a complaint has been assessed and a responsive out-of-hours visit is considered necessary to properly investigate the matter. This is organised through the authority's 'Lifeline' service, which also records other complaints received out of normal office hours and refers them for investigation on the next working day.

10.6.4 Officers will arrange programmed out-of-hours visits where noise incidents appear to be predictable and a personal presence is considered necessary. In practice, such visits are rarely required as the Council has two 'Matron' noise recording systems, which are sufficient for the collection of evidence for almost all out-of-hours noise incidents.

10.6.5 Where statutory nuisances are found, abatement notices are served and acted upon, but informal advice and assistance may also be provided where it might be beneficial. This might be the case where the noise is easily controlled, such as by the fitting of buffer pads to reduce impact noise from the closing of doors, but is primarily of value where the complainant may have hyperacusis, tinnitus or similar conditions. In such cases, advice on sound conditioning, neuro-linguistic programming and similar measures may relieve substantial distress. Where noise is found to result from a breach of a planning condition, the evidence is passed to the planning service for further investigation. Similar arrangements exist with the police.

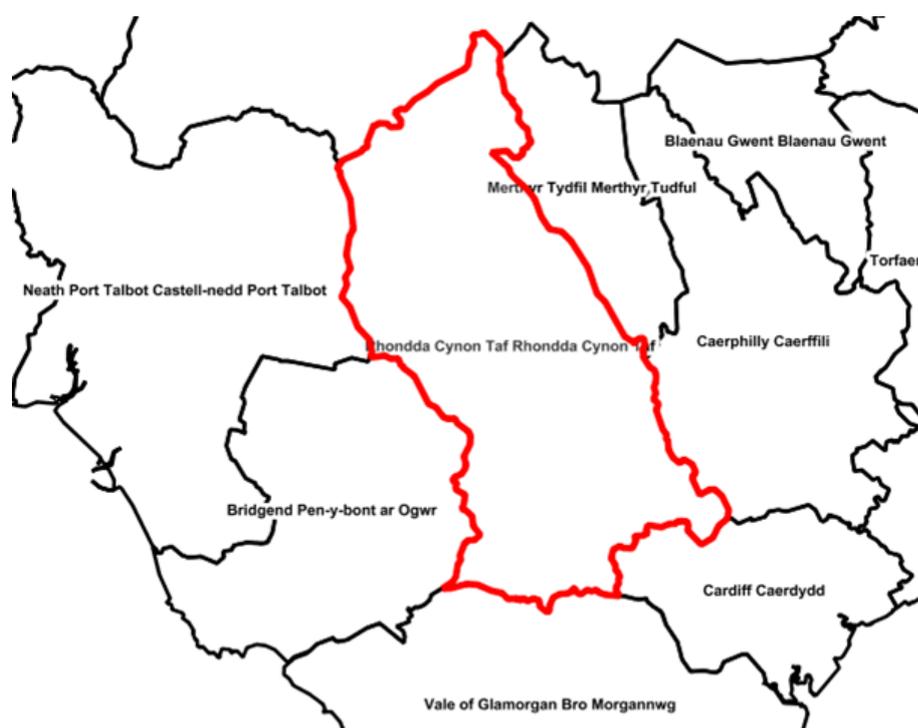
Noise and planning

10.6.6 In addition to responsive services, the authority also takes a proactive approach to noise control. This primarily takes place when planning applications are received, through informal advice to developers and the recommendation of planning conditions. Measures will be designed to protect residents and quiet spaces from proposed noisy activities but will also be designed to protect residents of proposed housing developments, for instance, when being introduced into existing noisy environments. Where the proposal will result in unreasonable noise exposure, an objection will be made. This approach is applied to larger infrastructure projects, such as those where major road changes are proposed, where liaison with other authorities will help to minimise exposure to both noise and air pollutants.

Box 10.4

Merthyr Tydfil CBC has been increasingly extending noise and air quality protection principles into other policy areas such as that of its green infrastructure, a process that has been considerably accelerated by the WFG Act. In doing so, it is furthering movement from the historic position of primarily arresting deterioration in environmental noise and air quality to one where positive changes will promote a developing improvement in the health and well-being of residents and visitors to the area.

10.7 Rhondda Cynon Taf County Borough Council



The information in this section has been provided by Rhondda Cynon Taf CBC, which lies between the Cardiff and Penarth and the Swansea and Neath Port Talbot agglomerations.

Noise priorities and services

10.7.1 The Pollution and Public Health team in Rhondda Cynon Taf CBC deals with a wide range of environmental protection and public health matters including the investigation of noise nuisance complaints. In the 2017/18 financial year, it received 1,070 domestic noise and 155 industrial/commercial/vehicle noise complaints. The largest source of domestic noise complaints was barking dogs, followed by loud amplified music/television.

10.7.2 Since July 2017, Rhondda Cynon Taf CBC has utilised the 'Noise App' to assist in dealing with noise nuisance complaints, with complainants being offered the opportunity to record and submit the alleged noise via a smartphone app. The Noise App is being used as an alternative to the traditional diary sheet method of obtaining evidence. It has the added benefit of officers being able to listen to the offending noise, and use this evidence to attempt to resolve issues more quickly. The Noise App is being utilised by officers across the department, including in relation to nuisance associated with licensed premises and anti-social behaviour complaints.

Noise and planning

10.7.3 The Pollution and Public Health team acts as a consultee under planning and licensing legislation, where advice is provided and conditions requested when required to mitigate the impact of noise in respect of a new development or licensed premises. This consultee role also involved advising on the production of an appropriate policy in the LDP⁸⁶, to prevent any developments causing unacceptable risks due to noise pollution. This resulted in policy AW10 (Environmental Protection and Public Health) being included in the 2011-2021 LDP, which reads as follows:

Development proposals will not be permitted where they would cause or result in a risk of unacceptable harm to health and/or local amenity because of:

- Air pollution;
- Noise pollution;
- Light pollution;
- Contamination;
- Landfill gas;
- Land instability;
- Water pollution;
- Flooding; or
- Any other identified risk to the environment, local amenity and public health or safety

unless it can be demonstrated that measures can be taken to overcome any significant adverse risk to public health, the environment and/or impact upon local amenity.

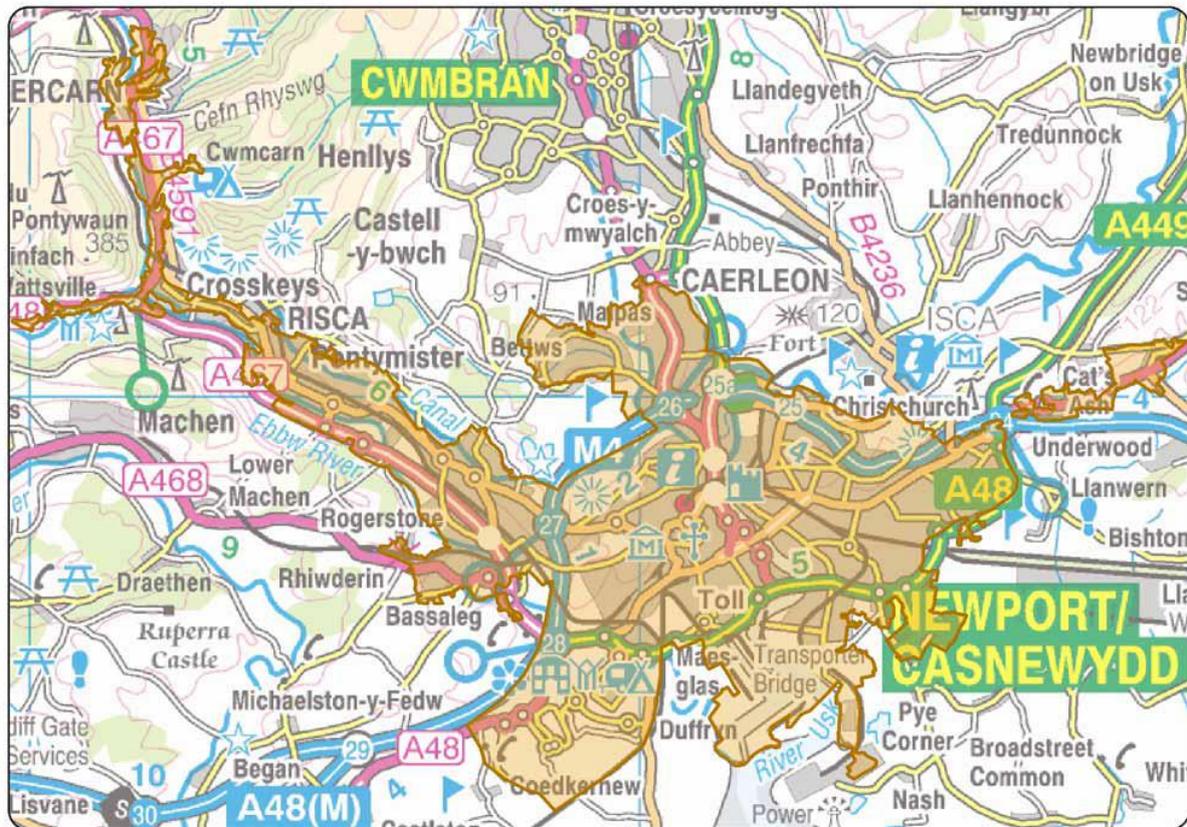
⁸⁶ <https://www.rctcbc.gov.uk/EN/Resident/PlanningandBuildingControl/LocalDevelopmentPlans/RelateddocumentsLDP20062021/AdoptedLocalDevelopmentPlan.pdf>

10.7.4 There is no dedicated out-of-hours noise service, but Rhondda Cynon Taf CBC provides the services of an emergency out-of-hours officer to deal with noise nuisance where an abatement notice is in force. The officers also work flexible hours and utilise noise monitoring equipment, which assists in obtaining evidence of noise nuisance occurring outside office hours.

Box 10.5

The requirements of the WFG Act are being followed when working with other Council departments and external organisations to ensure that actions are in line with the sustainable development principle. The Pollution and Public Health team is currently working alongside partners in Highways and Transportation, Planning Services, Education, and Parks and Countryside to seek both noise and air quality improvements through appropriate use of traffic management, active travel routes and green infrastructure in Rhondda Cynon Taf.

11 The Newport agglomeration



© Crown Copyright and database right 2012. Ordnance Survey 100021874. Welsh Government.

11.1 What the noise maps tell us

11.1.1 The residential population of the Newport agglomeration rose from 148,500 to 150,100 between the 2012 and 2017 noise mapping exercises.

11.1.2 Residential population exposure to noise from major roads and industry has been estimated from the 2017 noise maps. Residential population exposure to noise from all roads in the agglomeration, and from railways, has been estimated from the 2012 noise maps, using an updated 2017 residential population model. The exception to this rule is where it gives a higher figure for major roads than for all roads. In this case, marked by an asterisk in Table 11.2, the higher major roads figure is used.

Table 11.1 Residential population exposure using the day-evening-night noise indicator L_{den} , based on the 2017 noise maps and population model

Noise source	Number of people whose homes are exposed to these noise levels				
	55-59 dB	60-64 dB	65-69 dB	70-74 dB	> 75 dB
Major roads	32,100	13,900	5,100	2,700	1,100
All roads	40,000	21,000	13,600	3,900	1,100
Major railways	3,200	1,800	800	1,000	500
All railways	4,900	2,500	1,000	1,100	500
Industry	800	200	100	0	0

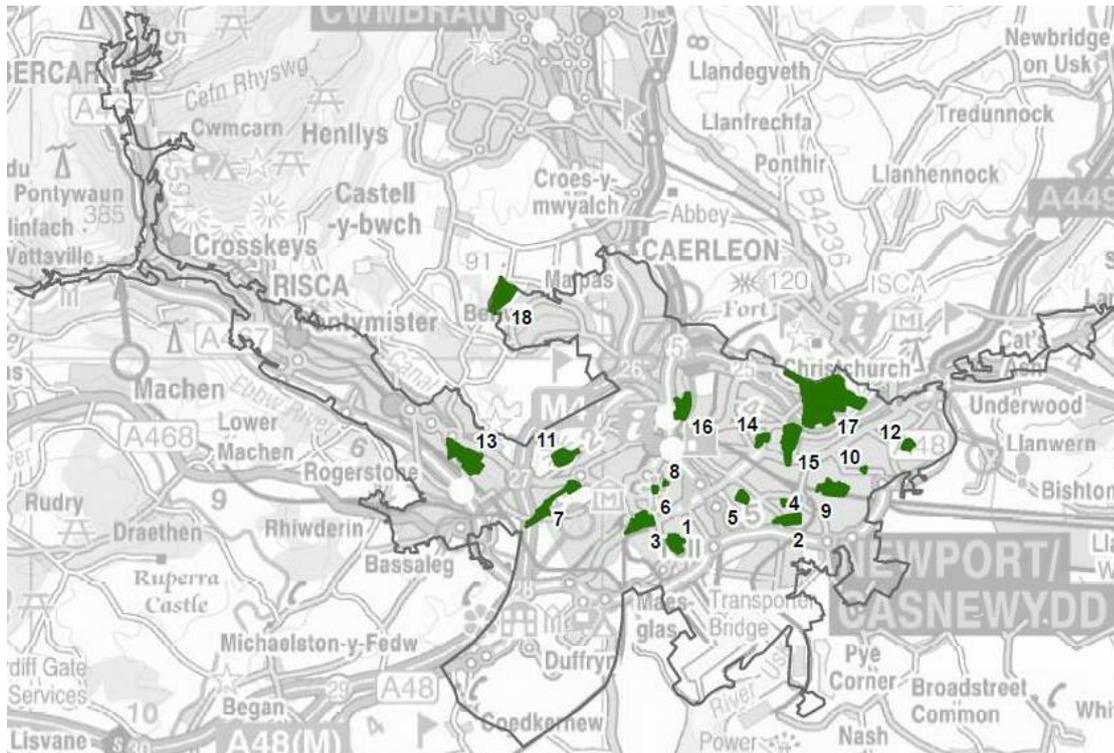
Table 11.2 Residential population exposure using the night-time noise indicator L_{night} , based on the 2017 noise maps and population model

Noise source	Number of people whose homes are exposed to these noise levels				
	50-54 dB	55-59 dB	60-64 dB	65-69 dB	> 70 dB
Major roads	22,700	8,600	3,400	1,300	600
All roads	29,200	17,100	5,800	1,300*	600
Major railways	2,900	1,300	800	1,100	200
All railways	4,000	1,500	1,000	1,100	200
Industry	500	200	0	0	0

11.2 Quiet areas

11.2.1 There are 18 designated quiet areas in this agglomeration. Those holding Green Flag Awards are marked by an asterisk.

- | | |
|--|-----------------------------|
| 1 – Pill Recreation Ground | 10 – Ladyhill Park |
| 2 – Llswerry Recreation Ground | 11 – Allt-yr-yn Wood |
| 3 – Belle Vue Park* | 12 – Ringland Top |
| 4 – Oliver Road Park | 13 – Cefn Wood |
| 5 – Lysaghts Park | 14 – Woodland Park |
| 6 – Clifton Road Park | 15 – Beechwood Park |
| 7 – Coed Melyn Park and Bassaleg
Playing Fields | 16 – Shaftesbury Park |
| 8 – Chapel Park | 17 – St Julians Park |
| 9 – Aberthaw Road Park (locally
known as Llswerry Pond Field) | 18 – Ty-Coed Playing Fields |



© Crown Copyright and database right 2012. Ordnance Survey 100021874. Welsh Government.

11.3 Newport City Council



The information in this section has been provided by Newport City Council.

Noise priorities and services

11.3.1 The Noise and Neighbourhood team of Newport City Council is responsible for investigating service requests with regard to noise pollution, noise nuisance and noise-related antisocial behaviour. The team is made up of environmental health and pollution control officers, community safety wardens and anti-social behaviour liaison officers.

11.3.2 Initial noise service requests are responded to by community safety wardens between 3 pm and midnight, seven days a week. Community safety wardens will conduct a visit to the perpetrator to discuss the complaint in order to try to achieve an early resolution in an efficient manner. Where service requests continue to be made, environmental health and pollution control officers become involved to take more formal action under relevant legislation. Anti-social behaviour liaison officers work closely with officers within the team and other partners to address noise-related anti-social behaviour.

11.3.3 During the 2017/18 financial year, Newport City Council received over 2,300 service requests relating to noise from commercial, domestic and industrial sources. The most common cause of complaint within this time period was from loud amplified music. Other sources of noise such as barking dogs and construction/DIY noise also create high demands on the service.

11.3.4 In respect of service requests, the service is reactive in nature. However, proactive work to minimise disturbance from noise and vibration is undertaken through the planning process, licensing regimes and Section 61 consents.

- 11.3.5 As a consultee, the team makes representation to planning and licensing applications. This provides an opportunity to scrutinise information submitted with each application. An officer will assess the impact of new developments and also recommends conditions that should be added to consents in order to protect public health. Conditions and recommendations take into account the existing noise climate and provide protection to the amenity of existing or future residents. The process also provides officers with the opportunity to require site-specific noise and vibration surveys to ensure that any changes in an area do not give rise to disturbance or statutory noise nuisance.
- 11.3.6 Special regard is given to developments where protection from transport-derived noise is considered in order to ensure compliance with the WHO's guidelines for acceptable internal noise levels. Officers also ensure that requirements in relation to standards such as BS 8223 and BS 4142, TAN 11 assessments and the calculation of road traffic noise are met.
- 11.3.7 Under Section 61 of the Control of Pollution Act 1974, a developer may apply to the team for prior consent to carry out construction and demolition works. This involves the team liaising with the applicant prior to noise-generating activities to minimise disturbance to residents during essential 'noisy' works.
- 11.3.8 The team has a close working relationship with other partner agencies to ensure that noise nuisance and anti-social behaviour are dealt with. Close working links with registered social landlords are in place to ensure that tenants comply with conditions in their tenancy agreements.

Noise and planning

- 11.3.9 On 27 January 2015, the Council formally adopted a new LDP⁸⁷, which supersedes the unitary development plan.
- 11.3.10 In accordance with PPW, the revised Deposit LDP sets out detailed policies that allow for the assessment of noise impacts on the local environment and residential amenity and seek to ensure that development proposals do not result in noise levels that are unacceptable given the surrounding land uses. The noise action plan will provide supporting information for assessing the impact of proposed developments on identified quiet areas.

⁸⁷ <http://www.newport.gov.uk/documents/Planning-Documents/LDP-2011-2026/LDP-Adopted-Plan-January-2015.pdf>

11.3.11 The LDP also protects environmental spaces, which are areas of open and amenity space identified for a number of reasons including biodiversity, recreation and amenity. Identified quiet areas can overlap with allocated environmental spaces and provide an additional layer of protection to the areas.

11.3.12 In accordance with PPW, relevant TANs and policies in the adopted Newport LDP, the impact of noise is considered in the determination of planning applications. In consultation with Newport's environmental health department and, where relevant, NRW, the suitability of noise levels resulting from proposed developments given the surrounding land uses is assessed through an approved methodology. Where considered appropriate, noise mitigation measures are required and secured through the use of planning conditions. Where mitigation is not possible and noise levels are considered to be unacceptable, planning permission is refused.

Quiet areas and priority areas

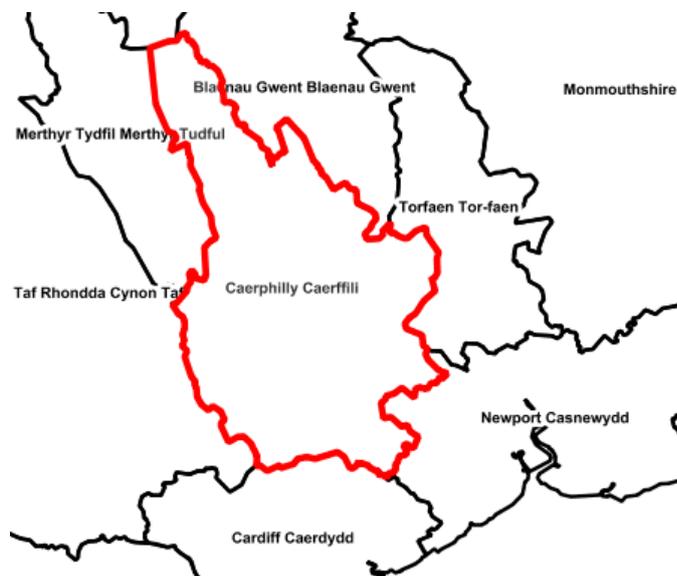
11.3.13 Candidate quiet areas in Newport were proposed by identifying suitable open green spaces and recreation spaces within the agglomeration boundary. A consultation with local elected Members was undertaken in order to identify areas valued by local communities. The suitability of nominations was assessed against tranquillity criteria, levels of use and facilities for community and recreational use along with historical, botanical and wildlife biodiversity. Areas falling outside the agglomeration boundary, though ineligible for formal quiet area designation under the Environmental Noise Directive and Regulations, will be noted and information on them provided to development services, with a database of such areas being created in order to ensure their protection.

11.3.14 The 'StreetScene' service area of Newport City Council, which includes highways, is working closely with contractors who promote the use of modern surfacing techniques to reduce road traffic noise. This approach is not currently focused on particular areas of the authority but is authority-wide. Once Newport's noise action planning priority areas have been designated, the Council will examine how future phases of planned resurfacing works and other noise mitigation works may take these areas into account.

Box 11.1

Newport City Council will produce noise policies for its LDP, protect designated quiet areas and other tranquil green space identified as being important outside the agglomeration boundary, take priority areas into consideration in its road resurfacing work, and, under the WFG Act, liaise with PSBs to take into account the noise maps produced under the Environmental Noise Directive.

11.4 Caerphilly County Borough Council



The information in this section has been provided by Caerphilly CBC.

Noise priorities and services

11.4.1 Noise complaints received by Caerphilly CBC are investigated by the Environmental Health department, which is included within the division of Public Protection. When noise complaints are received, they are categorised as 'domestic' or 'commercial/industrial' and then passed to the appropriate team for investigation. Domestic complaints are investigated by the General team and any commercial complaints are investigated by Pollution Control. Specific noise procedures are followed. Any complaints that cannot be resolved during the day-time or by a series of planned monitoring visits after office hours are then included on the Council's call-out list on the out-of-hours service.

- 11.4.2 The out-of-hours service is primarily an emergency response service. However, where noise complaints cannot be resolved, or if a subject has been served with a noise abatement notice, these cases are included as part of the service. The person affected by the nuisance can then call a number that connects them to the Council's 24-hour control room, the control room operatives will contact the on-call environmental health officer, and a visit will be made to investigate the complaint. Any noise complaints received by the control room that are not included on the call-out list are passed through to an officer for investigation the next working day.
- 11.4.3 During the 2017/18 financial year, Caerphilly CBC received 1,094 complaints relating to noise. Of these, 215 were commercial noise complaints and the remaining 879 concerned domestic neighbour noise. The majority of neighbour noise complaints were for disturbance from amplified music and barking dogs.
- 11.4.4 In respect of service requests, the pollution control service is reactive in nature. However, proactive work to minimise disturbance from noise and vibration is undertaken through the planning and licensing regimes.
- 11.4.5 Environmental Health works closely with partners such as the police, Community Safety and Tenancy Enforcement to ensure that noise associated with anti-social behaviour is tackled in a holistic manner. Partnership working with agencies such as Gwent Police has allowed Caerphilly CBC to play important roles in planned multi-agency operations, such as 'Operation Check' where unannounced visits are made to licensed premises and issues such as noise, anti-social behaviour, underage sales, substitution and counterfeit alcohol checks etc. are addressed.
- 11.4.6 Some of the noise complaints received by the General team relate to noise from 'boy racers' misusing the town centre roads and playing loud music through their car stereos. Various departments of the Council, including Environmental Health, have participated in some very successful multi-agency initiatives with Gwent Police and South Wales Fire and Rescue Service to promote issues such as noise nuisance, illegal modifications, speeding and safe driving. The 2009 initiative 'COWS, Cars and Cruisers' ended with a road closure order through one of the town centres from 7 pm on a Thursday night through to 4 am on the Friday morning. Complaints relating to noise in this area have decreased significantly.

Noise and planning

11.4.7 The LDP for Caerphilly CBC⁸⁸ was adopted on 23 November 2010 and contains a number of environmental protection policies that consider amenity and design, namely CW2 (Amenity), CW15 (General Locational Constraints) and CW19 (Locational Constraints – Rural Development and Diversification). These policies do not relate directly to noise. However, they should be considered in conjunction with TAN 11: Noise and TAN12: Design⁸⁹.

11.4.8 Two of the 24 key objectives within the LDP that relate indirectly to noise are:

- Ensure that the environmental impact of all new development is minimised; and
- Protect and enhance the overall quality of the historic, natural and built environment of the County Borough.

11.4.9 Environmental Health worked very closely with the Strategic Planning department in the production of the LDP, and any candidate sites that were likely to be affected by noise from traffic or industrial activity would have been highlighted as part of the candidate sites assessment process. Appendix 8 of the LDP (Survey Requirements for Housing Sites) lists those sites that will require an acoustic assessment, whether it be a BS 4142 type assessment or a TAN 11 assessment. Where the assessment indicates that noise is a problem and mitigation cannot be adequately designed to address the noise, Environmental Health would recommend refusal of the application.

11.4.10 In conclusion, whilst noise is not specifically addressed in the LDP, when the LDP is read in conjunction with national guidance, the issue of noise is appropriately addressed.

11.4.11 As a consultee, the Pollution Control team provides professional advice to the planning department and planning committee on the impact of new developments and also recommends conditions that should be added to consents in order to protect public health and residential amenity. Conditions and recommendations take into account the existing noise climate and provide protection to the amenity of existing or future residents. The process also provides officers with the opportunity to require site-specific noise surveys to ensure that any changes in an area do not give rise to disturbance or statutory nuisance.

⁸⁸ <http://www.caerphilly.gov.uk/CaerphillyDocs/LDP/written-statement.aspx>

⁸⁹ <https://gov.wales/topics/planning/policy/tans/tan12/?lang=en>

11.4.12 In relation to developments that require protection from transport-derived noise, officers in the Pollution Control team will ensure that the development complies with guidance and standards such as the WHO's *Guidelines for Community Noise*, BS 4142 and TAN 11. Where these guidelines/standards cannot be met, Pollution Control will recommend appropriate conditions to mitigate against noise to protect future occupiers, or recommend that the development be refused on noise grounds.

Tranquil green space

11.4.13 Approximately 80% of Caerphilly County Borough is countryside. Many of the quiet green areas lie outside of the settlement boundaries, where there is little development pressure, and these areas are protected from inappropriate development by various LDP policies.

11.4.14 There are two large country parks in the south-eastern area of the Borough, namely Sirhowy Valley Country Park and Cwmcarn Scenic Drive. Both have extensive areas of forestation that offer screening to the impacts of noise.

11.4.15 The Countryside and Rights of Way Act 2000⁹⁰ enshrines access on common and open access land, and this includes extensive upland areas throughout the County Borough.

11.4.16 Caerphilly CBC is currently developing proposals, jointly with Torfaen and Newport, to increase recreational usage of the Twmbarlwm and Mynydd Maen areas.

11.4.17 To summarise, in this area of the County Borough there are large areas of easily accessible land close to the centres of population where people can freely go to experience particularly pleasant areas of peace and tranquillity in an outstanding landscape setting. For these reasons, Caerphilly CBC has not nominated any quiet areas within its part of the Newport agglomeration.

Box 11.2

Caerphilly CBC will continue to address noise issues in accordance with the information contained in this section of the noise and soundscape action plan.

⁹⁰ <https://www.legislation.gov.uk/ukpga/2000/37>

12 The Swansea and Neath Port Talbot agglomeration



© Crown Copyright and database right 2012. Ordnance Survey 100021874. Welsh Government.

12.1 What the noise maps tell us

12.1.1 The residential population of the Swansea and Neath Port Talbot agglomeration rose from 285,400 to 288,400 between the 2012 and 2017 noise mapping exercises.

12.1.2 Residential population exposure to noise from major roads and industry has been estimated from the 2017 noise maps. Residential population exposure to noise from all roads in the agglomeration, and from railways, has been estimated from the 2012 noise maps, using an updated 2017 residential population model.

Table 12.1 Residential population exposure using the day-evening-night noise indicator L_{den} , based on the 2017 noise maps and population model

Noise source	Number of people whose homes are exposed to these noise levels				
	55-59 dB	60-64 dB	65-69 dB	70-74 dB	> 75 dB
Major roads	39,500	18,100	10,700	7,400	1,000
All roads	52,900	40,300	30,300	9,900	1,100
Major railways	3,500	2,600	1,600	400	0
All railways	4,100	3,100	1,700	400	0
Industry	3,800	400	100	0	0

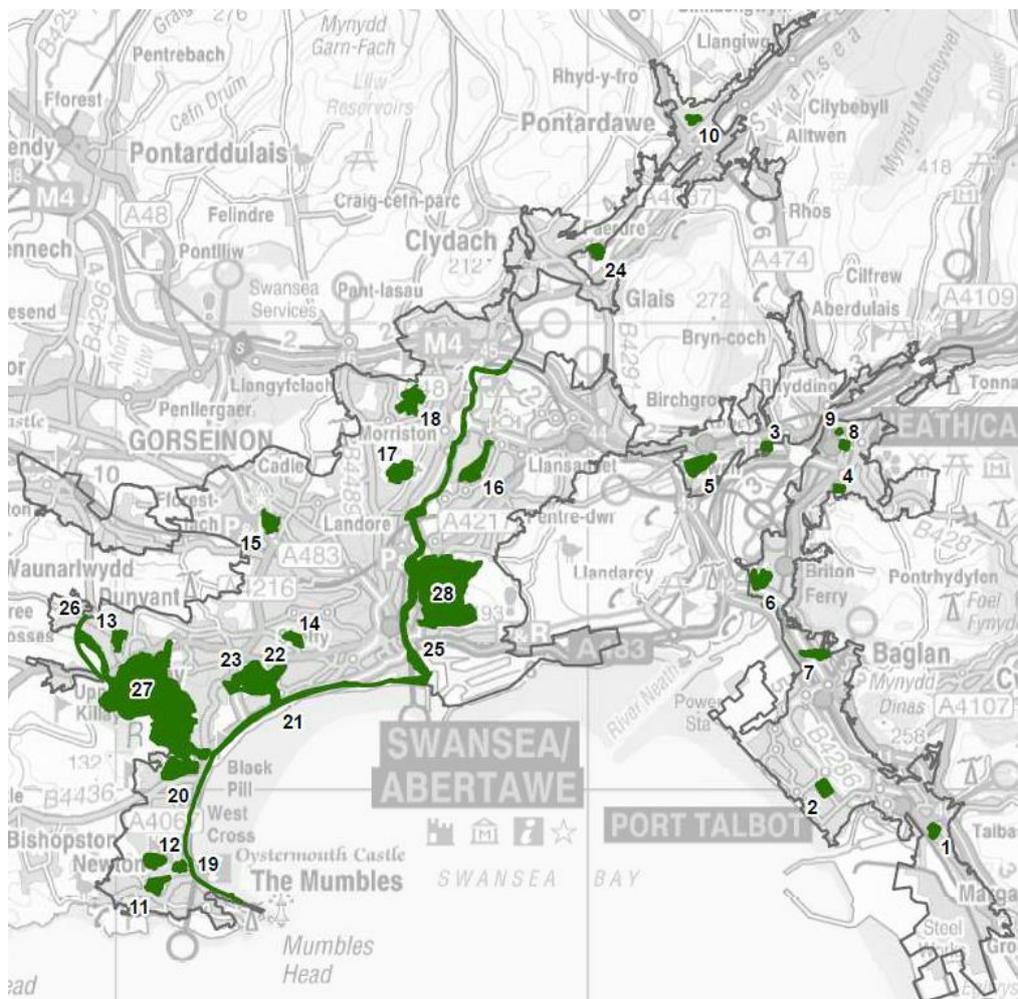
Table 12.2 Residential population exposure using the night-time noise indicator L_{night} , based on the 2017 noise maps and population model

Noise source	Number of people whose homes are exposed to these noise levels				
	50-54 dB	55-59 dB	60-64 dB	65-69 dB	> 70 dB
Major roads	28,700	14,400	9,100	1,400	400
All roads	47,200	36,700	13,500	1,600	500
Major railways	3,200	2,100	1,100	100	0
All railways	3,700	2,400	1,100	100	0
Industry	2,100	300	0	0	0

12.2 Quiet areas

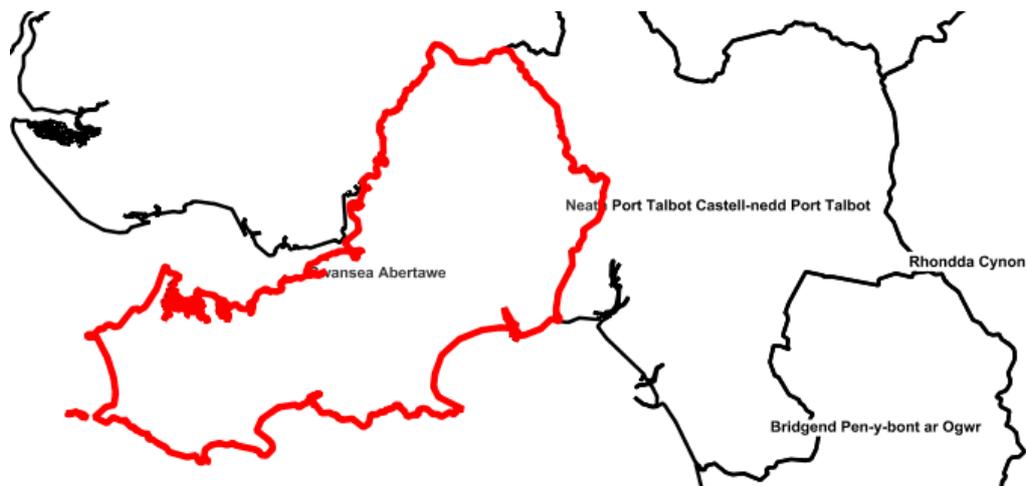
12.2.1 There are 28 designated quiet areas in this agglomeration. Those holding Green Flag Awards are marked by an asterisk.

- | | |
|---------------------------|--------------------------------|
| 1 – Talbot Memorial Park* | 15 – Ravenhill Park |
| 2 – Vivian Park | 16 – Fendrod Lake |
| 3 – Neath Abbey Ruins | 17 – Parc Llewelyn* |
| 4 – Mount Pleasant Park | 18 – Morriston Park |
| 5 – Skewen Park | 19 – Oystermouth Castle |
| 6 – Shelone Woods | 20 – Clyne Gardens* |
| 7 – Baglan Park | 21 – Swansea Beach |
| 8 – Victoria Gardens* | 22 – Brynmill Park* |
| 9 – Church Place | 23 – Singleton Park* |
| 10 – King George V Park | 24 – Coed Gwilym Park |
| 11 – Underhill Park | 25 – Tawe Riverside |
| 12 – Oystermouth Cemetery | 26 – Clyne Cycle Track |
| 13 – Dunvant Park | 27 – Clyne Valley Country Park |
| 14 – Cwmdonkin Park* | 28 – Swansea Urban Woodland |



© Crown Copyright and database right 2012. Ordnance Survey 100021874. Welsh Government.

12.3 Swansea Council



The information in this section has been provided by Swansea Council.

Noise priorities and services

12.3.1 Within the Public Protection service, the Pollution Control team receives nearly 4,000 noise enquiries from the public every year. The largest sector in terms of generating complaints is amplified music, although barking dogs and licensed entertainment are still causing significant numbers of enquiries. Audible alarms from vehicles or buildings cause about 200 complaints per year but generate the largest number of applications for a warrant from magistrates in order to enter premises to silence the alarm if the owner cannot be found quickly. Other sources of noise and vibration are regularly complained about but in smaller numbers. All of this generates a large number of statutory notices, using either nuisance powers or the Control of Pollution Act 1974 (to control noise from the construction industry).

12.3.2 The team takes its enforcement role very seriously, and any breaches of notices will be actioned. Currently, it is usual for about 50 cases per year to proceed through the prosecution process, although increasingly a large number are dealt with by simple cautions if the Council's internal prosecution panel feels that is appropriate (and compliant with the current legal guidelines). There has been a slight reduction in the number of abatement notices served on domestic noise, and this appears to be due to a greater effort made by the universities to be more actively involved with complaints relating to students. Much of this enforcement work is undertaken by officers who are available 24/7 to provide a standby service for any emergency in the County, as well as dealing with night-time noise problems.

12.3.3 The team is a consultee under planning and licensing legislation, for example in respect of temporary event notices and premises licences issued under the Licensing Act 2003. The team has an excellent relationship with planning colleagues and every effort is made to play a full part in development control. This is particularly true in terms of dealing with environmental impact assessment as well as more policy-related matters. For many years, there has been agreement that any comments from the team are reported verbatim in the reports that go before planning committee. Officers from the team also present their views in person at committee so that full consideration is given by the Members to any noise concerns relating to planning applications. Recently this has included requiring 'green façades' and 'living fences' around developments where traffic noise and poor air quality are both issues.

12.3.4 Major infrastructure works often result in prior approval schemes for noise and vibration under section 61 of the Control of Pollution Act 1974. This can be for major rail network operations or preparatory work for schemes such as the tidal lagoon. The team has access to a wide range of acoustic instruments to undertake the necessary survey work. Currently all this work is ISO-accredited and the team has also developed various projects to examine the adequacy of certain façade designs. This was in addition to our work on party walls and floors, and has been particularly important in the city centre, where conflicting uses around the night-time economy have created problems that have not been resolved by a traditional planning or Building Regulations approach.

12.3.5 Noise from existing industrial noise sources affecting new noise-sensitive developments is best addressed through appropriate conditions at the planning stage rather than after construction has already gone ahead. The Council cannot rule out the use of statutory nuisance powers, although the 'best practicable means' defence is always available to existing operators.

Noise and planning

12.3.6 The Swansea LDP is currently at the Examination stage. The Deposit plan strategy sets out 24 plan objectives including overarching and area-based objectives and objectives grouped under three headings:

- Enhancing Communities, Facilities and Infrastructure;
- Delivering Economic Growth and Prosperity; and
- Fostering a High Quality Environment.

12.3.7 The plan provides for growth over the plan period of 2010-2025. Land is identified to meet the identified need for 15,600 new homes over the plan period, together with the creation of 13,600 additional jobs. The plan's growth strategy is to create a limited number of sustainable new neighbourhoods at Strategic Development Areas, within or close to the existing urban area, supported by a limited number of non-strategic, medium-scale, edge-of-settlement extensions and more dispersed and smaller allocations to round off settlements. Most significant new developments are consequently to be within or adjacent to the urban agglomeration area identified for noise mapping and action planning purposes under the Environmental Noise Directive and Regulations.

12.3.8 Planning applications will be dealt with in accordance with national and local policy in relation to noise. LDP policies relevant to noise and related matters that are applied in dealing with planning applications are summarised below.

12.3.9 Policy EV40 in Swansea's adopted Unitary Development Plan states that development proposals will not be permitted that would cause or result in significant harm to health, local amenity, natural heritage, the historic environment or landscape character because of significant levels of air, noise or light pollution.

12.3.10 Swansea's Deposit policies are currently being examined through the LDP Examination.

Policy RP1: Safeguarding Public Health and Natural Resources

Development that would result in significant risk to life, human health and well-being, property, controlled waters or the natural and historic environment will not be permitted, particularly in respect of:

- Air, noise or light pollution;
- Flood risk;
- The quality or quantity of water resources;
- Land contamination;
- Land instability or subsidence;
- Sustainable development of mineral resources; and

- Sustainable waste management.

Development judged to have a significant adverse effect on the integrity of any European designated sites, either alone or in combination with other plans or projects, will not be permitted.

12.3.11 Following the completion of the hearing sessions, the Council has submitted proposed 'Matters Arising Changes' to policy RP2 (Air, Noise or Light Pollution) to provide a separate policy on noise pollution, to include specific reference to priority areas and to the agent of change principle. The final wording of amendments to the plan will be confirmed through the publication of the Inspector's Report.

Box 12.1

Swansea Council will:

Seek to maximise the noise benefits to be gained from highway improvement works and local air quality management;

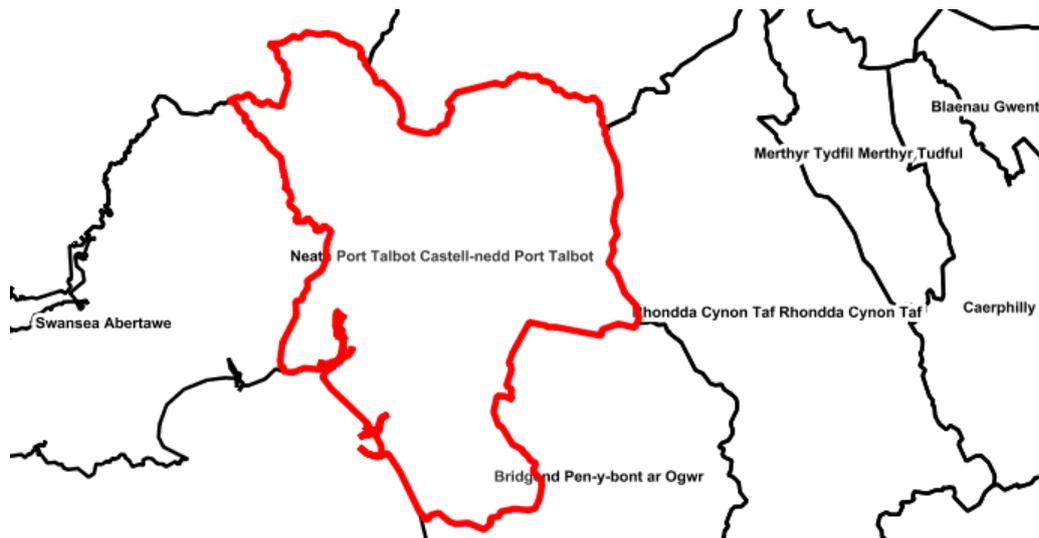
Produce noise policies for its LDP so as to reflect the statements in section 12.3 of this action plan;

Take priority areas into consideration in its road resurfacing work;

Take noise maps, priority areas, quiet areas and other tranquil urban green space into consideration when a noise-sensitive or noise-generating development is proposed; and

Take priority areas, quiet areas and other tranquil urban areas into consideration when determining permits for industrial sites if they are classed as A2 permits, and encourage NRW to do likewise for A1 permits.

12.4 Neath Port Talbot County Borough Council



The information in this section has been provided by Neath Port Talbot CBC.

Noise priorities and services

12.4.1 Noise-related service requests are investigated by two general environmental health teams, each team being responsible for reacting to service requests within their area of the County Borough.

12.4.2 Noise complaints are many and varied and range from domestic noise to commercial/industrial noise and noise from construction sites. The authority endeavours to resolve matters amicably at first, but, when required, formal legal action is utilised as determined by statute and procedures within the authority's adopted noise control policy.

12.4.3 In addition to undertaking investigations regarding noise complaints, the general environmental health teams are also consultees under planning and licensing legislation, for example in respect of licences such as temporary event notices and premises licences issued under the Licensing Act 2003.

12.4.4 Being consultees provides officers with an opportunity to scrutinise applications and the information provided to support applications. Officers regularly recommend the attachment of planning and licensing conditions following consultations, and it is not uncommon for officers to require additional information regarding noise and its possible impact from a particular development.

12.4.5 The authority does not provide a dedicated out-of-hours noise service, although an emergency out-of-hours officer may react to requests in situations where an abatement notice is in force. In an effort to investigate complaints outside office hours, officers on a rota utilise noise monitoring equipment and also undertake proactive out-of-hours visits.

Noise and planning

12.4.6 The Neath Port Talbot LDP⁹¹ was adopted in January 2016. The plan strategy sets out 25 plan objectives including overarching and area-based objectives and objectives grouped under five headings:

- Building healthy, sustainable communities;
- Promoting a sustainable economy;
- Valuing our environment;
- Achieving sustainable accessibility; and
- Respecting distinctiveness.

12.4.7 The plan envisages and provides for a relatively strong level of economic growth over the plan period (2011-2026). This leads to an identified need to provide for the development of 7,800 new dwellings over the plan period, together with the provision of new employment land focused on the Baglan Bay and Junction 38 (M4) Margam strategic employment sites and the safeguarding of existing employment sites.

12.4.8 The overall strategy is to focus new development on the coastal corridor while reinvigorating the valley communities. Most significant new developments are consequently to be within or adjacent to the urban agglomeration area identified for noise mapping and action planning purposes under the Environmental Noise Directive and Regulations.

12.4.9 Planning applications will be dealt with in accordance with national and local policy relating to noise. LDP policies relevant to noise and related matters that are applied in dealing with planning applications are summarised below:

⁹¹ https://www.npt.gov.uk/PDF/ldp_written_statement_jan16.pdf

Policy SP16: Environmental Protection

Air, water and ground quality and the environment generally will be protected and where feasible improved through the following measures:

- Ensuring that proposals have no significant adverse effects on water, ground or air quality and do not significantly increase pollution levels;
- Giving preference to the development of brownfield sites over greenfield sites where appropriate and deliverable; and
- Ensuring that developments do not increase the number of people exposed to significant levels of pollution.

Policy EN8: Pollution and Land Stability

Proposals that would be likely to have an unacceptable adverse effect on health, biodiversity and/or local amenity or would expose people to unacceptable risk due to the following will not be permitted:

- Air pollution;
- Noise pollution;
- Light pollution;
- Contamination;
- Land instability; and
- Water (including groundwater) pollution.

Proposals that would create new problems or exacerbate existing problems detailed above will not be acceptable unless mitigation measures are included to reduce the risk of harm to public health, biodiversity and/or local amenity to an acceptable level.

Policy EN10: Quiet Areas

In order to protect areas of tranquillity within urban areas, the following 'quiet areas' have been identified:

EN10/1	Neath Abbey Ruins, Neath
EN10/2	Mount Pleasant Park, Neath
EN10/3	Skewen Park, Neath
EN10/4	Shelone Woods, Neath
EN10/5	Victoria Gardens, Neath
EN10/6	Church Place, Neath
EN10/7	Talbot Memorial Park, Port Talbot
EN10/8	Vivian Park, Port Talbot
EN10/9	Baglan Park, Port Talbot
EN10/10	King George V Park, Pontardawe

Development proposals that would have unacceptable impacts on the characteristics that led to the designation will be resisted.

Box 12.2

Neath Port Talbot CBC will take priority areas into consideration in its road resurfacing work, and take noise maps, priority areas, quiet areas and other tranquil urban green space into consideration when a noise-sensitive or noise-generating development is proposed.

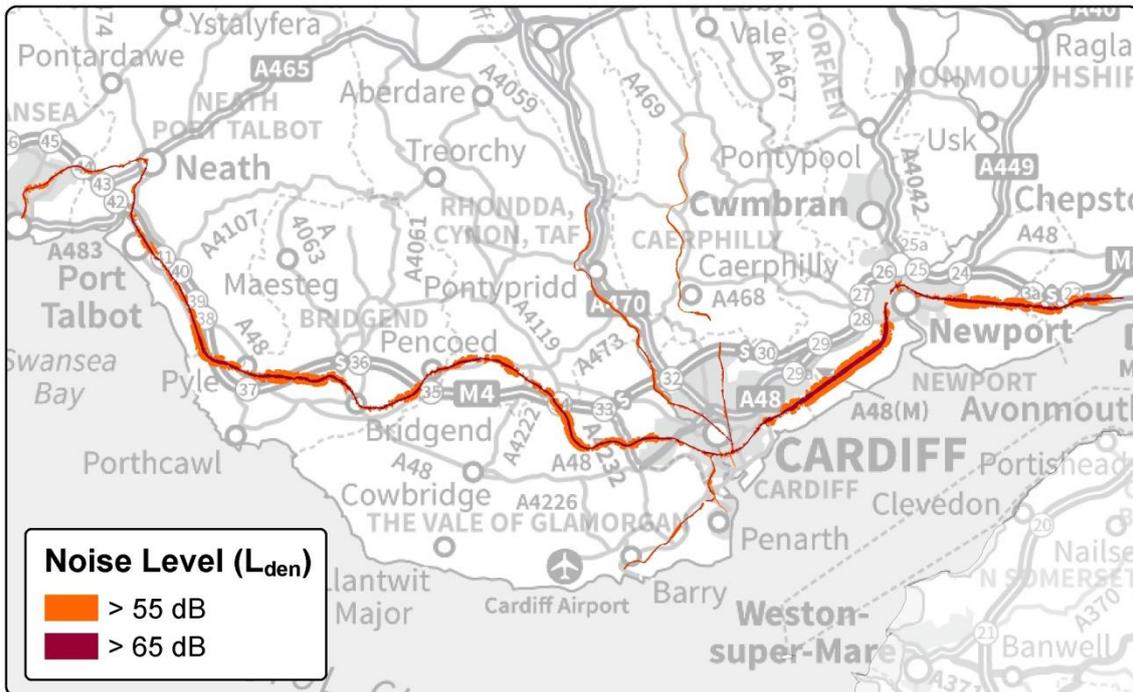
Annex A – noise maps

Map 1 Noise from major roads (2012)



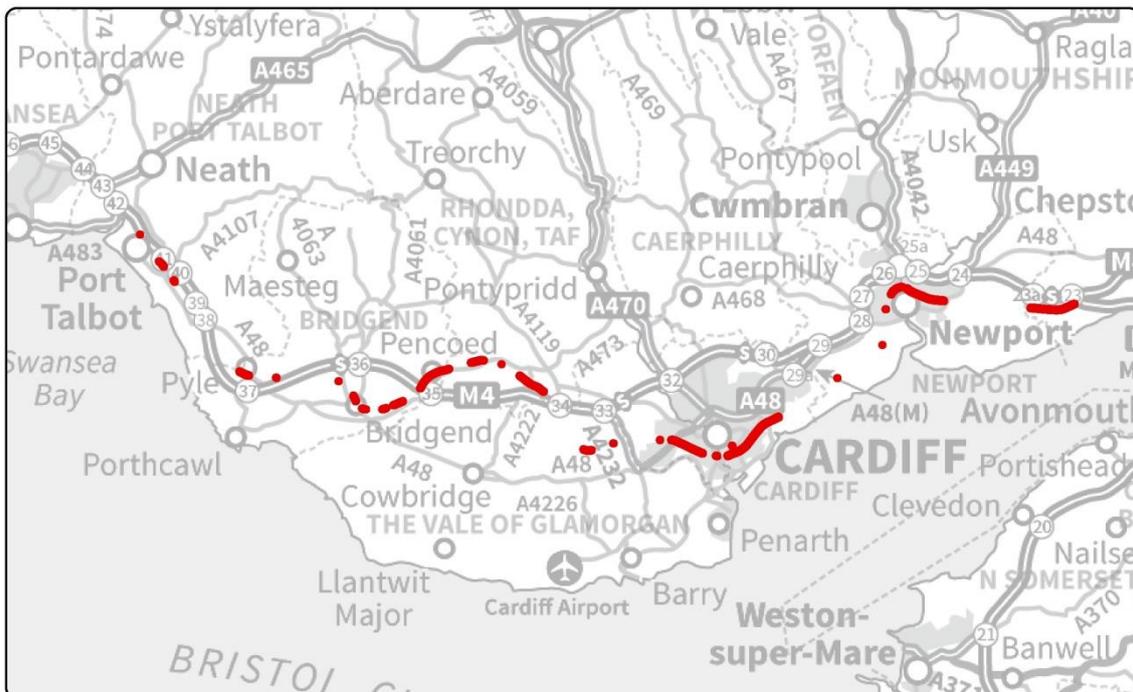
© Crown Copyright and database right 2018. Ordnance Survey 100021874. Welsh Government.

Map 4a Noise from major railways (2012/2017)



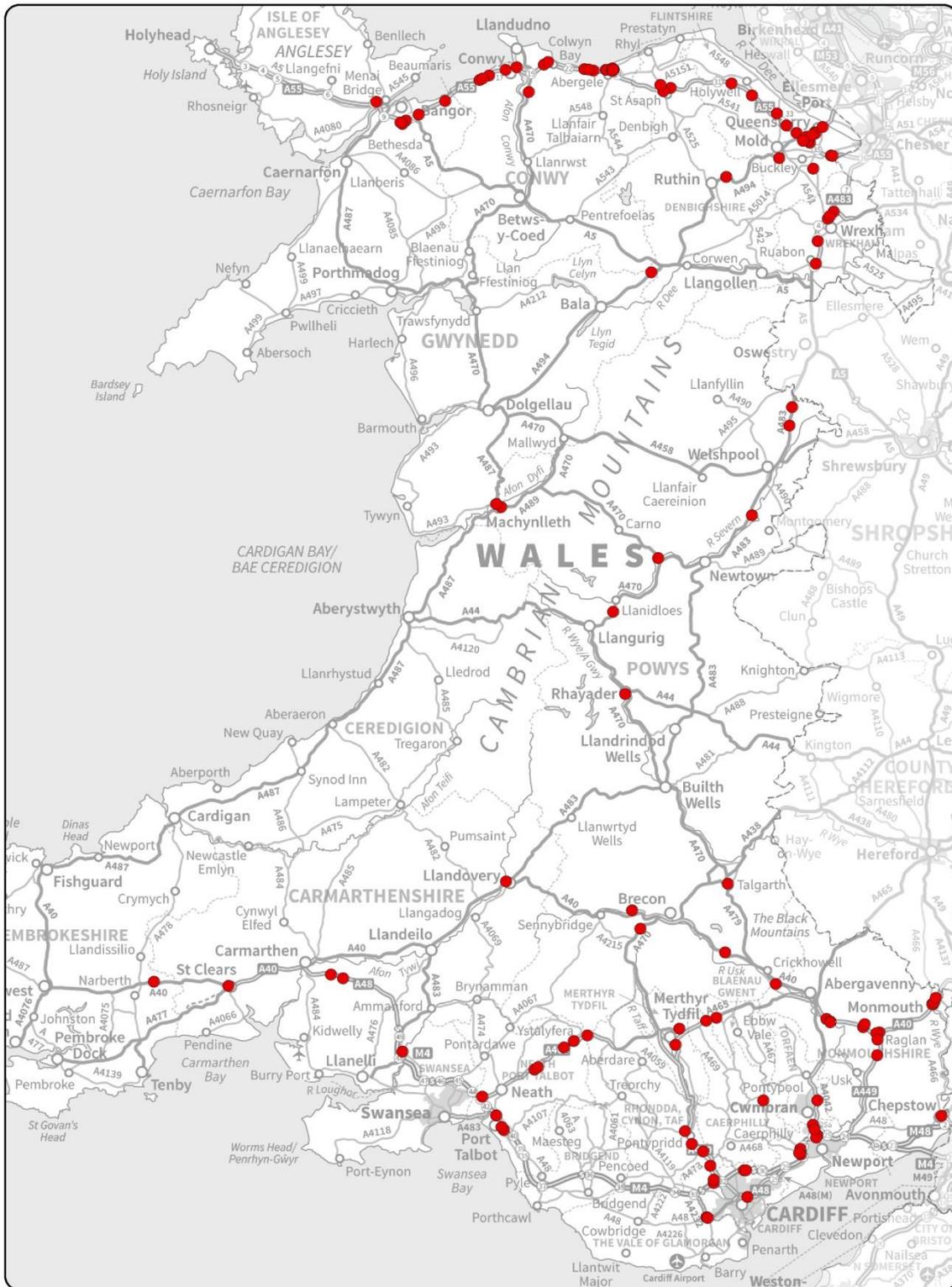
© Crown Copyright and database right 2018. Ordnance Survey 100021874. Welsh Government.

Map 4b Priority areas for major railways (2018)



© Crown Copyright and database right 2018. Ordnance Survey 100021874. Welsh Government.

Map 5 Transport noise complaints received by the Welsh Government



© Crown Copyright and database right 2018. Ordnance Survey 100021874. Welsh Government.

Annex B – National Survey for Wales: noise pollution

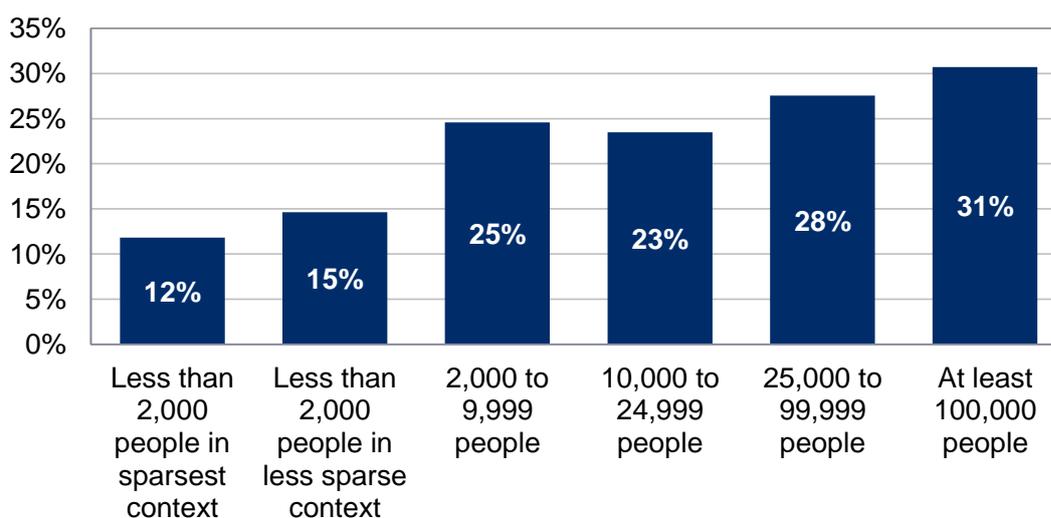
The National Survey for Wales involves face-to-face interviews with more than 11,000 randomly-selected adults aged 16 and over. The survey covers a wide range of issues affecting people and their local area. More information can be found on the National Survey web pages⁹².

A number of questions relating to housing and income were included in the National Survey for the first time in 2017-18. This was to support the 2017-18 Welsh Housing Conditions Survey⁹³, for which the National Survey provided a sample of addresses⁹⁴. One question related to noise levels. People were asked whether they had regularly been bothered by noise from outside their home in the previous 12 months. **24%** said they had. This percentage was the same for both male and female. Of these:

- **36%** said the noise was caused by **neighbours inside their homes**;
- **47%** by **neighbours outside their homes**; and
- **45%** by **traffic, businesses, or factories**.

People who lived in urban areas were more likely to have been bothered by noise than those who lived in rural areas. **27%** of people in **urban** areas were bothered by noise compared with **18%** in **rural** areas. This is also illustrated by looking at the percentage of people who were bothered by noise by their settlement size. People living in built-up areas were far more likely to be bothered by noise.

Chart 1: Bothered by noise, by settlement size



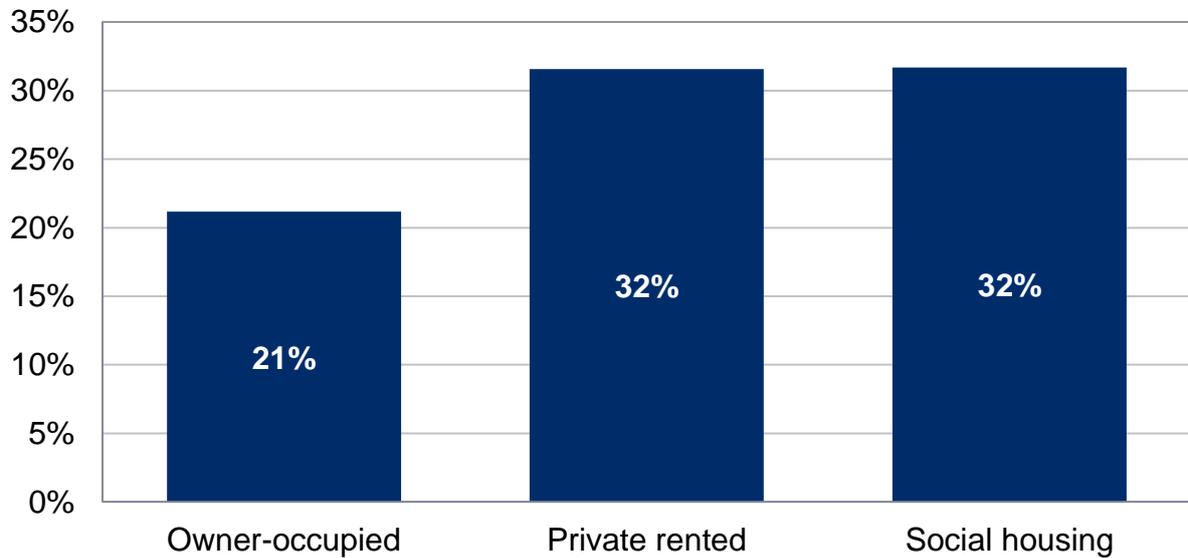
⁹² <https://gov.wales/statistics-and-research/national-survey>

⁹³ <https://gov.wales/statistics-and-research/welsh-housing-conditions-survey>

⁹⁴ The survey involved physical inspections of 2,550 properties. The [findings](#) will be available in December 2018.

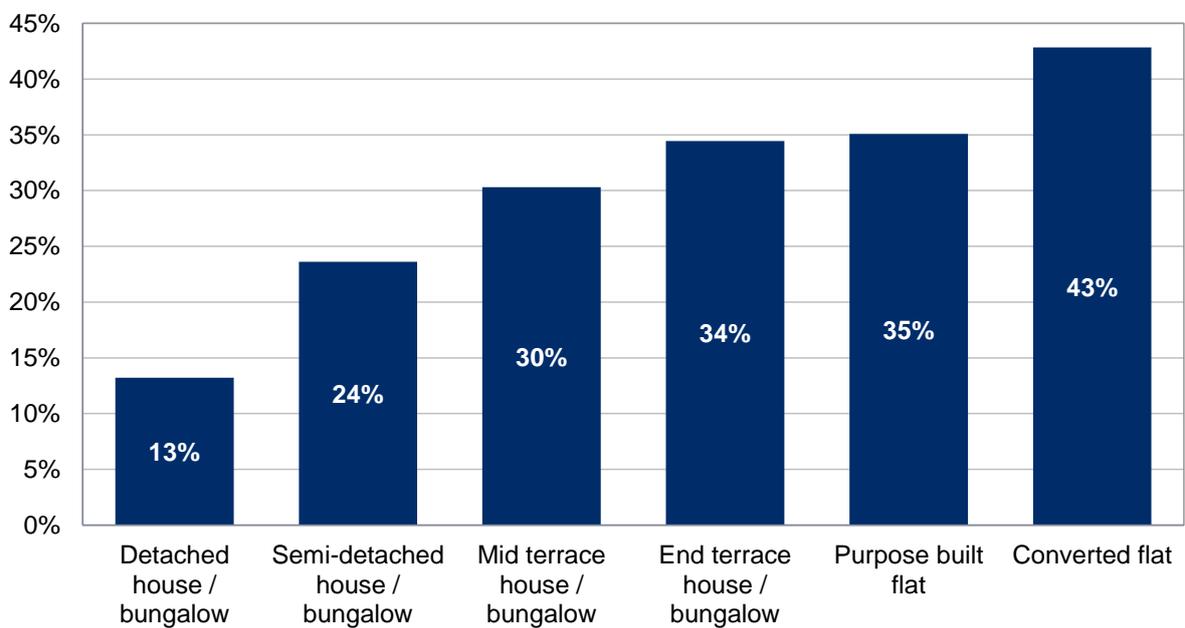
People were more likely to be bothered by noise if **they lived in social housing or private rented** as opposed to owning their own home, as is shown in Chart 2.

Chart 2: Bothered by noise, by tenure



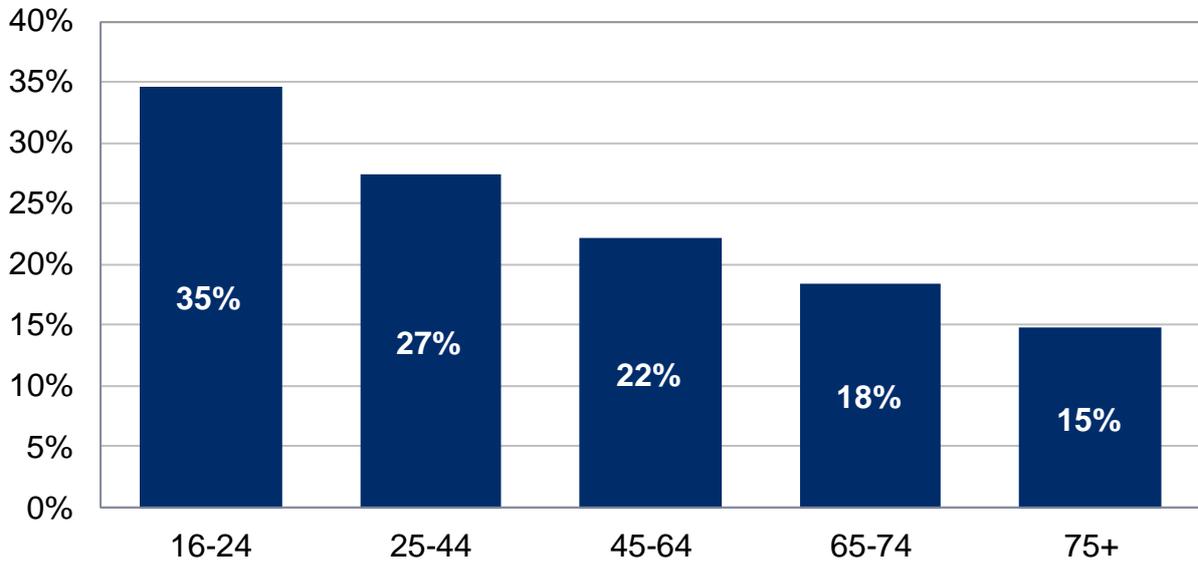
Those who **lived in flats** were more likely to be bothered by noise than those who lived in detached homes.

Chart 3: Bothered by noise, by type of dwelling



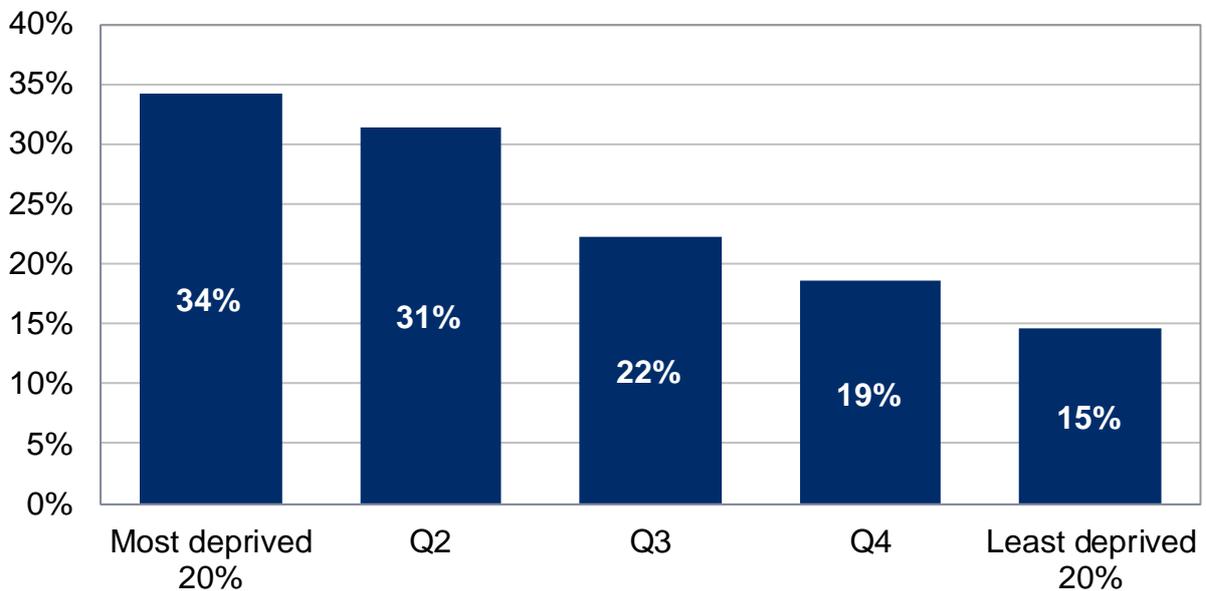
Younger people were more likely to say that they had regularly been bothered by noise than older people.

Chart 4: Bothered by noise, by age of respondent



People were more likely to be bothered by noise if they lived in materially **deprived households** or in **deprived areas**.

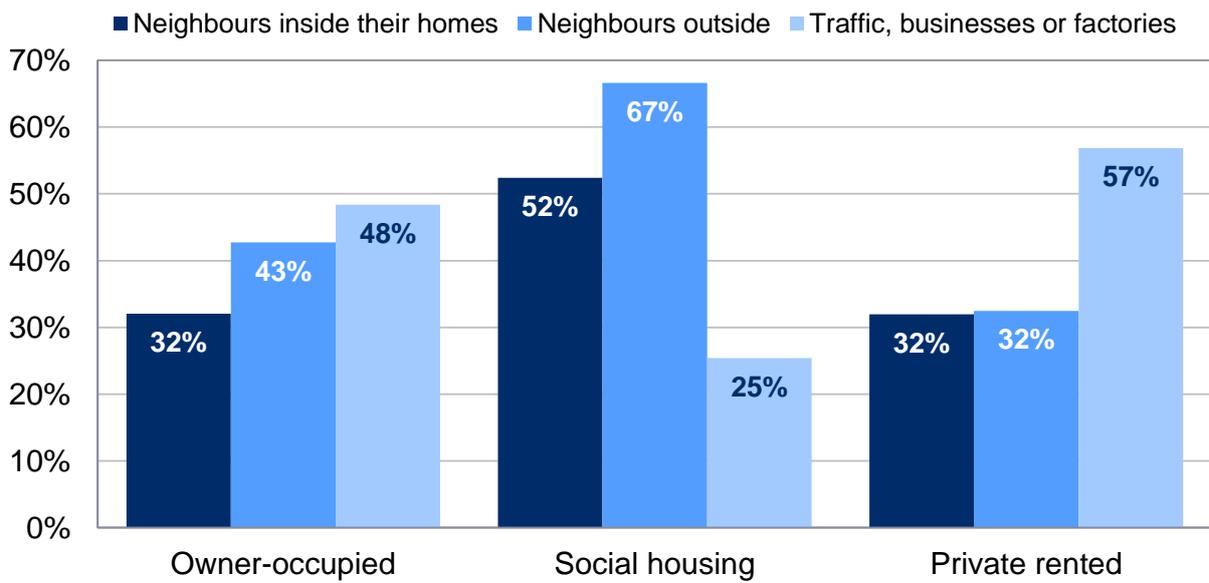
Chart 5: Bothered by noise, by area deprivation



Types of noise people were regularly bothered by

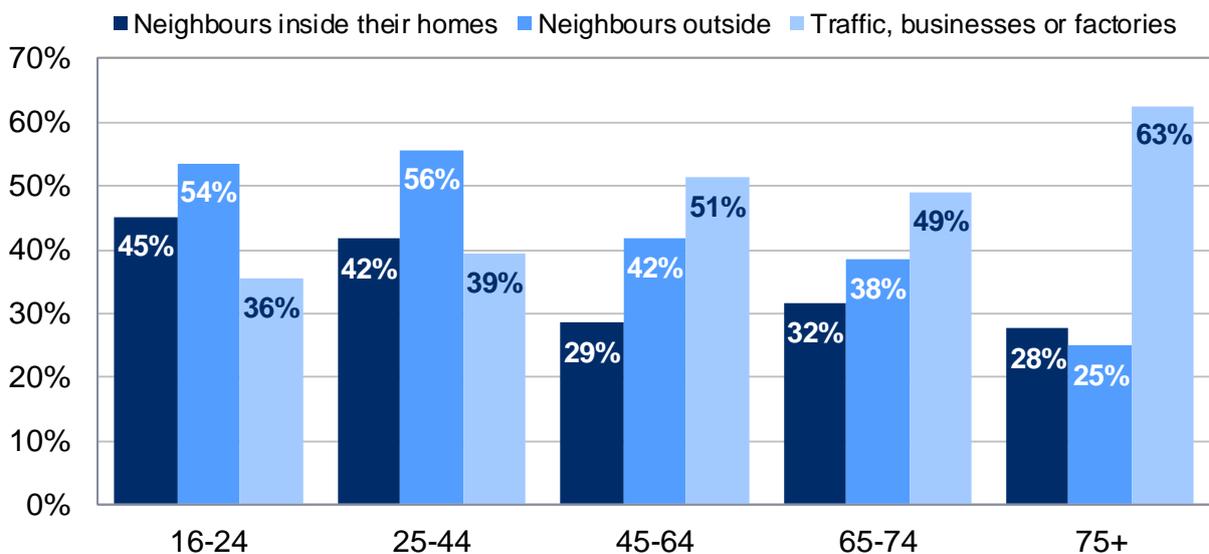
People who **owned their own property** were more likely to say they were regularly bothered by noise from traffic, businesses or factories than people living in social housing, but people living in social housing were more likely to be bothered by noise from their neighbours.

Chart 6: Type of noise, by tenure



Younger people were more likely to be regularly bothered by noise from their neighbours, but older people were more likely to be bothered by noise from traffic, businesses or factories.

Chart 7: Type of noise, by age of respondent



Annex C – checklist of requirements for noise action plans

This table lists the contents of a noise action plan required by the Environmental Noise Directive, and where they may be found in this document.

Mandatory element	Action plan (for the purposes of the Environmental Noise Directive)				
	Major roads	Major railways	Cardiff and Penarth	Newport	Swansea and Neath Port Talbot
A description of the agglomeration, the major roads, the major railways or major airports and other noise sources taken into account	Chapter 6	Chapter 7	Chapter 10	Chapter 11	Chapter 12
The authority responsible	Chapter 6	Chapter 7	Chapters 6-8	Chapters 6-8	Chapters 6-8
The legal context	Preface	Preface	Preface	Preface	Preface
Any limit values in place in accordance with Article 5	n/a	n/a	n/a	n/a	n/a
A summary of the results of the noise mapping	Chapter 6 and Annex A	Chapter 7 and Annex A	Chapter 10 and Annex A	Chapter 11 and Annex A	Chapter 12 and Annex A
An evaluation of the estimated number of people exposed to noise, identification of problems and situations that need to be improved	Chapter 6	Chapter 7	Chapter 10	Chapter 11	Chapter 12
A record of the public consultations organised in accordance with Article 8(7)	Preface	Preface	Preface	Preface	Preface

Any noise reduction measures already in force and any projects in preparation	Chapter 6	Chapter 7	Chapters 6-8 and 10	Chapters 6-8 and 11	Chapters 6-8 and 12
Actions that the competent authorities intend to take in the next five years, including any measures to preserve quiet areas	Chapters 1-6	Chapters 1-5 and 7	Chapters 1-8 and 10	Chapters 1-8 and 11	Chapters 1-8 and 12
Long-term strategy	Chapters 1-6	Chapters 1-5 and 7	Chapters 1-8 and 10	Chapters 1-8 and 11	Chapters 1-8 and 12
Financial information (if available): budgets, cost-effectiveness assessment, cost-benefit assessment	Not currently available				
Provisions envisaged for evaluating the implementation and the results of the action plan	Preface	Preface	Preface	Preface	Preface
Estimates in terms of the reduction of the number of people affected (annoyed, sleep disturbed, or other)	Not currently available				

Annex D – list of abbreviations used in this document

BB93	Building Bulletin 93
BS	British Standard
CAZ	Clean Air Zone
CBC	County Borough Council
dB	decibel
EPR	Environmental Permitting (England and Wales) Regulations 2016
HSE	Health and Safety Executive
LDP	local development plan
LWBP	local well-being plan
MOD	Ministry of Defence
NRP	Natural Resources Policy
NRW	Natural Resources Wales
PHW	Public Health Wales
PPW	Planning Policy Wales
ProPG	Professional Planning Guidance
PSB	public services board
RDG	Rail Delivery Group
RSSB	Rail Safety and Standards Board
SoNaRR	State of Natural Resources Report
SRS	Shared Regulatory Services
TAN	Technical Advice Note
WelTAG	Welsh Transport Planning and Appraisal Guidance
WFG	Well-being of Future Generations
WHO	World Health Organization

Annex E – contributors to the development of this document

Bridgend CBC

Caerphilly CBC

Cardiff Council

Carmarthenshire County Council

Extrium Ltd

Gwent Police

HSE

Merthyr Tydfil CBC

MOD

Neath Port Talbot CBC

Newport City Council

North Wales Police

NRW

PHW

Rhondda Cynon Taf CBC

RSSB

Swansea Council

The Vale of Glamorgan Council