



Welsh Government  
Consultation – summary

# Noise and soundscape action plan 2018-2023

December 2018

Mae'r ddogfen yma hefyd ar gael yn Gymraeg.  
This document is also available in Welsh.

## **Summary of consultation**

The Welsh Government ran a public consultation from 11 July 2018 to 3 October 2018 on a draft noise and soundscape action plan for Wales, for the period 2018-2023. The Environmental Noise Directive requires governments to review and, if necessary, revise, their noise action plans every five years.

Twenty-four consultation responses were received.

Eleven of the responses were from organisations, and commented on the draft action plan document itself. They were overwhelmingly supportive of the approach being taken by the Welsh Government, and suggested a number of improvements to the proposed text. These suggestions have been considered, and a number of changes made to the final action plan. Some of the technical contributions received during the consultation have been quoted from in the final action plan. Where comments related primarily to land use planning, they will be taken into account when the Welsh Government conducts its detailed review of Technical Advice Note (TAN) 11: Noise with a view to replacing it with a new TAN addressing air quality and soundscape.

Thirteen responses were received from members of the public or their elected representatives. Where these related to the content of the draft action plan, they have been considered alongside the responses received from organisations. Where they concerned local issues, they have been drawn to the attention of the relevant local authorities or, in the case of motorways and trunk roads, the Welsh Government's Network Management Division.

## Consultation responses

### Response from Ian Mullis on behalf of Caerphilly County Borough Council

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

Welsh Government expects public bodies to follow the WBFG Act's 'five ways of working' when managing noise. In principle, this may be laudible and, indeed, such considerations form key aspects of how the planning system operates which places a strong emphasis on sustainable development, stakeholder collaboration and community involvement. In practice, however, this may still result in development that has a negative impact (albeit small in many cases) on noise and soundscape considerations, though adheres to the principles of sustainability generally. Noise and soundscape need to be viewed as considerations in terms of sustainable development, but their importance should be not overstated within the context of providing that development which is necessary to create socially and economically sustainable communities.

Planning for New Development mentions that the revised version of PPW places noise pollution and soundscape on an equal footing with housing, employment and transport. Consequently, factors such as this should affect initial policy choices in the preparation of development plans and must feature as considerations in the initial choice of development locations, where appropriate, and in the early design stages of developments and projects.

Environmental factors such as this are already incorporated into site selection processes during development plan preparation and are assessed accordingly, including through the sustainability appraisal process. In this latter sense then, it is hard to see where an increased emphasis on noise pollution and soundscape issues would differ from the current approach in practical terms. Details of proposals can only be assessed at planning application stage and indeed are.

Should the future requirement be over and above what is currently employed by LPAs, then it is not considered that this approach is entirely realistic, in that the impact of a proposal outlined in principle in a development plan on issues such as soundscape may not be possible to adequately assess. In another regard, the planning system acts as a mechanism for the delivery, and regulation of, development. If those environmental factors used to assess the suitability of development are brought to a level of parity with the development itself, then this risks not achieving those social and economic sustainability objectives that might otherwise be realised – not through disallowing inappropriate development (which the system as it currently operates seeks to ensure should not be permitted in any

event), but by requiring such a degree of environmental mitigation that the market's willingness to invest in certain areas is diminished and viability is compromised.

The agent of change principle as envisaged appears to be a sensible one in terms of the recognition of different soundscapes. Compatibility of neighbouring uses is already considered during plan preparation, but the ability to codify these as "areas of cultural significance" or areas where soundscape is particularly sensitive may be helpful from the point of view of future development. However, it would still need to be balanced against a need not to prejudice development e.g. the diversification of uses in town and local centres, for example.

### Tranquil Green Space in the Built Environment

5.7 'Protecting Tranquil Urban Green Space' reiterates PPW Ed. 10 by stating that formal and informal open green spaces should be protected from development. Whilst this serves as the default position for development plan preparation and the determination of planning applications, national policy needs to provide development plans the flexibility to incorporate this into local planning policy whilst still allowing for development to take place, where it would be beneficial in overall sustainability terms and allow for local objectives, devised with regard for national policy and guidance, to be achieved.

### **Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

It is mentioned that TAN 11: Noise is being updated in order to take account of this document, and the provisions of PPW Ed. 10. In addition, Welsh Government is establishing an Air Quality Monitoring and Assessment Centre, although the document clearly states that Welsh Government is considering what role this new body should have.

The noise maps publicised in conjunction with this document provide a useful indication of those locations where noise may be an issue. If these are to be used to provide spatial context to the advice contained in the revised TAN (as the DAM maps are for TAN 15), it would be helpful if the requirements of the TAN gave room to LPAs to consider and weigh soundscape and noise issues against other aspects of sustainability when determining the suitability of particular proposals or development types in a given location. The effect of TAN 15 has been to rule out certain locations due to flood risk, and place onerous requirements on developers in others to overcome these. Whilst there will, indeed, be considerable costs associated with the mitigation of flood risk in certain areas in order to achieve sustainable schemes, the degree to which TAN 15 allows LPAs to weigh it against other sustainability factors is reduced, thereby increasing the risk of LDP strategies not being fulfilled, or increasing pressure on other sites in a local authority's area to collectively meet such strategies. It would be unfortunate if the revised TAN 11 were to adopt a similarly strict approach.

## **Response from Paul Carter on behalf of Cardiff Council**

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

Cardiff Council welcomes the proposal to draw together a coherent Noise and Soundscape Action Plan, using the five ways of working outlined in the Wellbeing of Future Generations Act.

Similarly, it is recognized that air quality and noise are key public health issues. Aligning noise and soundscape with the Clean Air programme by defining environmental noise as an airborne pollutant would be an effective approach. A revised Air Quality and Soundscape TAN would be welcomed. The emphasis on creating healthier soundscapes is a positive development and ensuring this is appropriately embedded in planning policy would provide the framework for delivering this aspiration. The agent of change principle also should be reflected in the policy framework, which also needs to provide Local Authorities with appropriate tools to ensure that the effects of new developments are fully considered and mitigated where necessary. The importance of having a robust policy framework is highlighted in the statement "The best way to deal with unacceptable levels of road traffic noises is to prevent them occurring in the first place" (6.1).

In relation to Section 6, 'Road traffic noise in Wales', we welcome the commitment to active travel and supporting quieter vehicle technologies as a means of addressing traffic noise. In view of the potential benefits of promoting active travel in terms of the soundscape and improving air quality, this needs to be prioritised and further support given, particularly in view of the ambitions of the Active Travel Act. With regard to quieter vehicle technologies, reference also needs to be made public transport vehicles, which are currently not specifically mentioned with the exception of the reference to the Low Emission Bus Fund (6.6.5). Information regarding funding opportunities (6.6.5) would be appreciated.

Section 6.2, 'Who is responsible?' outlines the accountability of local authorities for managing noise from the roads for which it is responsible. Whilst some of the actions outlined in 6.1 are within the remit/are of influence of local authorities (e.g. road surfacing), many of those which are identified as making a "major contribution" (6.1.2 e.g. stricter legislation) are not. Additional action is needed from the UK and Welsh governments, particularly with regard to the composition of the vehicle fleet and stricter legislation for the point of sale. This is particularly pressing given the evidence presented in the action plan regarding residential population exposure to road traffic noise.

## **Response from Tony Hughes on behalf of the Clwydian Range and Dee Valley AONB Joint Committee**

Thank you for consulting the AONB on this matter. The following observations are submitted on behalf of the Joint Committee following consultation with the AONB Partnership Landscape Character and Built Environment Working Group and the Chair of the committee:

“The Joint Committee fully supports preparation of a noise and soundscape action plan for Wales.

Tranquillity is recognised as one of the Special Qualities of the AONB, and is defined in the AONB Management Plan as ‘an atmosphere of calm and stillness; peace and quiet; and with dark night skies’. The opportunity to experience these qualities enhances the quality of life of residents and visitors to the AONB and contributes to their well-being, and the committee welcomes recognition in the action plan of the benefits provided by Wales’ protected landscapes in this regard.

Broadening the scope of the action plan to embrace the concept of ‘soundscapes’ is also supported. Recognising that some noise has beneficial effects (e.g. the natural sounds of the landscape such as running water or birdsong) will help provide a more holistic and coherent response. To assist with rolling out this concept, the committee would suggest that Welsh Government consider the development of a ‘toolkit’ to provide guidance for practitioners and others to assess soundscapes and impacts on tranquillity.

In addition, encouraging greater integration between noise and air quality management is supported, but the Joint Committee would also suggest 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 AONB’s) have already secured or aspire to be recognised and managed as formal Dark Sky areas, including the Clwydian Range and Dee Valley AONB. In this context, the committee would suggest that this should be recognised in the action plan and consideration given to how this might be part of a more integrated approach.”

I would be grateful if you could take account of the Committee’s views when finalising the action plan.

## **Response from Stephen Turner on behalf of the Institute of Acoustics**

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

The Institute of Acoustics recognises that this document has been produced to meet the necessary requirements of the Environmental Noise (Wales) Regulations 2006, as amended. We welcome, however, the opportunity taken by the Welsh Government to make this document its central noise policy document. In particular, we welcome that, probably uniquely, it is a policy document that overtly includes soundscape in the title. This represents a significant change in approach.

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.

Furthermore, the long-term strategy might be expanded to accommodate soundscape approaches which consider conservation and management of cultural and natural heritage and accompanying research results. This is partially present within the Special Landscape Areas policy (ENV3-4) for Cardiff and Swansea areas but it could be included as part of a general strategy.

Overall, the process adopted by the Welsh Government appears to have been robust and we support the way the plan seeks to integrate noise management policy with other related policies in Wales.

We broadly agree with the actions and long-term strategy proposed by the Welsh Government. In particular:

- The fact that air quality should be considered alongside noise pollution
- The recognition that there is risk of adverse effects at consistent low level exposure as well as intermittent high-level exposure.

Having said that, it must be remembered that noise is an inevitable consequence of our current society and when approaching the management noise, there has to be a recognition that many noise making activities provide value to society (e.g. through employment, connectivity etc). Therefore, any noise management policy must consider the economic and social benefits of the activity as well as any environmental dis-benefits.

**Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

There is potentially scope for the definition and methods of soundscape (as in ISO soundscape standards), to be made clearer. Additional methods, approaches and guidance on soundscape could be given, or at least encouraged.

In general, some more indication could be given about the expertise and skills required of consultants and public officials to be involved in the different stages of the implementation of the noise and soundscape action plan. Managing and designing the acoustic environments of the urban realm is indeed a complex and multifaceted task, for which specific skills are desirable (or even necessary). While the support of noise control engineers and acoustic consultants will always be required, there is a case for professionals with different backgrounds also to be involved.

Having in mind that the focus of the soundscape approach includes the positive effect of sounds, consideration could be given to the possibility of identifying, mapping and managing not only quiet areas but also high-quality soundscape areas in general (as a quality soundscape doesn't need to be quiet).

As this is a broad ranging policy document, IOA would suggest consideration be given to 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. Extensive information on trials and options for these activities are available from the Department for Transport and Transport for London.

Some other suggestions are:

- Box 1.1 – Could PHW also consider how sound might be used to improve the health and wellbeing of people, to embrace the more positive value that a good soundscape can bring inside and outside of buildings.
- Box 2.1 and Para 2.1.3– the triple bottom line approach of people places and economic value might also be spelt out here.
- Para 3.3.3 - It would be helpful if the suggestion regarding the presence of trees and hedgerows by the roadside or along the central reservation was supported by reference to research showing this possible association.
- 3.6.2 – Building on the concept of Clean Air Zones, might the concept be introduced of an equivalent for soundscape (which is not tranquility), perhaps in terms of a Valued Soundscape Zone.
- 4.3 The “Agent of Change” principle is an important concept that has emerged in recent years. However, it needs to be recognised that the principle is not new and the IOA has concerns that it will not prove to be the panacea for the



issues of bringing new noise sensitive dwellings close to existing businesses. The IOA would be happy to discuss further with you their views on this important issue, perhaps in order to assist with the development of further guidance to assist implementation.

- Box 5.2 – could some indication be given of the value in the past of such environmental grants be provided as well as examples of the types of project they have contributed towards.
- Over recent years, the issue of overheating in buildings has arisen. There appears to be no mention of it in this draft document. It is worth noting that a guidance document is being developed by the Association of Noise Consultants in order to assist with this aspect of building design.

**Question 3: We have asked a number of specific questions. If you have any related issues, which we have not specifically addressed, please use this space to report them:**

There is a case for making overt reference to the ISO standards on soundscape, namely ISO 12913-1 and ISO 12913-2.

**Response from Philip Dunbavin on behalf of International Organization for Standardization Working Group ISO TC43/SC1/WG54**

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

All of the aims are very welcome and particularly the involvement of residents and soundscape. The area that concerns me is that Soundscape is a developing science which is still at the beginning of its development. I am the convenor of the International Standards Organisations Working Group 54 developing the ISO/TS 12913 – all parts on Soundscape. Parts 1 and 2 have been published and we are now working on Part 3 which covers the analysis of the data from soundscape studies. We plan that there will be fourth part on the interpretation of the results of the analysis.

I have attached an article that appeared in the July/August edition of the Institute of Acoustics Bulletin this year that will explain where we are with the development of soundscape. Consequently, I am of the view that considerable work will need to be funded in order to realise the goals of the action plans. It was not clear to me from the consultation document how the plan would be funded. It may be that funding will come from diverse sources and some co-ordination will be required to ensure that the benefits are maximized.

**Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

From my perspective, as an acoustician, the most significant element is the third bullet point of section 2.2.2 which relates to involving the public. This is a vast resource which can have no significant cost. The second article I have attached covers the Hush City project and its relevance to planning which has just been published in the September/October edition of the Institute of Acoustics Bulletin. This approach gives residents a sense of ownership and in Berlin it identified a surprising number of small pockets of tranquility (every day quiet areas) that did not appear on the map of the quiet areas of Berlin. I would strongly recommend adopting this approach as part of your overall noise and soundscape action plan 2018 – 2023.

**Question 3: We have asked a number of specific questions. If you have any related issues, which we have not specifically addressed, please use this space to report them:**

The concept of Well-being for Future Generations (WFG) dovetails well with the World Health Organisations guidance. With that in mind I would draw your attention to the following recent announcement.

“We would like to bring to your attention the launch event of the WHO Environmental Noise Guidelines.

Noise is one of the top environmental risks to health, and continues to be a growing concern among policy-makers and public alike. Based on the assessment threshold specified in the Environmental Noise Directive of the European Union, at least 100 million people in the EU are affected by road traffic noise, and in Western Europe alone, at least 1.6 million healthy years of life are lost due to road traffic noise.

The WHO Regional Office for Europe has developed environmental noise guidelines for the European Region in response to the request formulated by the Member States at the Fifth Ministerial Conference on Environment and Health in Parma, Italy, 2010, ‘to develop noise guidelines that include transportation noise sources, but also leisure noise and wind turbine noise that have not been considered thus far’.

The Environmental Noise Guidelines for the European Region have been produced following a rigorous process outlined in the WHO Handbook for Guideline Development, involving several groups of experts and stakeholders. The guidelines provide a set of source-specific public health recommendations on long-term exposure to environmental noise, including road traffic, railway, aircraft, wind turbine, and leisure noise.

The launch event will take place on 10 October 2018 in Basel, Switzerland. It will gather representatives of Member States, experts and stakeholders and is planned as a one-day symposium, with a formal presentation of the guidelines, complemented by the panel discussions with the experts and stakeholders.”

Whilst that date is after this consultation closes it will have a direct bearing on your plans moving forward. Clearly it would be beneficial to obtain a copy of the new WHO Environmental Noise Guidelines to further inform your consideration of the consultation responses.

**The following articles are reproduced here with the kind permission of Mr Dunbavin and the Institute of Acoustics:**

*By Philip Dunbavin*

By the time you read this, ISO/TS 12913-2:2018 should have been published, or at any rate is about to be published. It is notoriously difficult to predict exact publication dates for new ISO documents.

## Part 1

Part 1 was published in 2014 [ISO, 2014] and considered to be the definition and conceptual framework. It is a very short standard three pages plus a bibliography. So, what is it all about and what is getting more and more acousticians interested in what is an emerging science?

Soundscape represents a paradigm shift from noise control policies towards a new multidisciplinary approach as it involves not only physical measurements, but also humans and social sciences with a focus on how people actually experience an acoustic environment in context. Soundscape started as a research field in the late 1960s, was defined more specifically by R Murray Schafer in the 1970s [Schafer, 1994 and 1977] and has grown significantly over the past 20 years in the field of community noise and environmental acoustics [Kang, J., and Schulte-Fortkamp, B., 2015; Kang and Aletta, 2018]. More recently it has come to the attention of policy makers [Payne et. al, 2009; Defra, 2010; Eastel et. al, 2014; City of London Corporation, 2017; Welsh Government 2018], as well as practitioners and acousticians in consultancy practices.

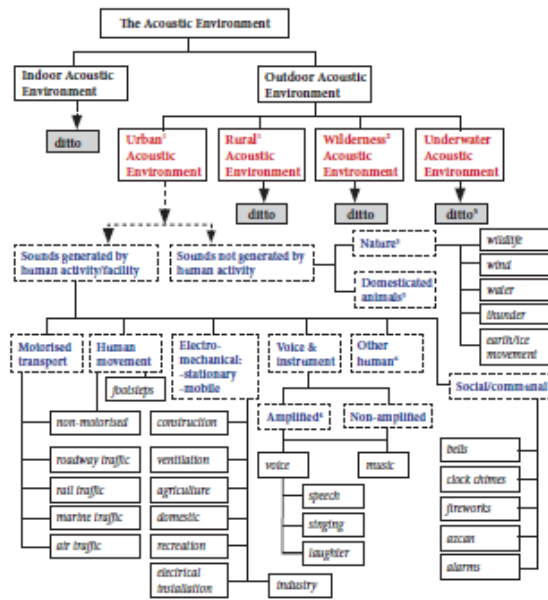
In Part 1, soundscape is defined as 'the acoustic environment as perceived or experienced by and/or understood by a person or people, in context' [ISO, 2014]. Much has been debated in recent years about exactly what 'context' is in the light of BS4142:2014. In soundscape, the context is meant as the physical place where the acoustic environment exists and according to the ISO definition, it 'includes the interrelationship between person and activity and place and time and may influence soundscape through the auditory sensation, the interpretation of auditory sensation, and the response to the acoustic environment' [ISO, 2014].

The main thrust of soundscape is that it is a holistic approach, meaning that it requires assessing the acoustic environment based on the contribution of different disciplines [Kang et. al, 2016].

## Part 2

According to Kull [1] a soundscape is the entire acoustic environment resulting from natural and man-made sound sources. To assist in source reporting a classification for all sounds sources should be used. The taxonomy proposed in Part 2 at Annex C, Figure C1 – A taxonomy of the acoustic environment for soundscape studies [2] is shown below [Reprinted from ISO/ PRF TS 12913-2:2018].

Note: Bold boxes = types of places, dashed boxes = types of sound source; italics = sound sources.



**Key** [Figure and key reprinted from ISO/ PRF TS 12913-2, 2018 Acoustics — Soundscape — Part 2: Data collection and reporting requirements. Geneva, Switzerland: International Organization for Standardization (ISO)].

1. The urban/rural distinction is not always readily defined but remains useful.
2. The wilderness category includes national parks, undeveloped natural and coastal zones and large recreation areas for example, though the wilderness/rural divide is not always clear-cut.
3. While 'nature' and 'domesticated animals' sources are shown as being 'not generated by human activity' there are many areas of overlap, e.g. the sounds of running water in constructed water features or the sound of wind on buildings. Domesticated animal sounds are generally from animals associated with a human activity/facility.
4. Recording, replay and amplification can occur for any type of sound, e.g. in installations playing nature/wildlife sounds.
5. Because of the different acoustic impedances in air and water, many of the terrestrial sound sources would not normally be observed under water, but overall the same classification system is still applicable.
6. Coughing for example.

## Measuring a soundscape

The big challenge with respect to measuring a soundscape is that soundscape is a multifaceted phenomenon and hence

## Technical Contributions

cannot be measured with a few single numbers. In general, soundscape has to be measured, assessed/evaluated through human perception of the respective acoustic environment.

The soundwalk method is an empirical method for identifying a soundscape and its components and is the most frequently applied method to collect data to explore areas of human response to an acoustic environment. The essential purpose of a soundwalk is to encourage participants to listen discriminately and to make judgements about the sounds heard [3], but the protocols can vary and Part 2 presents three different approaches to this.

The more observant reader will have noted that Part 2 is an ISO/TS. A TS (Technical Specification) is a device used where a science is emerging and further research is required to provide the evidence that will result in it becoming a full ISO in due course. In the case of soundscape there is currently no "reference method" and logically then a TS is the right basis for Part 2. The lifespan of a TS is that it is reviewed after three years and then again at the six-year point. At either of those reviews it can be upgraded to a full ISO providing the evidence to do so is available.

Annex C of Part 2 describes three methods of data collection [Reprinted from ISO/ PRF TS 12913-2:2018]:

**Soundwalk Method A** [Figure reprinted from ISO/ PRF TS 12913-2:2018]:

This uses a questionnaire to collect data on how people perceive an acoustic environment in situ, e.g. in a soundwalk.

[See references 4, 5, 6, and 7.]

The questions are presented and the participants mark their perception using a five-point ordinal-category scale. A simple example is shown below:

<b>Overall, how would you describe the present surrounding sound environment?</b>				
Very good	Good	Neither good nor bad	Bad	Very bad
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Soundwalk Method B** [Figure reprinted from ISO/ PRF TS 12913-2:2018]:

Method B is very similar but uses five-point unipolar continuous-category scales with additional verbal labelling ranging from 'not at all' to 'extremely'. A simple example is shown below:

<b>How loud is it here?</b>				
Mark your impression at any location on the scale below.				
not at all	slightly	moderately	very	extremely

**Method C** [from ISO/ PRF TS 12913-2:2018]:

Method C is not an actual soundwalk but is instead, a narrative

interview and is based on COST TD0804 STSM [8]. The guidelines refer to satisfaction with the living space, residential experience, experiences with/relation to sounds in daily life, daily routines, co-inhabitants, neighbours, spatial identification of sound effects within residences, effects of various kinds of sounds, assessment of the effect that varying sounds have upon overall sound exposure and actions to improve residences with regard to sound exposure.

In COST TU0901 [9] an attempt was made to produce a questionnaire that was harmonised and common for use in 29 European countries plus three countries outside of Europe. We came to the conclusion that one size fits all was not possible. Selecting the wording of the questions used for a questionnaire is a delicate task. The meaning and weight of some words would simply not translate adequately into other languages. The critical message is to design your questionnaire with great care.

As an aside, ISO TC 43/SC1/WG62 [ISO, 2018. ISO/TC42/SC1/WG62] is about to start on the task of revising ISO/TS 15666 Acoustics [ISO, 2003] – Assessment of noise annoyance by means of social and socio-acoustic surveys.

### Physical measurements

So, what about physical measurements? Annex D of Part 2 [ISO/ PRF TS 12913-2:2018] specifies how to perform binaural measurements by means of an artificial head measurement system. In contrast to recordings based on a monaural microphone, binaural acoustic measurement systems record sound as if a human listener is present in the original; sound field, maintaining all spatial information.

Statistical analysis of responses from questionnaires can test the reliability of the responses and examine the relationship between subjective responses and objective measurements. Analysis of the results has frequently been performed using linear regression. Other correlation methods may be considered as well, e.g. multivariate analysis. The analysis of the data will be the subject of Part 3 of the standard and work on that will start later this year.

During the development of Part 2, there was much comment and debate over whether binaural measurements should be 'normative', which means they are mandatory, or whether monaural recordings would be adequate. This is one of the many areas in which research is required.

While it is understandable that researchers would like to use monaural recording, because it has much lower costs associated with it, there is no substantial evidence to demonstrate that no important information would be lost by using monaural recordings instead of binaural.

Having good recordings means that researchers can analyse them using a range of metrics depending on the nature of the sound sources. Classical acoustic indicators are to be measured and reported in accordance with ISO 1996-1. Psychoacoustic parameters play an important role with respect to auditory sensation. Such parameters as sharpness, tonality, roughness and fluctuation strength can yield information with greater differentiation than the consideration of sound pressure alone. [Fastl, H., Zwicker, E., 2007]

### What next?


The European Environmental Agency in its Good Practice Guide acknowledges 'soundscape' as one of the

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strategies to identify and manage quiet areas [10], thus a lot of research efforts are focused on this one particular soundscape: quietness and tranquillity.

Much more effort should be directed to developing predictive models for the perception of the acoustic environment starting from physical features of the environment. This might provide 'tools' to link soundscape research, policy making and design practice.

Overall, soundscape research needs more scientific evidence of its potential to promote healthy urban environments. This will eventually integrate this emerging science into the broader framework of policy making and urban planning. 

## Author

**Philip Dunbavin** is the Managing Director of PDA Ltd. He is a Fellow of the Institute of Acoustics and a Member of the Society of Environmental Engineers, and a past Chairman of the Association of Noise Consultants. He is the current chairman of the BSI committee EH/1/3 on environmental acoustics and also chairman of the BSI's overarching EH/1 committee on Acoustics.

Philip is the convenor of ISO/TC43/SC1/WG54 on soundscape and also of the newly formed ISO/TC43/SC1/WG62 for Social and socio-acoustics surveys.

## Acknowledgment

The author wishes to acknowledge and thank, in particular, all the participants of ISO TC43/SC1/WG54 and BSI EH/ 1/3 committees for their considerable input and work over several years on the soundscape standards.

## Main references

- [1] R.C.Kull, Natural and urban soundscapes: the need for a multi-disciplinary approach, *Acta Acoustica United Acoustica* 92 (6) (2006) 898 – 902.
- [2] Brown A.L., Kang J., Gjestland T. Towards standardization in soundscape preference assessment. *Appl. Acoust.* 2011, 72 (6) pp 387 – 392.
- [3] J. Y. Jeon, J.Y. Hong, P.J. Lee, Soundwalk approach to identify urban soundscapes individually. *J. Acoust. Soc. Am.* 134(1) (2103) 803 – 812.
- [4] Axelsson Ö., Nilsson M. E., Berglund B. A Swedish instrument for measuring soundscape quality. In J. Kang (Ed.), *Euronoise 2009: Action on noise in Europe*, Edinburgh, Scotland: Institute of Acoustics, Paper EN09\_0179.
- [5] Axelsson Ö., Nilsson M. E., Berglund B., A principal components model of soundscape perception. *J. Acoust. Soc. Am.* 2010, 128 pp. 2836 – 2846.
- [6] Axelsson Ö., Nilsson M. E., Hellström B., Lundén P. A field experiment on the impact of sounds from a jet-and-basin fountain on soundscape quality in an urban park. *Landsc. Urban Plan.* 2014, 123C pp. 49 – 60.
- [7] Axelsson Ö., How to measure soundscape quality. In *Proceedings of Euronoise 2015*. Maastricht, The Netherlands: Nederlands Akoestisch Genootschap and ABAV – Belgium Acoustical Society, Paper 67.
- [8] COST TUD Action TD0804 in: J. Kang, K.

Chourmouziadou, K. Sakantamis, B. Wang, Y. Hao, *Soundscape of European Cities and Landscapes*. Oxford, UK: COST office through Soundscape-2013

[9] COST Action TU0901 (2013) – Towards a common framework in building acoustics throughout Europe, Chapter 6, pp. 98 – 120.

[10] European Environment Agency, *Good Practice Guide on Quiet areas*, Publications Office of the European Union, Luxembourg, 2014.

## Additional references/reading

- ISO 12913-1:2014 Acoustics — Soundscape — Part 1: Definition and conceptual framework. Geneva, Switzerland: International Organization for Standardization (ISO).
- ISO. (2018). ISO/ PRF TS 12913-2, 2018 Acoustics — Soundscape — Part 2: Data collection and reporting requirements. Geneva, Switzerland: International Organization for Standardization (ISO).
- Kang, J. and Aletta, F. (2018). The Impact and Outreach of Soundscape Research in Environments 2018, 5(5), 58; doi:10.3390/environments5050058
- Kang, J., & Schulte-Fortkamp, B., (Eds.) (2015). *Soundscape and the Built Environment*. London, UK: CRC Press. 310 Pages. ISBN 9781482226317
- Kang, J., Aletta, F., Gjestland, T. T., Brown, L. A., Botteldooren, D., Schulte-Fortkamp, B., ... Lavia, L. (2016). Ten questions on the soundscapes of the built environment. *Building and Environment*, in press
- Easteal, M., Bannister, S., Kang, J., Aletta, F., Lavia, L., and Witchel, H. (2014). "Urban Sound Planning in Brighton and Hove". *Proceeds of Forum Acusticum 2014*, Krakow, Poland.
- Payne, S. R., Davies, W. J., & Adams, M. D. (2009). *Research into the Practical and Policy Applications of Soundscape Concepts and Techniques in Urban Areas (NANR 2000)*. London: Department for Environment Food and Rural Affairs.
- Schafer R.M., (1994). *'chafSoundscape: Our Sonic Environment and the Tuning of the World*, Destiny Books, Rochester, 1994 (first published 1977).
- Fastl, H., Zwicker, E. (2007). *Psychoacoustics. Facts and models*, Heidelberg, New York, Berlin, Springer Verlag
- ISO. 2003. ISO/TS 15666 Acoustics — Assessment of noise annoyance by means of social and socio-acoustic surveys. Geneva, Switzerland: International Organization for Standardization (ISO).
- ISO. 2018. ISO/TC42/SC1/WG62. Revision of ISO/TS 15666 - Assessment of noise annoyance by means of social and socio-acoustic surveys. Geneva, Switzerland: International Organization for Standardization (ISO).
- City of London (2017). *Draft Noise Strategy 2016-2016*. City of London Corporation. <https://www.cityoflondon.gov.uk/business/environmental-health/environmental-protection/Pages/Noise-strategy-and-policy.aspx>. Accessed 24 May 2017
- Defra (2010). *Noise policy statement for England*. Department for Environment, Food & Rural Affairs, UK
- Welsh Government. 2018. *The Planning Policy Wales consultation*; <https://beta.gov.wales/planning-policy-wales-edition-10>

# The Hush City project and its relevance to planning policy

By Philip Dunbavin and Antonella Radicchi

### Let me start with a little history.

#### Noise Policy Statement for England

In March 2010, the Department for Environment Food and Rural Affairs (DEFRA) published the Noise Policy Statement for England (NPSE). This was aimed at promoting good health and a good quality of life through the effective management of noise, within the context of Government policy on sustainable development.

#### National Planning Policy Framework

Then in March 2012, the Department for Communities and Local Government replaced over 1,000 pages of national policy with the National Planning Policy Framework (NPPF). The NPPF was some 50 pages long and left a vast vacuum; in that it did not contain any objective numbers. What it did contain, was a clear statement as to what planning policies should aim to achieve.

In the NPPF, at paragraph 123, the fourth aim is stated as: *"...identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason."*

While this is clearly a desirable objective there is no guidance on how to identify, let alone protect, these areas of tranquillity. The development of soundscape clearly has the potential to do just that. However, full soundscape studies are not cheap to undertake and very few planning authorities have the budget for an extensive number of them.

#### Soundscape

In 2014, the ISO norm on soundscape definition and its conceptual framework was published, and a new ISO norm to standardise soundscape data collection and reporting requirements is under preparation (1). These ISO norms are fundamental to the achievement of data quality and to the development of consistent and robust comparative studies in soundscape research, and they can contribute to the establishment of the emerging soundscape science.

At Euronoise 2018, in Crete, Antonella Radicchi presented a paper on the use of mobile applications in soundscape research (2). This was a bit of a 'eureka moment' because that paper has enormous implications for the protection of tranquil areas. The Environmental Noise Directive (END) results in maps of noisy or non-tranquil places and this is driven by road, railways and airports. Even laypersons would expect the sound levels caused by those transportation methods to be far less than tranquil. This app does something new – it helps planning authorities to locate areas that are tranquil in places they may never have thought to look. Even more significant, is that this can be achieved at virtually no cost to planning authorities.

A screening of mobile apps available on the market to crowdsourcing and produce noise and sound maps was conducted through a literature and market review by Dr Antonella Radicchi, at the Technical University of Berlin, Germany. She found that 28 mobile apps had been available between 2008 and

the end of 2016. The full list of these apps is given in her paper (2) presented at Euronoise 2018.

Out of these 28 apps, 16 are noise meter-based applications and 11 are audio recorder-based ones. Only SoundOfTheCity works both as a sound recorder and as a noise meter, even if the data collection process of audio recordings and noise measurements is not sequential.

This state of the art reflects the current dichotomy between the two main approaches applied nowadays to analyse and evaluate the sonic environment: the noise-based approach and the soundscape approach.

The former relies on quantitative indicators (e.g. acoustical indices) and the usual remedy is to apply anti-noise strategies to noise sources. The latter focuses on the "acoustic environment as perceived, experienced, and/or understood by people, in context" (3) and it applies more qualitative and interdisciplinary measures to evaluate and (re)design the sonic environment.

Clearly, there was a lack of an app that could enable the simultaneous and sequential collection of complex mixed data, to effectively integrate the soundscape approach with the noise-based one to reach a holistic and mixed approach, as indicated by the European Environment Agency, especially in the framework of research on quiet areas (4).

#### Methods to identify areas of tranquillity

As reported in (Radicchi 2017; Radicchi et al. 2017)(6), the END draws the attention of protecting and planning quiet areas as an effective measure to reduce noise pollution, and it defines the concepts of a 'quiet area in open country' and a 'quiet area in an agglomeration', by applying noise indicators and thresholds, which should be set up by the respective Member States.

However, END does not provide any common methodology to protect and plan quiet areas. Consequently, the Member States and academic scholars have experimented with diverse methods, mainly based on:

- Acoustical criteria, such as 'noise indicators' defined by the Member States;
- Distance-based criteria; and
- Mixed criteria: composed of acoustical, size-based and land use-based criteria, or the integration of acoustical criteria with accessibility-based criteria, the SLOPE indicator, the TR indicator – to name only a few.

Although in professional and academic environments, a growing interest towards the inspection of qualitative definition of concepts like quietness and tranquillity has been registered, especially in the frame of research in quiet areas, experimentation with digital new media to favour public participation and the collection of people's preferences is still at the very beginning, with few examples available.

Taking inspiration from citizen science trends in the use of GPS-equipped smartphones as sensors in data collection, and evaluations in the field of environmental noise, the idea

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of using a mobile app to identify, map and evaluate 'everyday quiet areas' seemed to be appropriate, as it can be used by means of smartphones and carried out by citizens in their everyday life, independently of the researchers.

After reviewing the state of the art, the option to re-use an existing app was discarded, because there was no mobile application on the market that enabled the simultaneous and sequential collection of mixed data, such as audio recordings and related noise pressure levels, pictures of the place where the sounds are recorded, user feedback on the location where the sounds are recorded, and that addressed a variety of issues, such as the quality of the sonic environment and of the overall location, sense of security, accessibility, user behaviour, weather conditions and many others (see below for more details). Consequently, the Hush City app was developed from scratch.

### The Hush City app

The Hush City app was developed to fill this gap. It is a novel, free mobile application, launched in April 2017 as a tool to crowdsourcing, evaluate and map everyday quiet areas (5).

The Hush City app (re)places people at the core of the sonic environment evaluation process and it is aimed at understanding what quietness is for people. It goes beyond the definitions of quiet areas, applied within the context of EU-funded research projects, which are mainly based on quantitative criteria – such as acoustical indicators, land use criteria, size-based criteria or a combination of the above (5).

The most innovative aspects of the Hush City mobile application include both the data collection and the data consultation processes. In regard to innovation in data collection, the Hush City app allows the sequential collection on the same location and by the same user of a complex set of mixed data in a limited timeframe (approximately three minutes). The mixed data collectable consists of audio

recordings and related sound pressure levels, pictures of the place where the sounds are recorded and user feedback on the location where the sounds are recorded.

User feedback is collected by means of a predefined questionnaire, structured in three sections; soundscape, general issues and issues related to activities.

Questions are designed to explore the correlation between the soundscape and the following topics:

- emotional responses;
- semantic descriptors;
- perceived quietness;
- positive and negative sounds;
- level of oral interaction and social communication;
- sense of the place;
- landscape quality;
- level of maintenance and cleanliness;
- sense of security; and
- accessibility to the location.

Additional information collected through the questionnaire regards major sound sources, user status, weather conditions, number of people in the area and major activities performed in the area.

### How the Hush City app works

By clicking on the button 'Map the quietness around you', users are guided through data collection of their favourite 'everyday quiet areas'. The first action required is to record the sound of the chosen area by clicking on the button 'Record'; the app starts recording and it automatically stops after 30 seconds. Secondly, users are asked to click on the button 'Analyse' and the app calculates and displays the sound pressure levels of the sound recorded. Thirdly, users are asked to take a picture of the place where the sound was recorded, and finally they are invited to evaluate the soundscape and the surroundings by replying to a pre-defined questionnaire. The sequence is shown below: P38 ►

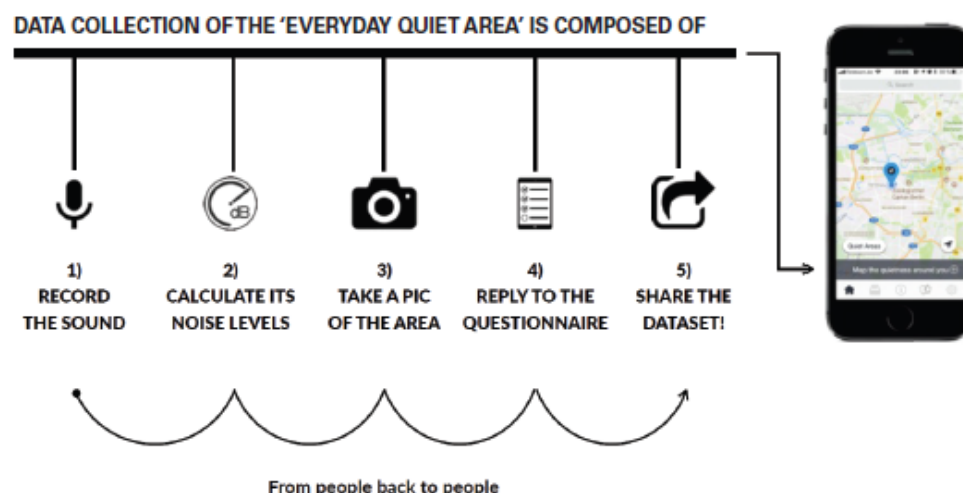


Figure 1. Image displaying the data collection sequence of the Hush City app (Image source © Antonella Radicchi 2018)



## Technical Contributions

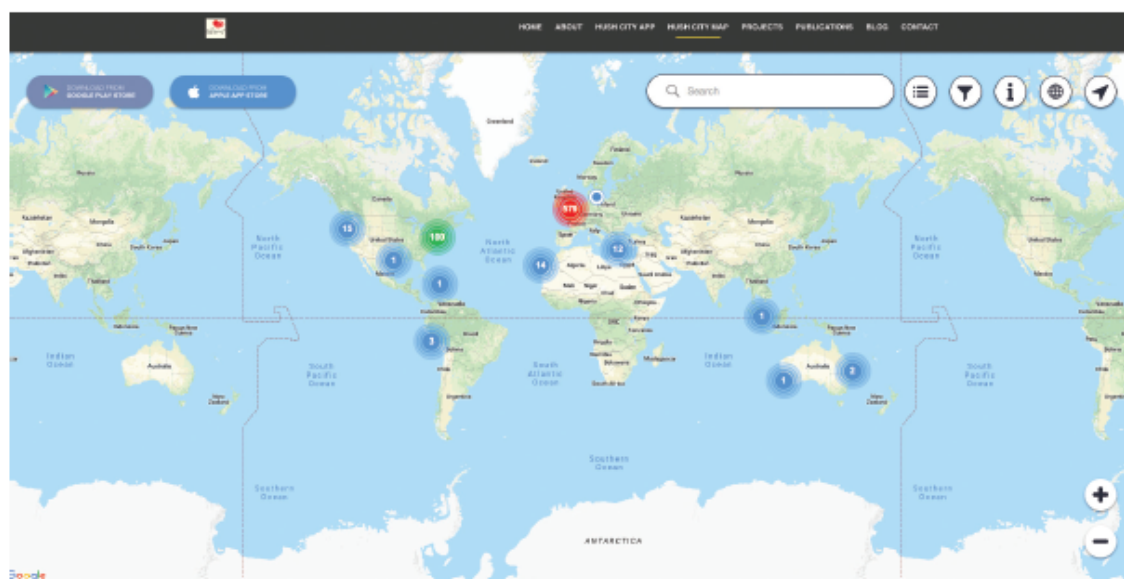


Figure 2. Image displaying the Hush City Map, accessible online at: <https://map.opensourcesoundscapes.org/view-area>

### The Hush City map

When the map view mode is active, colour markers are displayed on the dark background map. Colours are automatically assigned to the markers by the Hush City application, according to the sound pressure levels of each sound recorded. For example, light green markers indicate that in these spots, sound pressure levels were approximately between 35–40 dB(A). So clearly, planning authorities can use the Hush City map to locate areas of tranquillity that they need to protect.

The data that has been submitted has been checked to ensure that it is of a good quality, so that there will be no garbage in the datasets. Once datasets are submitted by the users, the researchers evaluate the datasets in order to ensure their quality. Datasets which clearly originate from user tests are deleted. Datasets that contain inappropriate data are also deleted. Inappropriate data is considered when:

1. Pictures depict private rooms, personal objects and/or profile pictures; and
2. Recordings and comments contain messages and/or sounds, which do not relate to the project's aim.

The everyday quiet areas collected with Hush City app are now accessible to everyone online at this website:

<https://map.opensourcesoundscapes.org/view-area>

### The Hush City map of Berlin

The QGIS (open source geographic information system) elaboration of the Hush City map of Berlin is shown below (updated to February 2018). The light green areas are those identified as urban recreation areas by the official Plan of Quiet Areas of Berlin. These were the obvious areas of quietness, but the surprise is that the Berlin Everyday Quiet Areas are generally not in the same places as the urban recreation areas. This means that there are many more areas of quietness than was previously thought.

Filters can be applied to the map to select areas using a range of descriptors including perceived quietness, landscape quality and accessibility to the areas etc. This is in addition to the sound levels, which makes this a valuable tool for planning authorities, environmental health officers and acoustic consultants.

### The implications for the United Kingdom

The Hush City app has the potential to assist planning authorities to comply with their duties under the NPPF, more importantly, it will also, wherever possible, contribute to the health and quality of life.

### How to get involved

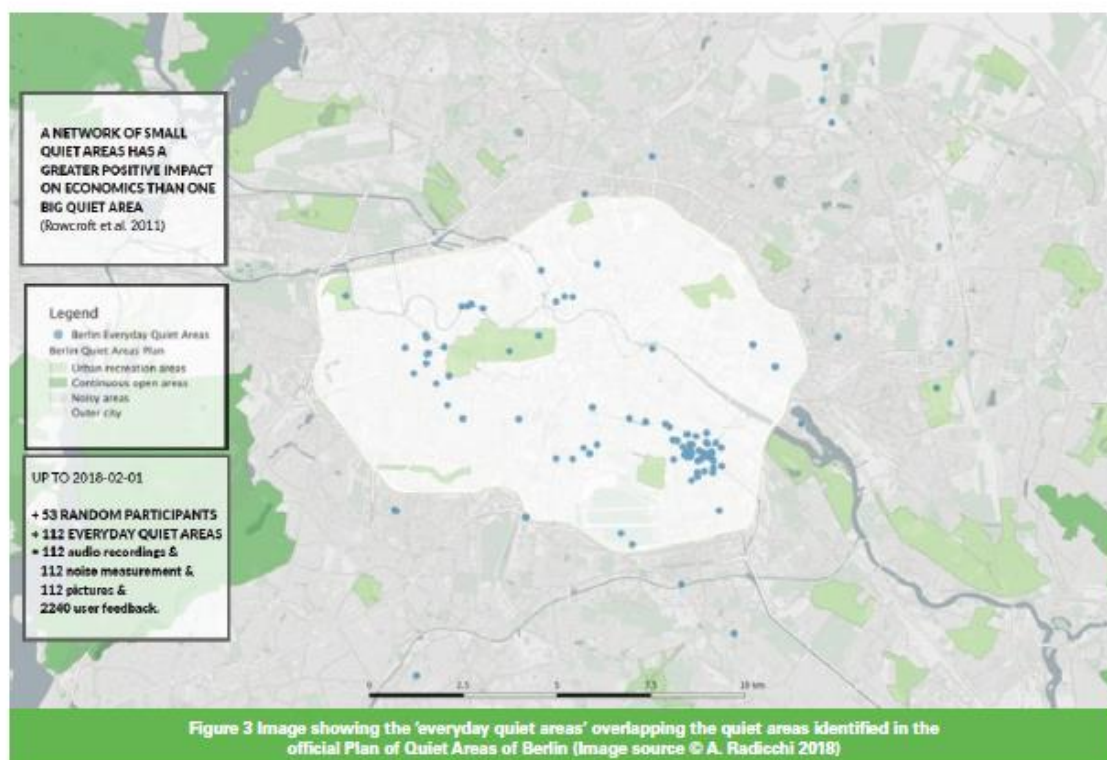
Simply follow this link to download the free app for either IOS or Android. <http://www.opensourcesoundscapes.org/hush-city/>

### What next?


The more people that can be encouraged to use the Hush City app; the better our knowledge of where the truly important tranquil places are will be, and Environmental Health Departments should encourage the general public to get involved. If we all get behind this approach, we might just end up protecting the quiet and tranquil areas for future generations.

Planning authorities can use the Hush City map as a tool when planning their noise policies and local plans. It will also help developers to identify where not to plan new developments, thereby aiding the protection of these tranquil areas.

When a local authority receives a planning application, they can use the Hush City map to see if there is likely to be a problem with that development in that particular location. Local authorities currently use the END noise maps to determine if a noise survey will be required, so the Hush City map could be a logical extension of that approach at the quieter end of the acoustic spectrum. They can use the Hush City



map to determine if a full soundscape survey will be required to determine the acceptability of any given planning application, helping to make the best possible use of authorities' resources.

Surprisingly, even in big cities like Berlin, there are many areas of tranquillity in some of the densest areas of development. Protection of these areas is clearly going to have significant health benefits for many of our citizens who live in highly developed areas and cities. 

### References

- 1 P. R. Dunbavin, ISO/TS 12913-2:2018 – Soundscape – Part 2: data collection and reporting requirements – what's it all about? *Acoustics Bulletin* July/August 2018, Pages 55 to 57.
- 2 A. Radicchi, The use of mobile applications in soundscape research: open questions in standardization presented at Euronoise 2018, 20.4 – 2471.
- 3 ISO 12913-1: Soundscape – Part 1: Definition and conceptual framework. International Standardization Organisation, Geneva, 2014.
- 4 European Environment Agency, Good Practice Guide on Quiet Areas, Publications Office of the European Union, Luxembourg, 2014.
- 5 A. Radicchi et al.: Citizens as smart, active sensors for a quiet and just city. *Noise Mapping* 4(2017) 104-122.
- 6 Radicchi: Beyond the Noise: Open Source Soundscapes. A mixed methodology to analyse, evaluate and plan "everyday quiet areas", *Proc. Mtgs. Acoust.* 30, 2017, doi:10.1121/2.0000565

This technical contribution also contains elements that are more appropriate for an industry update. Although the article focuses on one product, we have placed it as a technical contribution in order to draw attention to the wider soundscape and tranquillity issues described and to keep readers up-to-date with the approach used and potential applications.

### Authors

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*Philip is the convenor of ISO/TC43/SC1/WG54 on soundscape and also of the newly formed ISO/TC43/SC1/WG62 for social and socio-acoustics surveys.*

*Antonella Radicchi is an associate soundscape researcher and HEAD-Genuit Foundation fellow at TU Berlin Institute of City & Regional Planning, where she has established and led the Hush City Mobile Lab. Dr. Radicchi is a registered architect and holds a Ph.D. in Urban Design and Territorial Planning, with doctoral studies conducted at MIT (Cambridge, USA) and at the University of Firenze (IT).*

*She also acts as Lead Editor of the special issue 'Sound and the Healthy City' for the Cities & Health Journal.*

*Her publications and projects on soundscape are available at: [www.opensourcesoundscapes.org](http://www.opensourcesoundscapes.org)*

## **Response from Michel Regelous on behalf of National Parks Wales**

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

Diolch i chi am y cyfle i wneud sylwadau ar y Cynllun Gweithredu drafft ynghylch Sŵn a Seinwedd 2018-2023.

Mae'r Awdurdodau Parciau Cenedlaethol yng Nghymru yn gweithio mewn partneriaeth, fel Parciau Cenedlaethol Cymru, i ymateb i faterion polisi all ddylanwadu ar reoli'r Parciau Cenedlaethol yng Nghymru.

Mae awyr iach, glân a seinweddau naturiol heb sŵn ymwthiol yn nodweddion gwerthfawr y parciau cenedlaethol yng Nghymru. Hefyd mae'r Awdurdodau Parciau Cenedlaethol yn cydnabod manteision seilwaith gwyrdd / mannau tawel mewn amgylcheddau trefol, gwerth pennu ardaloedd gwyrdd, a'r manteision lleihau sŵn a llygredd aer a ddaw yn sgîl teithio llesol a symudiadau moddol o ran trafnidiaeth. Mae'r rhain yn cael eu hamlygu ym mholisi'r Parciau Cenedlaethol ar gynllunio rheoli a chynllunio datblygu.

Mae Parciau Cenedlaethol Cymru yn cefnogi dulliau integredig y Cynllun Gweithredu o ran sŵn ac ansawdd aer. Rydym yn cymeradwyo'r camau gweithredu a'r strategaeth hirdymor, ac yn nodi'r cysoni â Deddf Llesiant Cenedlaethau'r Dyfodol (Cymru) 2015 a Deddf yr Amgylchedd (Cymru) 2016. Mae Parciau Cenedlaethol Cymru yn nodi disgwyliadau Llywodraeth Cymru o ran y pum ffordd o weithio mewn perthynas â sŵn a seinweddau. Rydym yn croesawu cyfeiriad cynnar y drafft at y parciau cenedlaethol (para 1.1.2). Bydd yr Awdurdodau Parciau Cenedlaethol yn parhau i weithio gyda'r rhanddeiliaid i warchod a gwella rhai o'r ardaloedd tawel mwyaf yng Nghymru, ac i groesawu croestoriad ehangach o gymdeithas Cymru i fwynhau manteision yr ardaloedd tawel.

Thank you for the opportunity to comment on the draft Noise and Soundscape Action Plan 2018-2023.

The National Park Authorities in Wales work in partnership, as National Parks Wales, to respond to policy issues with the potential to influence the management of Wales' National Parks.

Fresh, clean air and natural soundscapes that are free from intrusive noise are valued qualities of Wales' national parks. The National Park authorities also recognise the benefits of green infrastructure / tranquil spaces in urban environments, the value of green prescribing and the noise and air pollution reduction benefits of active travel and modal shifts in transport. These are reflected in National Park management planning and development planning policy.

National Parks Wales supports the Action Plan's integrated approach to noise and air quality. We endorse the actions and long-term strategy, and note the alignment with the Well-being of Future Generations (Wales) Act 2015 and Environment (Wales) Act 2016. National Parks Wales notes Welsh Government's expectation in relation to the five ways of working in relation to noise and soundscapes. We welcome the draft's early reference to national parks (para 1.1.2). The National Park Authorities will continue to work with stakeholders to conserve and enhance some of the largest tranquil areas in Wales, and to welcome a broader cross-section of Welsh society to enjoy the benefits of them.

## Response from Natural Resources Wales

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

We welcome the new Noise and Soundscape Action Plan and believe it provides a good basis for making progress on managing noise issues in Wales. There are two areas which we feel merit further consideration in the plan.

### Tranquillity outside urban areas

Reference to tranquillity outside urban areas is not mentioned (in contrast to the previous noise action plan). 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 greenspace. 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.

We suggest a section on soundscape as an aspect of tranquillity outside urban areas is therefore needed, setting out why it is important for our economy and well-being, together with an approach recommended for its management.

### Road traffic noise maps

We understand that most roads are excluded because of the threshold for mapping. Work to include mapping of all roads would provide a more useful and finer grained evidence base to inform local policies. While traditionally the collection of data would have been a limitation, the wide availability of such data today (e.g. that used by Google Maps) could provide sufficient indication to map broad levels of traffic and the patterns of their ebb and flow, at least enough to inform local plan and policy-making. By not showing any data at all below our busiest main roads, we limit the ability to use the data to do joined up planning. We would welcome this extension of the baseline evidence assessment work.

**Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

Please find below some amendments to reflect changes since we last contributed to the Plan:

- 5.5.4: The Cardiff i-tree Eco Assessment is nearly complete so we suggest the following amendment:

‘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.’

- Box 5.5: We suggest the following additional text is added to the action:

‘including setting out the wider tranquillity context necessary for the appreciation of soundscapes.’

- 8.2.2: There has been a delay to the publication of H3 and there is currently no deadline so we suggest that the last sentence of this paragraph is removed.



## **Response from Lisa Lavia on behalf of the Noise Abatement Society**

### Introduction

1. The Noise Abatement Society (NAS) welcomes the opportunity to respond to the Welsh Government's Noise and Soundscape Action Plan 2018-2023. In preparation for this response NAS has consulted its members and stakeholders including local government, subject matter experts, relevant NGOs and public sector bodies, industry and members of the public.

### About the Noise Abatement Society

2. The Noise Abatement Society (NAS) was founded in 1959 to find solutions to noise pollution and related environmental problems for the public benefit. Our founder, John Connell OBE, was a pragmatist and visionary who recognised that excessive noise was detrimental to productivity, health, learning and general wellbeing. Connell called noise 'the forgotten pollutant' and in 1960, after a prolonged campaign, lobbied the Noise Abatement Act through Parliament making noise a statutory nuisance for the first time in the UK. Nearly sixty years on, NAS continues its work responding to concerns about noise, through public outreach, engaging government and industry, and applied research to educate, inform and encourage responsible practice, and promote and evidence the benefits of holistic management of the acoustic environment. For more information, please visit [www.noiseabatementociety.com](http://www.noiseabatementociety.com).

### CONSULTATION QUESTIONS – ANSWERS

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

The Noise Abatement Society (NAS) welcomes the Welsh Government's Noise and Soundscape Action Plan 2018-2023 and agrees with the actions and long-term strategy proposed in the draft.

In particular NAS welcomes the plan's purposeful integration of noise and soundscape management within cross-cutting government policy clearly placing good acoustics and the benefits on a par with all other environmental factors and their role in enabling, supporting and enhancing health and wellbeing.

NAS applauds the explicit nature of the plan, specifically its clarity regarding expectations of collaboration, design thinking and holistic solutions to achieve maximum social, environmental and economic benefits and impact namely its:

- Aim to have a ‘broader focus than simply clamping down on the decibels’; it’s commitment to ‘create appropriate soundscapes, meaning the right acoustic environment in the right time and place’ nationally; it’s recognition that ‘there should not be a one-size-fits-all urban soundscape .. any more than every street and building should look alike.’ [Ministerial Forward]
- Integration of soundscape into the seven elements of the Well-being of Future Generations (Wales) Act 2015 (WFG) and the wider commitment to encourage ‘a globally responsible Wales, the development of quieter technologies and promoting standards developed in the UK’, recognising the wider impact for citizens everywhere. [1.2.1]
- Commitment to ‘consider the feasibility of environmental public health tracking of noise and health data as part of wider public health surveillance.’ [Box 1.1]
- Expectation that ‘public bodies subject to the WFG Act follow the five [holistic and integrated] ways of working when managing noise and soundscapes.’ [Box 2.1]
- Commitment to ‘pursue long-term, enduring solutions to any existing instances of noise nuisance’ rather than dependence on short-term solutions that may not be truly sustainable or avoid problem recurrence. [2.2.2]
- Integration of local air quality and noise management and the recognition of the synergistic benefits achievable that ‘improvement to health and quality of life will be greater if improved soundscapes are achieved alongside reductions in air pollution’. [Box 3.1]
- Inclusion of environmental noise ‘as an airborne pollutant within its Clean Air Programme’ and ‘creating and pursuing 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 its actions.’ [Box 3.3]
- Commitment to overtly link national policy and ‘build upon the new air quality and soundscape content of Planning Policy Wales to take forward Wales’ first statutory National Development Framework and produce further guidance on air and soundscape quality to assist local planning authorities in Wales’ and thereby embed the requirement of good acoustic design at the heart of all development in Wales. [Section 4 and Box 4.1]
- Approach to future environment grants to reward sustainability and positive impact by ‘enhancing the development and delivery of cross-sector collaborative projects and seek to maximise the use of the resources



available' to actively support best practice and holistic acoustic design for the public benefit. [Section 5.4]

**Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

NAS would recommend the inclusion of integrated, quiet(er) delivery and servicing plans, including routing and timing, for goods vehicles [of all sizes and types] to better manage the cumulative impacts of noise from these activities, especially in urban centres. Extensive information on trials, driver training, equipment and management options for these activities are available from the Department for Transport [<https://www.gov.uk/government/publications/quiet-deliveries-demonstration-scheme>]; [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/306851/freight-operators.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/306851/freight-operators.pdf)] and Transport for London [<https://tfl.gov.uk/info-for/deliveries-in-london/delivering-efficiently/retiming-deliveries>]. 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.

**Response from Kristian James on behalf of Public Health Wales**

Public Health Wales has already contributed to the plan and therefore supports its contribution within section 1.3. Therefore we have no specific further comments via this consultation.

## **Response from Peter Rogers on behalf of Sustainable Acoustics Ltd**

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

The Welsh draft policy document correctly identifies the hole created a preoccupation with noise management by the Environmental Noise directive, in that it does go much further than non transportation noise, and the fact the policy seeks to address more generally sound in the environment. This is welcomed as a positive step change, which as an acoustic consultancy that places sustainability at the core of what we do we welcome.

It is agreed that a more coherent approach is needed to deal with noise management and valued sound design in our environments; and that the consideration of sound that has positive health effects and are of value should be included within that.

The inclusion of the term "Soundscape" is new in national policy, and is now well defined in ISO standard as the acoustic environment as perceived or experienced or understood by a person or people, in context. Sustainable acoustics therefore fully supports policy that includes this as part of redefining that reducing noise is not the only consideration, but encouraging the protection and development of values soundscapes. Significant guidance will be needed to make good progress against this policy, in our view.

In relation to the actions we have the following comments :

It is also welcomed that air quality is considered alongside noise pollution (in Section 3), given that the WHO recognise noise to be second only to air pollution in terms of risk to health. The WHO have just updated their advice, planned to be launched on the 10th October 2018 in Switzerland we understand. They state in their announcement "noise is one of the top environmental risks to health, and continues to be a growing concern among policy makers and public alike". "In Western Europe 1.6 million healthy years of life are lost due to road traffic noise". Section 1.1.3 should perhaps take this into account. Box 3.1 is supported as a worthy and justifiable goal by evidence.

The recognition that just being below the risk levels for noise is not enough to support health and wellbeing is welcomed as a big and necessary step forward in the protection and improvement of current and future generations. The appreciation that tending to silence is not in itself desirable enables this approach to use sound that is valued in the environment (such as natural sounds). This may include vibrant areas of manmade sound, such as concerts or the buzz of night life in the city, where the noise impact is sufficiently management for those living in the area, to enable the

balance required for sustainable development to be achieved between noise impact and soundscape design and management . This directly addresses the views of the Chief Medical Officer for Wales.

Tackling noise and improving soundscapes is a sentiment embedded into the well-being goals identified.

**Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

Comments on the goals are as follows:

- Value, in terms of sustainability must be remembered to not just be economic, but societal and environmental (in terms of natural capital), as pointed out in 2.1.2 in principle, so in the consideration of the prosperous Wales goal this should perhaps split more clearly this into these sections (ie. That property prices is fiscal, educational attainment and productivity in the work place and quick recoveries in hospitals is the societal benefit, whilst the reduction on noise in the environment is the environmental benefit).
- In the goal for a healthier Wales, in addition to consideration of traffic noise could the improvement in recovery rates in hospitals by reducing noise be a consideration too for improving public health and a focus point for PHW, given that PHW “recognizes the importance of appropriate soundscapes to the health and wellbeing of people ?
- In the goal about a more equal Wales might it be prudent to embed the example a little more in the round and say that those fortunate to live and work in tranquil soundings should have the “value of those soundscapes protected” whilst those less fortunate should have targeted interventions to improve the quality of their soundscapes, and reduce environmental inequalities.
- In the vibrant Wales goal it is not clear what the goal would be. It would seem necessary to state that poor acoustic environments in schools will be avoided and optimized conditions for learning language will be the goal to support learning Welsh. Also the protection of historic locations acoustically for the benefit of the natural environment and maximizing the benefit to encourage pleasant soundscapes that will support tourism.

It is recognized that Wales would be leading the way with this policy, which it is hoped would influence other countries. It is pointed out that transportation noise from road rail and crucially air do cross borders, which should be a consideration.

Having in mind that the focus of the soundscape approach is on the positive effect of sounds, possible extension could be made towards the possibility of identifying, mapping and managing not only quiet areas but also high-quality areas in general (as quality soundscape doesn't need to be quiet). Further, the possibility of planning new quiet areas in the three Welsh agglomerations could be open as well, as well as preserving areas rated as having valued soundscapes (whether because they are tranquil because of lack of manmade sound or perhaps even vibrant because of human made sound, such as areas of night life). Because of the temporal nature of sound the same location can have very different soundscapes at different times of day, which should be accounted for. This idea is developed further below.

Other specific comments include :

Box 1.1 – Could PHW also consider how sound might improve the health and wellbeing of people by providing guidance which the IOA could input into, to embrace the more positive value that soundscape can bring inside and outside of buildings.

Box 2.1 – the triple bottom line approach mentioned above of people places and economic value has not been spelt out, and perhaps should be. Could this be expanded to read to achieve benefits for the people, places and the economy of Wales as a true measure of value ?.

Bullet 5 of 3.3.2 – suggest the addition at the end of “, and any impact caused by them on those living around them to an acceptably low level”.

3.6.2 – Given that Clean Air Zones are being considered might the concept be introduced here of an equivalent for soundscape (which is not tranquility) but a Valued Soundscape Zone. This takes the concept of the AONB into the realm of sound, and soundscapes.

4.3 - the “Agent of Change” principle is an important concept to get clear. 6 paragraphs are dedicated to it, yet the implications of it are not explored or explained in any depth. It is recommended that further guidance is provided on implementing Agent of Change, which we are happy to contribute to as we are leading in the area.

For example the scenario explored for music venues is perhaps the clearest to illustrate, which is that an existing business will have the protection of Agent of Change when new residential encroaches closet to it to protect the valued vibrant Soundscape they provide. This in itself is important otherwise the creep of residential will lead to venues having to get quieter and quieter, neutralizing vibrancy at night and permanently changing the character of the area because the right to complain of a nuisance remains in place lawfully. For this to be avoided baseline soundscape assessments are needed by authorities as they characterize their areas, to determine what benchmark should be set to avoid mitigation being implemented that is not adequate to deal with the venues worst case operations. This means the polluter does not pay, but the developer would be expected to should they choose to develop in this area. The law has still not been tested as to whether a deed of easement could apply and hold to then protect the venue, or if the mitigation would

mean that provided the venue is sticking within the baseline defined that it would have a defense of “reasonableness” against complaints. Guidance is required to make this workable, and prevent a scheme that has acoustic protection as part of the facade being by-passed by residents who then claim that it is their right to open their windows for ventilation at night.

A different example is for a new gym in vacant retail, with existing commercial above. With the gym being the Agent of Change and also the noise maker it is perhaps clearer, but what constitutes adequate protection of the existing business’ health and wellbeing for those in the offices above, and what regard should be had for the fact they could be converted to residential use through permitted development in the future. A long term view would require some regard if had of this. Guidance would assist this, to avoid such reuse of vacant units to be viable commercially, and not presenting a barrier to such uses and economic growth in close proximity to potential residential.

Standards commonly used to provide guidance for achieving acceptable conditions acoustically almost always relate to anonymous noise sources, which often is not the case for things like music, people, transportation sources etc. This makes applying standards like BS8233 , or WHO Night noise guidelines very difficult, as more stringent criteria may be required to avoid complaints. It is suggested that in 4.4.4 this is acknowledged by adding at the end “ it should be noted that this guidance relates only to anonymous noise, and a more specialist advice should be sought to determine what appropriate criteria for the noise sources being considered would be to inform packages of mitigation”.

Overheating is not addressed with the guidance section, and since the draft a new AVO guidance document has been published jointly CIEH, ANC and the IOA, which we suggest could be added in as 4.5.4.

Section 5 - Tranquil spaces, could be best described here with a slight expansion on the concept explained. It can be described as a subjective thing that is a type of soundscape with high value, which enhances other aspects, and generally is understood to be the absence of manmade sound. A space can be tranquil as still have high levels of natural sound, such as on a deserted beach, so it need not be quiet unless it is linked with manmade sound (such as traffic). This section would be reworded to embed this concept, which is one aspect of soundscape that is understood by the layman.

Box 5.1 – could a general approach of protecting areas designated as tranquil be an option here ? – this would fit with the Green Flag Award Scheme in covered in 5.6, but which does not list tranquility as one of the defined headings, but rather as an overall thing. It would be helpful to embed the value of the soundscape into each criterion and how that contributes to tranquility. Work by Greg Watts can assist to do this.

Box 5.4 – Quiet areas that are identified and managed are not the same as areas that are tranquil and equally need to be protected or enhanced where possible. The two ideas sit within this box a little uneasily, and both appear linked with the Green Flag Award. Could this be teased apart more as clear separate aims a) protect quiet

areas , b) identify and protect areas of tranquility and use good design to enhance and create areas of tranquility where they did not previously exist. This is not explicitly stated in Box 5.5 either. The term “valued for restorative respite” seems to fit well however.

**Question 3: We have asked a number of specific questions. If you have any related issues, which we have not specifically addressed, please use this space to report them:**

We have inputted into the Institute of Acoustics response, so some of this response may be consistent with it, representing what of that are our own views. It is not the same in a number of areas, so please take note.

Peter Rogers' involvement with the Institute of Licensing in relation to Agent of Change, is of key usefulness, and an area where Soundscape baselines may be of great important to make the concept work in urban areas particularly where residential encroaches on noise sources of existing businesses. He would be happy to assist in an advisor role in bringing this policy to life, and assisting Wales to lead the way in terms of Sustainable Development and in building a greater National natural capital asset.

## Response from Dr Yiying Hao on behalf of Wood E&IS UK

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

Yes, Wood generally agrees with the actions and long-term strategy proposed in the draft noise and soundscape action plan. It does aim at achieving all the well-being goals specified in the Well-being of Future Generations (Wales) Act 2016.

**Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

The draft noise and soundscape action plan demonstrates a good understanding of the concept of soundscape and soundscape contexts. Soundscape is about the perception of the sound environment and beyond, because the cross modal perception<sup>1</sup> influences the judgment on soundscape quality, which asks for a consideration of multiple environmental qualities (e.g. visual and odour) as a whole when assessing and designing soundscape. The soundscape management mentioned in the action plan accords well with the focus of placemaking in the Welsh planning policy, aiming at promoting health and well-being by addressing multiple issues rather than single isolated issues.

The draft noise and soundscape action plan innovatively introduces soundscape management and sets up goals and ways of working. It would be advantageous to briefly clarify how to distinguish soundscape management from environmental noise management, and to define the relationship between the two.

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.

Tranquility can be considered as one quality of soundscape. It is one of the factors of Areas of Outstanding Natural Beauty (AONB), which are designated by Natural Resource Wales, Natural England or the Northern Ireland Environment Agency. With regards to 'relative tranquility', natural sounds are predominant in AONBs, which

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<sup>1</sup> Crossmodal perception or cross-modal perception is perception that involves interactions between two or more different sensory modalities. Examples include synesthesia, sensory substitution, and the McGurk effect, in which vision and hearing interact in speech perception. - Wikipedia

indicates that it is not necessary that there is an absolutely absence of man-made sounds. Tranquility is included in the National Planning Policy Framework (2018) (in England) as an important aspect in the promotion of healthy communities and in the preservation of the natural environment. In the Natural Resources Policy (Wales) (2016)<sup>2</sup>, tranquility is “An untroubled state, which is peaceful, calm and free from unwanted disturbances. This can refer to a state of mind or a particular environment. Tranquility can be measured in terms of the absence of unwanted intrusions, or by a balancing of positive and negative factors.” However, there has been no widely-accepted definition and metric of tranquility in National Policies, although it is mentioned in other official statements and guidance<sup>3</sup>.

Tranquility comprises both quietness and natural settings. In addition to rural areas, tranquil places do exist in cities. In an attempt to regain tranquility in busy cities, which are not known for being calm and relaxed environments, it is suggested to add the point that architects, landscape designers, acousticians and environmental scientists should propose the creation of tranquil places by combining building layout design, green building design, the presence of vegetation and screening from urban noise.

**Question 3: We have asked a number of specific questions. If you have any related issues, which we have not specifically addressed, please use this space to report them:**

#### Section 1.2:

A prosperous Wales: “Areas not subject to excessive noise are more attractive places to live and work.”

For areas not subject to excessive noise, an interesting soundscape can increase value of the areas for the users, and is usually more popular and desirable. The use of soundscape design can be considered as an investment. Soundscape cost-benefit can be attractive, given the added value in property, in human health, and generally and foremost in wellbeing and quality of life.

A resilient Wales: “Airborne environmental noise is known to affect terrestrial wildlife as well as people, although much further research is needed in this area.”

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

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<sup>2</sup> The State of Natural Resources Report (SoNaRR): Assessment of the Sustainable Management of Natural Resources. Technical Report (2016).

<sup>3</sup> Rural White Paper, Our Countryside: The Future – A Fair Deal for Rural England (2000); Scottish Natural Heritage Landscape Policy Statement 2005 (Scotland); Draft Airports National Policy Statement (England) (2017); CAP 1616 – Airspace Design: Guidance on the regulatory process for changing airspace design during community engagement requirements (2017);



behavior, e.g. homogenization of avifauna in the urbanized 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: “Targeting interventions to help those most seriously affected can reduce these and other environmental inequalities.”

In the context of new residential development in England, PPG-N<sup>4</sup> advises that noise effects may be partially offset if the residents of affected dwellings have access to a relatively quiet façade, or quiet external amenity space for sole use by a limited group of residents. In this context, soundscaping would be a powerful tool in demonstrating that 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.

A global responsible Wales: “Noise tends not to carry far from one country to another, but good practice may do so.”

Through the proposed Action Plan, Wales has the opportunity to take the lead in people centered planning in the UK. Good soundscape practice can be used as evidence to promote the issue of policy and standards on soundscape, which will benefit soundscape management and future well-being. Nowadays, most of the good soundscape practices originate from academia, musicians, artists and designers. There is a need to promote good practice in the planning system, in design practice nationwide, and beyond Wales.

## Section 2.2 Dos and don'ts:

“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.”

This is within the scope of the data collection in soundscape management. ISO/DIS 12913-2: ‘Soundscape -- Part 2: Data collection and reporting requirements’ provided some methods on the relevant social survey, but the standard<sup>5</sup> has been revoked. There is a need to standardise the methods and procedures to do this.

## Section 5.5.3:

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<sup>4</sup> Ministry of Housing, Communities and Local Government (2014) Planning Practice Guidance [online] Available at <https://www.gov.uk/government/collections/planning-practice-guidance> [Accessed 14/02/2018]

<sup>5</sup> ISO/DIS 12913-2 Acoustics -- Soundscape -- Part 2: Data collection and reporting requirements (2017)

“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.”

Naturalistic scenery (including use of vegetation) can distract attention from a noise source even though the noise source is within sight. A ‘green’ area can introduce natural sounds (e.g. birdsong, waterfalls) to weaken the perception of urban noise by attracting attention and providing sound masking. Besides the natural view, natural sounds have the function of restoration.

## **Response from Mark Drakeford AM**

**Question 1: The noise and soundscape action plan is the Welsh Government’s central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector’s strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

Yes.

**Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

No.

**Question 3: We have asked a number of specific questions. If you have any related issues, which we have not specifically addressed, please use this space to report them:**

A small group of residents in the Radyr area of the Cardiff West constituency have experienced a particular problem with noise pollution from the M4 for a number of years, specifically on Maes-Y-Bryn (CF15 8BB). The Cardiff West constituency office has been working on their behalf to secure some support in mitigating this issue, but have found it difficult to do so. Meetings with Welsh Government ministers concluded that a bespoke solution is required. It would be very helpful if such a solution could be found as a result of this action plan.

## **Individual response 1**

Why is there no equivalent plan for light pollution?

Serious question. Could someone please pick up the ball..?

## Individual response 2

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

Agree. However further work can be done to promote green space and green infrastructure within development which will have noise reduction benefits.

**Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

Caerphilly Councils contribution is incorrect and the statements provided should be reviewed in detail. Caerphilly CBC urban areas particularly in the South of the borough has considerable development pressure. The large number of infill development is having a negative impact on noise levels. Residents have seen an increase in noise levels which may not have been reported to the local authority. Large scale road works being undertaken and proposed by CCBC have had little noise impact assessments.

## Individual response 3

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

Yes I agree with the long term strategy proposed in the draft noise and soundscape action plan. However, I question how it will work. I live in a high density area of Houses of multiple occupation that are mostly lived in by students that create a lot of transient noise and some anti social behaviour when coming home at all hours of night. I have had dealings with student services.

**Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

There are laws against traffic noise, but none for people causing noise. New laws? Policed better.

## Individual response 4

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

The actions quoted are laudable but do not recognise the real problems that are happening now and will not be solved by these document,

### 6.2 Responsibility for public roads

The division between trunk roads and all other public roads means that all the locals roads are the responsibility of the local authority. There is a lack of funds allocated to this important duty. Actions by the LA will not happen due to lack staff to enforce.

### 6.8 role of the police

Once again the statements are good objectives. With the lack of officers and funding this will be a very low priority and very little action will ensue. We have complained about loud exhausts and the resultant effect on the local communities. Police will not take any responsibility to tackle this form of anti social behaviour. Once again the words are fine but in practice nothing will be achieved.

**Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

How will the strategy be turned into actions. Who will take the responsibility for making sure that effective action is taken.

## Individual response 5

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

Broadly in agreement however the statement "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." needs to be strengthened.

Air quality and soundscape should be given greater emphasis and carry more weight than the other objectives as the long term health issues of bad planning remain for generations. Economic development should never be the over riding factor when it's effect is to create costly health and welfare issues through the introduction of, or the exacerbation of air and noise pollution.

**Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

Noise and air pollution are significantly attributed to traffic movements which cover large areas yet we rely on local authorities with their limited area of influence to shape local road and transport issues against a political background.

Should politicians with their own or party agendas be allowed to continue to influence the quality of the air we breathe or the noise we are subjected to? Where is the input of the health professionals in influencing planning decisions?

## Individual response 6

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

yes think for too long people have not taken these factors properly into consideration

**Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

not specific but cases should be viewed individually and not compared against other scenarios but against the current levels to make sure the true extent of any deterioration is considered

## Individual response 7

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

yes!!!!. [how long is long term?] but we have had a noise action plan in place [area a 605] since 2013 its now 2018 sept 28, nothing has been done flintshire county council says its not statutory, we are the 1% of the action plan on noise 1.2 metres from our front door 4,500,000 per year vehicles vast majority hgvs and growing, 2015 hgvs where allowed to travel on single carriageways from 40 mph to 50 mph which is an increase in noise in an already priority area for noise ????.

**Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

yes i have a number of questions, spoken to dr martin mcvey of welsh gov about or concerns, not statutory, flintshire county council reluctance to act, phoned fcc about how loud is was living in my home its overwhelming and said its that bad it could affect my hearing, he just laughed and said the road noise was making me deaf, i dont find it funny also asked about fumes and told me they monitor on a neighbours drain pipe with a plastic tube hung upside down then i went to investigate,yes there it was, what a joke, 4,500,000 ++ vehicles spewing no, nox, brake dust, clutch dust, tyre wear dust and all matter of nasty s [consumables that wear down on vehicles] , not very professional with being in 1% of the la10,50db,18hrs priority for noise area a605 north east wales, a pertion was hand to [...] of street scene about some our issues? no funding ?.

there some very well written articles in the draft noise and soundscape, i could say great, but in the real world no, laughed at, ignored, not listened and a lack of funds also atkins a firm that was used to access the A5119 noise action plan area A605 for the increase by 10 mph to 50 mph monitored and passed it fit of use for hgvs to pass my me less than 2 feet as i step on to the pavement to walk in either direction?, asked flintshire county for a freedom of information about how they come to this conclusion, we cant give that information due to the sensitivity of the the deal by atkins to flintshire county council. what ???????, so good luck, someone is writing up these extensive plans for the future that was 5 years ago, but no ACTION is acted upon, also looking to the future the new red route has the go ahead by ken skates north east wales to take the pressure off the A494, but that has a knock effect to us on the A 5119 5-7 % thats 315,000++ more vehicles pass our home, also you talk about in your report, loud exhaust pipes!, programmes on the the tv people doing up the cars in the latest wrap and loud pipes ?, get the police to act you will make a fortune !.and make our lives a lot better.

**Question 3: We have asked a number of specific questions. If you have any related issues, which we have not specifically addressed, please use this space to report them:**

article 8 of the human rights act states we have the right to enjoy our home peacefully, not the case our home has not been enjoyed since march 2015 hgvs 50mph, in fact im sat upstairs at the back of our home traffic very intrusive,

sleeping is affected nightly, hgvs that use this road past our home run on a 24/7 basis hit or miss weather you get a decent nights sleep, the noise and vibration is prominent, i was asked during a meeting with fcc [...] ,said, you bought this house on this road and i said yes but the speed of hgvs was 40 mph now its 50 mph i was shocked by this, like i was to put up and shut up, this meeting was i think 2015, you have brought out this noise and soundscape action plan but prior to this was the noise action plan 2013- 2018 i had to find this myself ?.

if you make action plans should not all parties act on them, seems they are there but just not used or over looked,

infrastructure, the A5119 has and is crumbling under it own use, as is our home, ive worked hard all my life for this our home, but the price has devalued as our quality of life, due to amount of vehicles and many more to come as the population grows our house seems to me be blight to the road, business first [the new red route], peoples homes a secondary factor ?, speeds recorded by fcc 96 mph who cares ?. why should we live in fear of a road, madness. two roads for hgvs that want to access north west wales eg prestatyn A5119 and the A548 to the A55 or the trans European road network E20 [red route] saint petersburg to shannon airport.

There have been many accidents major and not so, near misses are many, but the majority go unreported. after the recent one where a young man was taken in ambulance to hospital i had the pleasure of speaking to one of local police officers and asked why they go unreported his answer was they log them to control, so im guessing control logs them on the system and then given to accountants to access on severity, but my question is why flintshire county council does not get the information ?. your probably wondering why i have brought up this matter, well living in a quiet and safe environment is far from the the truth were we live, and hasn't been for along time, pavement widths too narrow, very noise environment, fumes, brake dust, tyre wear, clutch dust, no. nox, vibration from the road felt through out the house, light pollution, pavement gets flooded unable to leave or front door on certain occasions, excessive speeding traffic, also have received a letter from fcc they are closing the A548 for six to eight weeks commencing the beginning of October thats going to be interesting. one of the two main roads out of north east wales piled on to yes you guested it the A5119 ?.

ive as about compulsory purchase of our home and compensation due to the above, fcc says we dont do that so won't act and cant do, like i said before this report makes good reading but what is the point if it can not be acted upon which in the last six year is apparent, the author and maker of noise action plan dr martin mcvey welsh gov and fcc waste of time and money ive said it now too late, the last report



2013- 2018 for the future and this report 2018-2023 what about past failing and the here and NOW.

i would like a foi on the total spent since these noise action plans where drawn up on the cost, because we and are home have not see the benefits form its content in fact we seen a speed increase of 10 mph and increase in speed is an increase in noise and lack of safety,fcc [...] safety officer did a report [our ref ss/ljs/lloc] on the 11th feb 2016 after being asked the issues of the above answer,"" this stretch of road has a good forward visibility and does not contain any bends it does have some accesses to properties .these properties have long been established and ultimately , due to the the road lay out and positioning of the dwellings etc, little or nothing can be done to improve this.the traffic flows confirm that the route is highly used"". i have the traffic flow report which i have come to an average with other reports to 4,500,000 vehicles that was then also absolute no mention of the noise action plan in the report i had to find this out myself due to [...] report,also dft hgv speed limit and noise letter our ref dft/ts/a11 this letter highlights the criteria for the hgv speed increase and factors that local authorities setting local speed limits [dft circular 01/2013] these are some of the factors is, environmental factors,level of road side development,history of collisions,composition of road users. im happy to provide information with copies of these letters.

## Individual response 8

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

Yes I agree with plan but we have a noise action plan in place where we live on the A5119 but have been told it is not compulsory to follow it, I personally don't understand why spend all this time and money on something that doesn't have to be followed.

**Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

I live in a village on the A5119, which is used by heavy fast traffic ie busses, hgv's, trucks, etc. I noticed villages weren't mentioned in your plan I suppose you wouldn't expect villages to have this amount of traffic.

**Question 3: We have asked a number of specific questions. If you have any related issues, which we have not specifically addressed, please use this space to report them:**

As I have mentioned above I live in a village, you have mentioned in your report about quality of life, fatigue, disruptive sleep, stress we have all of these plus we have to put up with air pollution from the traffic.

All through the hot summer we couldn't open our windows or use our dining room because of the smell and noise from the heavy traffic.

## Individual response 9

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

I agree with the proposals however there are areas where the proposals would not be able to be enforced due to the dynamics of the roadway in conjunction with the properties along side the said roadway.

A5119 Flint Mountain - Properties are positioned along the roadway whereby there is a very narrow walkway in front of property onto a very busy 50mph roadway carrying heavy articulated lorries, buses and a high volume of traffic.

The noise of the heavy vehicles is extreme. Inside the properties the heavy vehicles cause huge cracks in the walls from their vibrations.

This road has an inadequate walkway/pavement running alongside only part way towards Flint High school where school children are expected to cross over to a continuing footpath on the opposite side of the road. This is extremely dangerous and there has been a teenager killed previously on this road crossing at this point. This is a local authority road and although they have received numerous complaints and the request to have speed reduced/cameras fitted nothing is done.

**Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

A5119 Flint Mountain

6.1.2 Reduction in the speed limit - This would reduce noise levels and the vibrations causing damage to properties along the roadway.

6.1.3 Encourage safer driving - Average speed cameras would encourage safer driving at the reduced speed.

**Question 3: We have asked a number of specific questions. If you have any related issues, which we have not specifically addressed, please use this space to report them:**

Annex E - I note there is no contribution from Flintshire County Council to the development of document Noise & Soundscape Action Plan 2018 - 2023, WG35191.

## Individual response 10

**Question 1: The noise and soundscape action plan is the Welsh Government's central noise policy document, and has been produced collaboratively with local authorities and other public bodies. It outlines the Welsh public sector's strategic policy direction in relation to noise and soundscape management for the next five years. Do you agree with the actions and long-term strategy proposed in the draft noise and soundscape action plan? If not, what do you think the Welsh Government and other public bodies should be doing differently?**

Received late, no time to read.

We have requested changes in Castleton to slow vehicles down to prevent the frequent near misses caused by speeding traffic and so that we can cross the road to catch a bus or to go home, but Newport City Council refuse to cooperate saying they have no money.

**Question 2: Do you have any comments on the content of the draft noise and soundscape action plan, besides the proposed actions and long-term strategy?**

We need things done immediately, while I am still sane!!!

I believe there is such a thing as low noise tarmac = please put some on the A48 Cardiff to Castleton

**Question 3: We have asked a number of specific questions. If you have any related issues, which we have not specifically addressed, please use this space to report them:**

I haven't had time to read it all, but I am on the A48 and the A48M runs not far away behind my property.

I suffer from Tinnitus, Increasing sleep disturbance and Annoyance.

Key problems are:-

- HGV's
- Speeding motorists (particularly racing their cars at night)
- Motorbikes (particularly those without silencers)
- Road Works vehicles (dumping traffic cones without warning)
- Recycling Lorries
- Vehicles with loud music
- Vehicles blowing their horn at other motorists not following road signs
- Stationary traffic, particularly during congestion on other routes

**Individual response 11 (partial)**

Stop aircraft flying over houses at lower levels

We have a lot of different people using St athen airbase. Not all whom stick to the rules they were given about flying over the town of llantwit major

**Individual response 12 (partial)**

Tinnitus as traffic related is incorrect, or at least extremely misleading.