



Welsh Government  
Consultation – responses collated by theme

## Local air quality and noise management in Wales

March 2017

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## Consultation responses – collated by theme

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## Question 6.1 – streamlining local air quality management

6.1 *As has recently occurred in other parts of the UK, the Welsh Government proposes to streamline the LAQM system in Wales by:*

- *moving from the current three-yearly cycle of updating and screening assessments every third year and progress reports in the intervening two years, to a simpler system with a single annual progress report;*
- *changing the submission deadline for annual progress reports from 30 April to 30 June, to avoid the end-of-financial-year work pressures; and*
- *removing the requirement for a detailed assessment where the Local Authority already has enough information to warrant declaring an AQMA, thereby enabling resources to be focused more swiftly on the development of an effective local air quality action plan.*

***We think these proposed changes will reduce the burden on Local Authorities without reducing the effectiveness of LAQM. Do you agree?***

All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council: Agree with these proposals to reduce the burden on local authorities.

British Heart Foundation (BHF) Cymru: BHF Cymru agrees that these proposals would make the LAQM system more straightforward for Local Authorities. However the quality and detail of annual progress reports would need to at least match the current requirements in order to maintain or enhance effectiveness.

British Lung Foundation (BLF) Cymru: We would support any simplifying of the reporting process for local authorities in order to reduce unnecessary burden on staff and enable more resources to be directed into directly tackling air quality issues. Our only concern would be ensuring there is no reduction in the overall information contained within the new annual progress report compared to the present reporting arrangements. We would also like to see increased transparency regarding the publication of reports, ensuring that they are readily available and accessible to all.

Caerphilly County Borough Council: Agree with the proposals to reduce the burden on Local Authorities.

Carmarthenshire County Council (Environmental Health & Licensing): Yes, we would agree that these proposed changes would help reduce the burden on Local Authorities.

Ceredigion County Council: Fully agree

Chartered Institute of Environmental Health (CIEH): Although this is an issue for local authorities we agree with the proposed change in principle as it should reduce the burden on local authority teams. We are aware from the 2014-15 Environmental Health Workforce Survey that the service area most affected by budget cuts has been environmental protection, with members citing air quality management as the area of the service 'most at risk'. (CIEH Environmental Health Workforce Survey 2014-15 at <http://www.cieh.org/Environmental-Health-Workforce-Survey-2014-15>) Any step that reduces the burden on this area of the service is therefore to be encouraged.

City and County of Swansea (Pollution Control): We agree with these proposals; as most areas have now been assessed for some time it makes sense to amend the structure of reporting.

Environmental Protection UK: This change should slightly reduce the reporting burden, but the Annual report should include all relevant information that was previously included in the Review and Assessment reports. This should include information on new sources, new pollutants, new exposure, new monitoring data, and updated modelling work. It should also include work that was previously carried out for Detailed and Further Assessments, such as source apportionment. This information is needed to ensure any action is effective. The change should be that this report should be proportionate to the scale of the problem in the local area, so areas with consistently good air quality will only need to provide a short report.

Flintshire County Council: We agree with the three proposals to reduce both the financial burden on LA's and the deadline pressure on reduced staff resources. These measures would not reduce the effectiveness of LAQM.

Natural Gas Vehicles Network: On the proposed changes to reporting outlined in section 6.1, we agree that a single annual report would give a better indication of local authorities' progress in improving air quality whilst making the reporting process simpler for all bodies involved. This would also refocus efforts in this area to an ongoing annual basis as opposed to the primary focus being on three-yearly assessments.

Public Health England (PHE) (Centre for Radiation, Chemical and Environmental Hazards): The proposed reporting requirements will allow Local Authorities to focus their work on putting in place actions to improve local air quality by streamlining reporting to Government and appears to follow the new recommendations set out in the UK LAQM TG2016.

Public Health Wales (PHW) (Health Protection Division): Agree. The proposed changes outlined in this section are appropriate and are likely to increase efficiencies within the LAQM regime and reduce the burden on Local Authorities.

Rhondda Cynon Taf County Borough Council: Agree with proposals to streamline LAQM reporting.

Swansea University (College of Law and Criminology): Requiring a single annual progress report is likely to be more efficient in its own right and to facilitate clearer communication about the direction of travel on the topics covered. A shift away from the end of the tax year as the point of focus for reporting, when many other fixed deadlines must be met by LAs provides less pretext for non-compliance and is therefore is desirable. I would say however that a June deadline is not the optimum choice as it falls near the Assembly's summer recess – more impact would be gained by placing deadlines prior to the Assembly's autumn session so that maximum publicity for results can be generated early in the new Assembly session. (see 6.3 also below)

University of the West of England (Air Quality Management Resources Centre): We support the streamlining of the reporting process

Private individual or unattributed response 1: I agree with section 6.1,

Private individual or unattributed response 7: Don't know.

Private individual or unattributed response 15: Yes, however it should be ensured that the requirement for yearly reporting should not increase the burden on other stakeholders who have no influence on the frequency and submission dates of the reports.

## Question 6.2 – joint working between local authorities

6.2 *The Welsh Government also proposes to encourage Local Authorities to consider improving efficiency by sharing expertise, pooling resources and collaborating on monitoring activities, local air quality strategies and the preparation of annual progress reports. The Welsh Government does not insist on a separate annual progress report for each Local Authority, and would accept annual progress reports and/or local air quality strategies covering two or more Local Authorities.*

***Do you agree there is scope for some Local Authorities to work more efficiently by producing annual progress reports and/or local air quality strategies jointly?***

All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council: Agree with the principal of Local Authorities producing joint progress reports.

British Heart Foundation (BHF) Cymru: We support collaborative working across Local Authorities with a sharing of expertise, pooling resources and collaborating on monitoring. Where shared strategies and annual progress reports are submitted they would need to include clear lines of accountability in order to prevent delays in actions needing to be taken as a result of that work; for example in relation to Welsh Government deadline enforcements.

British Lung Foundation (BLF) Cymru: We believe that while further efficiency could be gained by local authorities pooling resources regarding tackling air quality, individual annual progress reports should be retained to enable local people to more effectively hold their own local authority to account.

Caerphilly County Borough Council: Agree with the fact that there is scope for some Local Authorities to work more efficiently by producing joint progress reports and / or local air quality strategies.

Campaign for the Protection of Rural Wales (CPRW) (Montgomery and Brecon & Radnor branches): Whilst we would welcome the sharing of expertise across Local Authority boundaries we would not, in view of the already considerable area within Powys, support a widening of the geographical base for the preparation of annual progress reports and/or local air quality strategies beyond Powys Local Authority boundaries.

Carmarthenshire County Council (Environmental Health & Licensing): Removing the barriers to allow better joint working where this is appropriate is a sensible approach,

although this will be of more benefit to some authorities than others. It is important to ensure that this should not be at the expense of local knowledge.

Ceredigion County Council: Certainly need to find ways to work together and ultimately it would make sense to have one report (for the whole of Wales or perhaps three reports (South Wales, Mid-Wales and North Wales - reflecting the different regional issues). What might work is the Air Management equivalent of the Food Standards Agency for Wales - a multi-agency body (local authorities, Natural Resources Wales, Public Health Wales etc) co-ordinating activity and sharing resources (for monitoring, modelling, managing AQMAs etc) and ultimately pooling data etc into one report for Wales.

Chartered Institute of Environmental Health (CIEH): In the view of the CIEH there is benefit to local authorities producing joint reports as they will give a better and more representative picture of the conditions over a wider geographical area and a truer representation of the circumstances that exist that may be achieved by reports that stop at administrative boundaries.

City and County of Swansea (Pollution Control): If the need arises for local authorities to combine reports this makes sense. However some of the proposals could make reporting in urban areas more complex and involve many staff. It is likely that in those areas any additional complications to combine reports across boundaries would probably result in further delays.

City of Cardiff Council: Given the cross-boundary nature of issues around air quality and noise, we agree that for some Local Authorities, working together on progress report and air quality strategies may be advantageous.

Environmental Protection UK: Yes, provided this is not used as an excuse to reduce staff dealing with EP issues. It is vital that sufficient and knowledgeable staff are available, and supported with adequate funds and political backing, to develop and implement effective environmental protection plans.

Flintshire County Council: We agree with the principal of Local Authorities producing joint Progress Reports and/or Local Air Quality Strategies particularly in light of the requirements of the Well-being of Future Generations (Wales) Act 2015 (WFG Act).

Mineral Products Association: We would agree that sharing expertise and resources would offer scope for an improved service. However, it is important that sharing resources does not lose the local focus.

Natural Gas Vehicles Network: In terms of local authorities working together on progress reports, as outlined in section 6.2, we agree with this proposal as it is perfectly sensible to allow local authorities to work jointly on progress reports and the

actions which arise from them. In fact, we believe this model of working should not only be allowed but should be actively encouraged. Poor air quality is clearly a problem which transcends local government boundaries and often affects neighbouring areas in similar ways; for example, local authorities along the M4 corridor could benefit from working together on reducing emissions associated with motorway traffic whilst councils in the South Wales Valleys will often experience similar issues with emissions from arterial roads settling in the valleys and could therefore share expertise and resources. A silo mentality in government has been detrimental to improving air quality for decades and so we welcome this proposal to allow local authorities to collaborate on joint strategies that will be mutually beneficial to their residents.

Public Health England (PHE) (Centre for Radiation, Chemical and Environmental Hazards): PHE welcomes collaborative working across Local Authorities in order to share expertise and emphasises the importance of engaging with local public health teams.

Public Health Wales (PHW) (Health Protection Division): Agree. There is scope for some Local Authorities to work together to produce annual progress reports and/or air quality strategies. However, in our opinion, this proposal does not go far enough. It would be far more appropriate for new Public Services Boards to be tasked with producing regional air quality strategies that consider air pollution problems and solutions in the broadest possible public health context. Such strategies must adopt a broad perspective that outlines the contribution of all public bodies in reducing air pollution, risks and inequalities, and hold them to account to ensure shared objectives are specified and met.

Rhondda Cynon Taf County Borough Council: Agree there is scope to work more effectively through joint working on air quality issues of mutual concern but need to recognise the different priorities, any legal implications and available resources for each LA.

Swansea University (College of Law and Criminology): Yes. This type of development would take advantage of the potential economies of scale that are available in a relatively compact jurisdiction. It would also allow shared emphasis and experience among groups Local Authorities encountering similar areas of particular concern. This approach would also sit well with the promotion of collaborative endeavour under the Well Being of Future Generations (Wales) Act 2015.

University of the West of England (Air Quality Management Resources Centre): We support the principle of Local Authorities working together on annual progress reports when appropriate, e.g. when an identified pollution problem straddles borders.



Private individual or unattributed response 1: I disagree with 6.2 as I feel that each Local Authority should be held accountable. Pooling reports give scope for passing the buck.

Private individual or unattributed response 7: Don't they already do this if not why not?. With 22 Local authorities for a population of 3,000,000 it makes sense to share resources. Local air quality strategies are vital for the health of the population.

Private individual or unattributed response 15: Yes, but only where appropriate.

## Question 6.3 – enforcement of reporting deadlines

6.3 *It is not acceptable for Local Authorities to miss deadlines set in statutory guidance for the submission of annual progress reports and local air quality action plans. The Welsh Government expects a consistent level of high performance across Wales and therefore proposes to implement the system recently put in place in Scotland<sup>1</sup>. Except in cases where an extension has been negotiated in advance with the Welsh Government:*

- *Where an annual progress report (due on 30 June) or local air quality action plan (due 18 months after the declaration of an AQMA) is two months overdue, the Local Authority will receive a reminder.*
- *Where an annual progress report or local air quality action plan is three months overdue, the Local Authority will receive a warning letter.*
- *Where an annual progress report or local air quality action plan is four months overdue, the Local Authority will receive a final warning letter.*
- *Where an annual progress report or local air quality action plan is six months overdue, the Local Authority will receive a direction from the Welsh Ministers under section 85(3) of the Environment Act 1995.*

***Do you agree the Welsh Government should enforce deadlines for annual progress reports and local air quality action plans in the manner described?***

All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council: The Panel acknowledges that it is unacceptable for Authorities to miss deadlines; however Authorities are under significant pressure with resources and this approach fails to recognise the pressures we are under. In some local authorities, these responsibilities fall to a single officer or a fraction of an FTE, which can render the service vulnerable to sickness or maternity/paternity leave pressures etc. it must also be pointed out that an early response is impossible if the local authority is carrying out any monitoring. Clearly quite a few months will pass before the authority has all the data properly available to analyse and interpret. It is not possible to draft out the critical text and simply hope that the rest of the data will appear and not change any of the outcomes. Any monitoring work will need analysis and verification which will take time, added to which is the lab time required for the analysis of any diffusion tube surveys. In areas with a number of AQMAs and a number of areas close to failing, it

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<sup>1</sup> See <http://www.gov.scot/publications/2016/03/9717>.

will not be possible to hit the proposed target date and so it is feared that the impression will be created that certain authorities are not committed to air quality, when actually any authority heavily engaged in difficult air quality problems is unlikely to report to your timescale. This could encourage some Councils to simply reduce investment and simplify their approach, which would not achieve the overall aim.

British Heart Foundation (BHF) Cymru: BHF Cymru agrees that it is unacceptable for Local Authorities to miss deadlines set in statutory guidance and supports the proposal in the manner described. We believe that this gives Local Authorities ample time to comply with their statutory requirements and a clear process of action should they be in breach.

British Lung Foundation (BLF) Cymru: We believe it is important for progress reports to be submitted to Welsh Government in a timely manner, to enable both Welsh Government and local people to effectively scrutinise their actions. With this in mind, we would recommend shortening the deadline enforcement timescale to mean that section 85(3) directions by Welsh Ministers would come three months following the deadline, rather than six. We would also encourage the Welsh Government to consider imposing fines on local authorities who fail to submit their reports within this three-month window.

Caerphilly County Borough Council: Caerphilly agrees with the fact that it is not acceptable to miss statutory reporting deadlines. The issue has always been that the deadline of the end March was unrealistic for Local Authorities to comply with due to the fact that the monitoring data from the previous calendar year has to be ratified, analysed and entered in to a suitable format for reporting purposes. Whilst the suggested approach seems fair, it also needs to take in to account that resources are decreasing year on year within Local Authorities and in some cases air quality falls to a single person to deal with in addition to their daily workload so reports can take time to draft especially when the information that needs to be inputted is held by various departments throughout the Council.

Carmarthenshire County Council (Environmental Health & Licensing): We feel that the implementation of deadlines that must be met would potentially help in raising the profile of Air Quality work within Local Authorities. The deadlines presented in the consultation appear to be reasonable and offer plenty of scope to discuss any issues that Authorities may have in submitting. The new reporting deadline of 30th June will assist in allowing LA's meet this deadline. If, for whatever reason, an LA is not able to meet the reporting deadlines, then the matter will be raised at the highest level within the organisation, which in itself could highlight the need and the importance of dealing with and resourcing LAQM. Given that NO<sub>2</sub> is a National indicator under section 10 of the Well-being of Future Generations Act (Wales) 2015 then the significance of this should be reflected by the implementation of a deadline.

Ceredigion County Council: Yes, deadline should be enforced.

Chartered Institute of Environmental Health (CIEH): As noted in our response to 6.1 above environmental protection has been the service area in Public Protection Departments most adversely affected by cuts. Whilst we agree that early reporting and completing responses within deadline periods is important, it is important to ensure that the drive to do so does not create a greater burden for local authorities. The nature of some sampling is such that results will not be available quickly, this being particularly the case where an AQMA is close to failing and the need for accurate results to ensure accurate reporting will inevitably create delay in responding. It would be counter intuitive were a need to respond to a deadline that would be missed by a local authority doing sophisticated sampling in a number of AQMAs led to that authority using simpler and less sophisticated sampling techniques in order to comply with the deadline rather than continuing to carryout monitoring that would give results that were of greater value in public health terms. The need to produce a response within a timeframe should not outweigh the underlying reason for carrying out monitoring and addressing the findings generated.

City and County of Swansea (Pollution Control): Realistically we have never been able to start writing the report until all the available data is ready. This often takes us into June or July and the report is then prepared through the summer as time becomes available. Over the last decade we have lost a number of key staff in this area and as the remit of the report widens, it seems unrealistic to assume that this time can be significantly compressed. There must be some sensible debate about all the technical requirements issued since 1995 as we agree that reports need to be timely and relevant. Given the number of other statutory duties that we can no longer respond to, ministers must accept that we have to make some very difficult decisions to prioritise work. Here we accept that air quality is one of our top priorities, but we would still find it difficult to avoid delays unless the guidance is fundamentally changed. We would be very happy to engage in a detailed discussion on this.

Environmental Protection UK: It is important that Local Authorities meet their duties on air quality and noise. By enforcing deadlines and ensuring adequate action the Welsh government is giving a clear indication of the importance of air quality and noise and their impact on public health, to both the EP teams and the Council and members.

Flintshire County Council: Whilst it is unacceptable for Authorities to miss deadlines; it should be appreciated that Authorities are under significant pressure with resources and this approach fails to recognise the pressures staff are under. In some LAs, AQ work is carried out by a single officer, this lack of resilience can render the service susceptible to many pressures including sickness, leave or simply other conflicting work duties e.g. A Planning enquiry or Statutory Nuisance prosecution.

Mineral Products Association: Accountability is critical for all public bodies and whilst there may be extenuating circumstances which cause delay, sharing services should help resolve any shortfalls in expertise. As such the proposed deadlines are supported, however, it is unclear from the consultation what penalties would be imposed for failure to comply.

Natural Gas Vehicles Network: As outlined in section 6.3, we support the Welsh Government's proposals to enforce the deadlines for annual progress reports. These reports should be viewed with the same seriousness as the issues of air quality and related preventable deaths are as they are the tool with which local authorities can take action. Enforcement is therefore necessary but we believe the process should be more stringent than that which is suggested. Half a year should not be allowed to go by without statutory action being taken, therefore we would suggest a warning letter after the report is two months overdue, a final warning letter after three months and a direction from Ministers after four months.

Rhondda Cynon Taf County Borough Council: Agree there is a need have deadlines but this approach would also require a degree of flexibility, as there may be particular circumstances for a LA which caused the delay in submitting the reports, such as absent staff and pressure on resources. In addition this deadline may become harder to meet if we take on a coordinating role for the reporting of non-traditional AQ information (WFG & noise). This is possibly unlikely to be achieved by a single Officer. Increased flexibility should be provided in the 1<sup>st</sup> year of implementation as we change from existing template to the potentially prescribed new one.

Swansea University (College of Law and Criminology): This is one area where compliance should be highlighted and non-compliance publicised – this creates a 'tote board effect' where non-compliance becomes the subject of public attention and political embarrassment, which makes failure to act as stipulated in the guidance unattractive and which may decrease the necessity for formal government action performance by Local Authorities. The 'sanctions' on offer at present are comparatively low in impact and take some considerable time to escalate – it also seems to be unnecessarily elaborate to offer two 'warning letter' phases in respect of a known reporting requirement which already allows plenty of notice of what is required and when. Adding a publicity dimension to the reminders and warnings process would be helpful in informing the public of non-compliance and garnering support for action promoting compliance.

Private individual or unattributed response 4: If 1300 people a year die in Wales per year due to poor air quality and there are 22 councils that is almost 60 people per council per year, which is 5 per month. So for the average council 10 people will die in the time the council has after it's deadline expires before they get a letter and another 10 before we move on from letters to enforcement. These timescales

suggest a lack of enthusiasm and will to action on behalf of the government and make this look like an exercise in appearing to do something while not actually doing anything concrete. The timescales should be shorter to show the actual urgency of the matter.

Private individual or unattributed response 11: Councils are currently encouraged to include information on non-LAQM pollutants such as PAH, metals etc. It is often the case that this data is not available on the UK-Air website until the end of June. Also, it is often necessary to submit these reports to the relevant Council Board before sending it to Welsh Government. Both of these delays make it unlikely that these reports could be submitted on time.

University of the West of England (Air Quality Management Resources Centre): We agree that the Welsh Government (WG) should enforce deadlines, however the WG should aim to understand why the submissions are overdue as well as issuing warning letters.

Private individual or unattributed response 1: I think that a deadline should be exactly that. I don't feel that the Local Authority should be allowed up to an extra six months to write a single report. It wouldn't happen in Industry.

Private individual or unattributed response 7: Yes.

Private individual or unattributed response 15: Yes, however it should be ensured that the proposed changes should not increase the burden on other stakeholders who have no influence on meeting the deadlines for annual progress reports and local air quality action plans.

## Question 6.4 – new reporting template

6.4 *The Welsh Government proposes to take ownership of the template for annual progress reports, to ensure it is more fully aligned with Welsh policy. Feedback from Local Authorities suggests the current format is time-consuming when it comes to data entry. The Welsh Government would welcome concrete proposals from Local Authorities for improvements to the template, ideally working jointly through the Welsh Air Quality Forum to agree a more user-friendly layout.*

***If you are a Local Authority, can you suggest ways to make the format of the annual progress report template easier to complete without reducing its usefulness to readers?***

All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council: The templates should be simplified and should focus on the primary pollutants of concern NO<sub>2</sub> and PM<sub>10</sub>. There shouldn't be a need for local authorities to repeatedly undertake the same tasks year on year if the issue has already been considered and excluded in a previous year, unless there has been a significant change. The template should be consistent & not change year on year, as this would make data entry much easier and greatly reduce the time taken to complete the report. Although the Panel acknowledges the need to amend should the requirement to do so arise, but by an agreed format & in a timely manner. It may also be helpful to have an online option for completing the report. It should also be possible for readers to view the history of previous reports to get the full picture, this could help reduce the time wasted in justifying whether certain pollutants are an issue in certain areas. We would not want any members of the public to feel that we were ignoring some risks which can be the suggestion (for example the current pressure to measure air quality at schools), when often a review of previous reports will demonstrate why certain areas are no longer of interest and this is not simply an omission, but the result of a carefully constructed series of surveys.

Association of Noise Consultants: We agree with all the proposals except the following: - 6.4 - although we are not a Local Authority, perhaps employing an air quality specialist to liaise with all the officers and assist them completing the report/interpret the data would help.

British Lung Foundation (BLF) Cymru: Despite not being a local authority, we would support a common format for annual progress reports to ease the comparative analysis of data, and ensure greater efficiency in the reporting process.

Caerphilly County Borough Council: The template layout should be simple and should negate the need for Local Authorities to enter the same data year on year

where no significant change has taken place. Maybe a question and tick box exercise and then a drop down where the Local Authority needs to enter details of a change e.g. a new bus depot / train station with relevant exposure, a new road with relevant exposure or a new permitted process etc.

Carmarthenshire County Council (Environmental Health & Licensing): We would agree that the current reporting template needs to be reviewed and standardised so that data collection can take place well in advance of the template being made available. Consistency of reporting requirements will also assist with this, in that information can be gathered throughout the year in a way in which is compatible with the reporting template (which would be the same format each year). Also agree that the template should be agreed through working with the WAQF, members of which are in a very good position to suggest improvements.

Ceredigion County Council: The format certainly needs to be standardised and made easier for Local Authorities to complete. Perhaps it should be a tick boxed approach. For example, LAs could tick boxes for the pollutants monitored (providing data in a standardised table when it does monitor a particular pollutant), ticking a box if there are any exceedances (and then providing more details, location, extent of exceedances, issues involved, means of addressing etc). If a local authority has no AQMAs it should be able for it to proceed along an easier route than those that do have AQMAs etc. A way forward may be to abstract the best approaches in current reports from local authorities and combining these into a template for the use of all (using a tick box approach)?

Chartered Institute of Environmental Health (CIEH): The purpose of reporting is to advise and inform the public of areas of concern. Currently there is much public concern about air quality around school gates, CIEH has commented in the media about monitoring of airborne pollutants around school gates and practical and pragmatic ways of effecting reductions. In the view of CIEH the purpose of the reports generated is to inform the public of the quality of the air in specified areas on a year by year basis, allowing for comparisons to be made. To this end we are of the view that all annual reports should be accessible to allow for such comparisons to be made. For this to be done in a meaningful way it is also important that the templates used do not change more than is necessary year on year. We consider that the important pollutants (PM10 and NOx) should be reported, but that where an area has been shown not to be a source of significant concern on-going reporting should cease. It is not best use of limited resources to nil report year on year.

City and County of Swansea (Pollution Control): Following the above comment we really have to agree to restrict the focus to the two key pollutants. However in Swansea there have been useful reports on other pollutants – perhaps either the forum or Welsh government could construct an easier way for the public to view previous reports on specific pollutants? There have also been concerns in this area



about nickel in air and the annual report is sometimes a useful way of publishing relevant data.

Environmental Protection UK: Yes.

Flintshire County Council: We agree that the templates should be simplified. They should focus on the primary pollutants of concern NO<sub>2</sub> and PM<sub>10</sub>. Clearly there is no need for LAs to continually undertake the same tasks every year if the problem has already been considered and excluded in a previous year. Of course this should happen if there has been a significant change requiring further consideration. It may also be helpful to have an online user friendly option for completing the report. Therefore, my suggestion to simplify an online form would be to remove anything that is not required and to produce conclusions and advice in simplified language easily understood by lay people.

Rhondda Cynon Taf County Borough Council: It would be beneficial to have a simplified template which focuses on the primary pollutants of concern NO<sub>2</sub> and PM<sub>10</sub>. It would also help if the template was structured to avoid unnecessary repetition and was set up to offer a user friendly system which allows the LA to provide a brief annual Air Quality Management update. It may be helpful to have a flexible reporting template (rather than a mandated one) which would still enable LA's to provide brief updates on continuing issues.

Private individual or unattributed response 12: I generally agree the template should be simplified and less onerous with regard to the air quality results. In my view a simple summary of air quality trends should be sufficient to illustrate improvements (if any), if there were a national spreadsheet / database that could be used for all the tube data and workings (distance, bias etc) it would save a lot of time and ensure consistency. The focus of the annual report should be weighted much more to the progress of actions and the change of fleet composition, rather than the over analysis of the air quality problem. The report should include a series of key performance indicators with quantitative measurements on a range of actions. These could include: Fleet Composition (General Fleet, Bus Fleet, Council Fleet & Taxi Fleet) Changes in the fleet composition, Age, type etc captured via ANPR surveys, general record keeping and reporting. Electric vehicle charging points The number and usage of Electric Vehicle charging points. School Travel Plans / Educational Programmes The uptake and range of school travel plans and uptake of educational AQ programmes. Cycling Cycle Path Network (km) and usage. HGV Fleet Recognition If an HGV fleet recognition scheme is implemented report on the uptake and other criteria. Funding Summary of annual expenditure and sources of funding.

## Question 6.5 – content of annual progress reports

6.5 *In terms of content, the Welsh Government proposes each LAQM annual progress report from 2017 onwards should state:*

- *whether air and/or noise pollution figure in the Local Authority's well-being objectives, and if so, in what form, and what progress has been made in meeting those well-being objectives to date;*
- *what policies the Local Authority has in place to reduce average levels of NO<sub>2</sub>, PM<sub>2.5</sub>, PM<sub>10</sub> and noise pollution at dwellings across the Local Authority, taking into consideration the Welsh air quality exposure indicators (see Annex A) and national noise maps; and*
- *how LAQM monitoring, the Welsh air quality exposure indicators and national noise maps have informed or will inform the PSB's assessment of local well-being.*

***Do you agree annual progress reports should include this information?***

All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council: Agree with these proposals in principle as long as this does not put an additional reporting burden on local authorities. Section 6.1 recognises moving to a simpler system of an annual progress report every year. The requirements in Section 6.5 may make it more complicated if the statements are to be backed up by sufficient data with concrete examples of how this is being addressed. Other sections of the Local Authority will have to become fully engaged in order to complete the submission. Strengthening the links to inform the PSB's assessment of well-being could raise the profile of air quality and noise pollution issues, which would be beneficial, although it is unclear how we are going to inform the process going forward. Greater working across traditional professional boundaries is essential for us to deliver air quality improvements; however for this to be meaningful and reported on without yet more slippage will be quite a challenge. Currently many colleagues in Wales are not confident that local planning policies and early work by the PSB's will have any noticeable effect on air quality. There are real concerns about the lack of opportunity to explain and influence decisionmaking around this complicated problem in some areas; whilst in areas that are compliant, air quality is way down the list of other local priorities. The preferred approach would be to make it a statutory duty for the PSB's assessment to consider air quality and noise. There also needs to be a realisation that in some local authorities where the air quality is generally good, there won't be any specific policies in place to reduce average NO<sub>2</sub> and PM<sub>10</sub>. Finally, technically, PM<sub>2.5</sub> has not been within the Authority's remit so limited resources would have been committed to this historically

and hence for some this would mean a significant change of policy. Even in the urban areas which have invested in monitoring programs for PM 2.5 the supporting technical guidance and evidence was not in place to achieve the same goals as for the other pollutant objectives. Technically it is very difficult to report with assurance on how local measures will reduce average levels of PM 2.5 in that area. It is agreed that this is a very important topic of direct public health significance but for that reason it is important to avoid annual reports which result to modelled projections instead of local authorities providing the vital backstop of good quality local monitoring providing assurance on whether national policies are working or not.

British Heart Foundation (BHF) Cymru: We agree that each LAQM annual progress report should include information against the three proposed statements. It is important the Local Authorities clearly demonstrate their commitments and actions to support the well-being objectives of the Well-being of Future Generations Act. Referencing well-being in LAQM would support Local Authorities to do this.

British Lung Foundation (BLF) Cymru: We would agree that this information should be included.

Caerphilly County Borough Council: Agree with the proposals provided that this does not make the reporting onerous. Section 6.1 agrees a simpler layout which is designed to reduce the burden of reporting for local Authorities, so this area will need some thought. Consideration will need to be given to what kind of evidence will be required for reporting purposes in terms of WFG and how LAQM and noise maps will inform the PSBs assessment of well being and detailing what progress has been made. WFG spans a number of departments / organisations so collating this information may take time and place additional pressures on air quality officers.

Campaign for the Protection of Rural Wales (CPRW) (Montgomery and Brecon & Radnor branches): We believe air and noise pollution should figure within a Local Authority's well-being objectives in such a way as to reflect that authority's particular challenges. For rural authorities such as Powys, this requires recognition of the noise and air quality impacts that intrusion of industrial development into a rural area, such as wind/solar and intensive livestock units (ILUs), is likely to cause and the issues arising from each must be specifically addressed in that LA's objectives. Annual progress reports should include information on achievement of the authority's specific noise/air quality objectives.

Carmarthenshire County Council (Environmental Health & Licensing): Yes, we agree that these should be included in the LA's Well-being objectives, but care should be taken that the figures are in the correct format and criteria considered is clear. It is not known what "noise pollution" refers to, and what this figure would be - it could mean number of complaints; background noise levels (where they are known/exist), etc. It would also be of benefit if the two figures were reported separately. How you

measure progress against the objectives will depend on what they are. It is not clear what "noise pollution at dwellings" means, but in principle we would agree with this proposal. It does, however, seem to require LA's to go beyond the statutory requirement of bringing levels of NO<sub>2</sub> below that of the Air Quality Objective, which would be "nice to do" but could be difficult to achieve under the current pressures on services. This may also require additional monitoring capabilities if the reduction in PM<sub>2.5</sub> or PM<sub>10</sub> is to be demonstrated. We would agree with this proposal; closer engagement with PSB's will also help but this should form the basis of any measures incorporated. Why only use noise maps to inform the well being objective? This would insinuate that the well being objectives should only consider noise from traffic? Also, in some authorities the current noise maps demonstrate no noise issues, this could lead to PSBs considering no need to include noise as an objective. Using national noise maps to inform the PSB's assessment of local well-being should be one of the many options that should be considered. Noise maps look only at transportation noise as a source however there are a number of potential sources equally as important. Should the noise maps indicate that your LA doesn't have an issue then could noise be excluded or overlooked?

Ceredigion County Council: Agreed, maps are available for guidance

Chartered Institute of Environmental Health (CIEH): CIEH is committed to principles of partnership and cross boundary working, however it is hard to see how this will work as envisaged. To date we have seen nothing from Public Service Boards (PSBs) that suggests that air quality is high on their agendas, neither have we seen evidence that supports the idea that local planning policies take account of the need to reduce air or noise pollution. While reducing air and noise pollution levels are drivers from local authority environmental health departments they are not drivers for PSBs and we suggest that in their first years of activity are unlikely to be, given the other challenges on which they are required to deliver. Going forward it is clear that there will be opportunities to address noise and air pollution using Health Impact Assessment to mitigate their impacts at the planning stage and to engage all partners in that process, including PSBs, but in the view of CIEH it is essential that PSBs recognise the importance of noise and air quality and their role in driving forward improvement as a critical part of improving wellbeing. We are concerned by the potential implications arising from the proposed introduction of reporting on PM<sub>2.5</sub>, which represents a significant policy change for Welsh Government. We know that PM<sub>2.5</sub> levels in urban areas are generally high in difficult to tackle areas, such as geographically challenging canyon development and high density traffic routes which will require major strategic infrastructure changes to effect significant change. We question whether the need to report will deflect resources from local solution pollution reduction measures which would be detrimental to public health.

City and County of Swansea (Pollution Control): We agree with these proposals even though it will clearly increase the work input needed by the local authorities.

The policy makes sense and hopefully will force discussions across professional and organisational boundaries. This is essential for us to successfully address air quality issues. Even in an authority like Swansea where there is a very good working relationship between highways and planning and environmental health, this has still been one of the biggest challenges in getting decisions made which deliver improvements and still allow development goals to be delivered. Sadly over the last decade our engagement with local health colleagues and NRW is significantly less on most areas of work, but more importantly, almost non-existent on air quality. We are aware of some excellent work being done by Public Health Wales to try and improve this, but delivering this style of work at a local level is proving to be very difficult in the current climate. This needs genuine interdepartmental leadership at a national and local level. We are also concerned about duplicating work streams and there needs to be a discussion about WFG reporting as well as the relevance of some of the indicators to actual residential exposure. We sincerely hope that this policy shift will lead to a better understanding of air quality and noise for PSB's but again currently at a local level the experience across Wales is very patchy.

Environmental Protection UK: Yes.

Flintshire County Council: In principle we agree with these proposals. However this is likely to put an additional reporting burden on LAs. Whilst Section 6.1 recognises a need to reduce the burden of reporting on LA's the additional reporting requirements proposed in Section 6.5 may make it more onerous and we will need to rely on other sections of the Local Authority in order to complete the Progress Report. I agree with the proposed strengthening of links with the PSB's to inform their assessment of well-being because this will raise the profile of air quality and noise pollution issues. Again, whilst this would clearly be beneficial it is still unclear to me as the AQ Officer who I should be advising or how I am going to inform the process going forward. The ideal approach would be to make it a statutory duty for the PSB's assessment to consider local/regional air quality and noise and consult with the Local AQ Officers. There also needs to be a realisation that in some LAs where the air quality is generally good, there won't be any specific policies in place to reduce average NO<sub>2</sub> and PM<sub>10</sub>. Finally, PM<sub>2.5</sub> has not been within the Authority's remit so we like most LA's in Wales have never committed any resources to this in the past. Therefore, this proposal as it stands would mean is a significant change of policy and potentially a very large increased burden on our very limited resources.

Mineral Products Association: Yes, we would agree with the proposed content

Natural Gas Vehicles Network: We agree with the proposals in section 6.5, particularly the suggestion to mandate the inclusion of NO<sub>2</sub> and particulate figures as they are undoubtedly now among the top targets for addressing air quality issues. Residents and the Welsh Government will need these figures to be included so that

they can come to an informed decision as to whether a LAQM plan is robust and effective enough.

Natural Resources Wales: NRW welcomes the proposals set out in the consultation to place more emphasis on partnership working and linking the LAQM reporting process to the newly established Public Services Boards (PSBs) and Well-being plans. This should help and inform location action plans to deliver “shared outcomes” in relation to air quality and noise. We recognise that we have a role to play in working with Local Authorities and Local Health Boards to deliver shared outcomes, within the PSBs and potentially through other partnerships. Along with the suggestions in the consultation for additional information to be included in the annual reports, we would also welcome the inclusion of information on amelioration and mitigation measures in respect to noise and air pollution and the number of Statutory Quiet Areas created as refuges from noise, defined by the criteria for the Green Flag Award.

Public Health England (PHE) (Centre for Radiation, Chemical and Environmental Hazards): PHE supports the reporting of Local Authorities’ well-being objectives relating to air and noise and any policies used by Local Authorities to reduce exposure to air pollutants and noise. This will reinforce the need to maintain a focus on air quality and noise and provide a mean of measuring improvement over time.

Public Health Wales (PHW) (Health Protection Division): Yes, the information listed would be appropriate to include in annual reports. It would also be beneficial to specify exactly what the collective objectives are (at PSB-level or other region (including national)) and what each partner will do to help achieve them. It should be noted that the national indicator in its current form, while informative, is unlikely to help partners identify problems and plan action (since it is based on modelled data) or evaluate intervention effectiveness (since modelled data will continue to show year on year improvements without taking action).

Rhondda Cynon Taf County Borough Council: Agree in principle but any reporting requirements should fit with the simplified template as proposed in 6.4. The reliance on other Council Departments and external partners, to assist in this process would also need to be recognised. It would assist if clear guidance was produced in order to assist LA’s in this process, particularly in respect of lines of communications and responsibilities for the relevant information.

Swansea University (College of Law and Criminology): Yes, but bullet 1 should use ‘how’ not ‘whether’ – reporting on LAQM is a responsibility that it is appropriate to map directly on to LA wellbeing objectives and this requirement should be expressed in terms of the expectation of engagement.

University of the West of England (Air Quality Management Resources Centre): Yes, we agree that annual progress reports should include this information.

Private individual or unattributed response 1: I agree with the proposals.

Private individual or unattributed response 7: Yes of course it should, it is well documented the damage particulate matter can do therefore we should publish the information.

Private individual or unattributed response 15: Yes, however the changes to the report content should not increase the workload for other stakeholders over and above their current legal and statutory requirements i.e. the changes should not adversely impact businesses that operate on a UK and global scale.

## Question 6.6 – content of local air quality action plans

6.6 *Furthermore, the Welsh Government proposes any new or updated local air quality action plan from 2017 onwards should state:*

- *how actions are being taken forward not solely with a view to achieving technical compliance with the national air quality objectives, but also with a view to maximising their contribution to reducing average levels of NO<sub>2</sub>, PM<sub>2.5</sub>, PM<sub>10</sub> and noise pollution at dwellings across the Local Authority, and thereby to achieving the greatest public health benefit; and*
- *how the local air quality action plan aligns with the objectives in the PSB's local well-being plan.*

***Do you agree local air quality action plans should include this information?***

All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council: Agree with these proposals but this does put an additional reporting burden on local authorities. Unclear as to how the “noise pollution at dwellings” would be reported. All these issues are important and are worth reporting, but it would be naïve to presume that action plans can include these complex additional issues without significant extra work. Similarly it will be difficult to discuss how the action plan aligns with the objectives in the local well-being plan if the PSB than year does not see this as a local priority. We fully understand the need to completely change the way all the local agencies operate in terms of addressing some of these problems, but it would be quite unfair to hold local authorities to account for delays or shortcomings in matters which are not under their control. We absolutely agree that all these matters should be aligned but the consultation document seems to swing from a more draconian approach on reporting for local authorities but a vague assumption that all the other organisations will agree with our priorities? Clearly PSB's are not meant to be committees of local government and will have their own views on priorities.

British Heart Foundation (BHF) Cymru: Scientific research suggests that particulate matter (PM) is a main cause of human disease, including cardiovascular disease. (Brook et al (2008) Cardiovascular effects of air pollution. Clinical science 115, 175-187) There are thousands of chemicals within PM that may individually or in combination have an effect in our bodies. For this reason we would support the proposal that local air quality plans should include how actions are being taken forward with a view to maximising their contribution to reducing average levels of NO<sub>2</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub>.



British Lung Foundation (BLF) Cymru: We would agree that this information should be included.

Caerphilly County Borough Council: It is clear that noise and air quality fit together and there is often a direct relationships between them. How the noise element of reporting will be presented in an air quality Action Plan will need some consideration. This will place additional time and resource implications on the process. In addition there is always the risk that noise and air pollution do not align with the specific priorities of the PSB in a particular year, so whilst LAs can discuss how the air quality action plan aligns with the objectives in the PSBs local well being plan, WG need to be conscious of the fact that air quality / noise may not always form part of the local priorities. There is a need to change the way in which various organisations work with each other, but it would not be fair to hold Local Authorities to account for something that is out of their control.

Campaign for the Protection of Rural Wales (CPRW) (Montgomery and Brecon & Radnor branches): We agree local action plans should include the information recommended.

Carmarthenshire County Council (Environmental Health & Licensing): We would agree with these proposals in principle, as they promote Well-being, but they would be difficult to demonstrate / measure. Again, "noise pollution at dwellings" needs some clarification. We would also express caution with the commitment to reducing NO2, PM2.5 and 10 where some authorities are struggling to meet their minimum statutory requirement. Would this also place an additional monitoring and reporting burden on the reporting requirements which were going to be streamlined?

Ceredigion County Council: Agreed

Chartered Institute of Environmental Health (CIEH): Whilst endorsing the principle of addressing noise pollution in dwellings we are also cognisant of the difficulty in defining and in measuring the same. We cannot see how a PSB can address the issue through action planning, neither have we seen any evidence that suggests that PSBs regard this issue as a priority. Unless Welsh Government is minded to compel PSBs to tackle the issue we consider it is unlikely that noise in dwellings will be a priority for them. Most incidents of noise in dwellings is dwelling specific and can be dealt with using the statutory nuisance powers in the Environmental Protection Act 1990 or through the use of Antisocial Behaviour powers. Whilst the powers are generally used in a reactive way following complaint both can be used to stop recurrence of noise and we suggest that this use of existing statutory powers for issue specific solutions is the preferred way forward.

City and County of Swansea (Pollution Control): We agree with this policy but there does seem to be an assumption that the PSB will also agree that this is a local

priority? Reporting on air and noise at a local level will need to be accurate and relevant to resolve many of the conflicting tensions between agencies at the PSB. This may not be quite as easy as implied but is clearly necessary.

Environmental Protection UK: Yes.

Flintshire County Council: We generally agree with these proposals to inform the public and achieve the greatest public health benefits. However, this is again likely to put an additional reporting burden on our limited resources. It is not clear how the “noise pollution at dwellings” information would be gathered or how this could be reported. If this was in an annual progress report would the public expect to know what the likely average noise level would be outside every dwelling. I’m not sure that this is achievable.

Mineral Products Association: Yes, we would agree with the proposed content

Natural Gas Vehicles Network: Furthermore, the proposals in section 6.6 are also sensible as they will guarantee the best real-world outcomes for residents. In the past, overemphasis on meeting national air quality figures has, in some cases, led to inadequate or poorly planned action being taken in many parts of the UK. In order to properly get to grips with air quality in an ambitious way, it will be necessary for all levels of government to take a holistic approach which considers the impact of decisions on a range of pollutants and particularly the most harmful to health such as NO<sub>2</sub> and particulates.

Public Health England (PHE) (Centre for Radiation, Chemical and Environmental Hazards): PHE would agree with this approach There is no evidence for a threshold below which health effects would not be expected for particulate matter. (COMEAP Long Term Exposure to Air Pollution: Effect on Mortality, 2009 (<https://www.gov.uk/government/groups/committee-on-the-medical-effects-of-air-pollutants-comeap>), WHO Review of evidence on health aspects of air pollution – REVIHAAP Project Technical Report, 2013 ([http://www.euro.who.int/\\_data/assets/pdf\\_file/0004/193108/REVIHAAP-Final-technical-report-final-version.pdf?ua=1](http://www.euro.who.int/_data/assets/pdf_file/0004/193108/REVIHAAP-Final-technical-report-final-version.pdf?ua=1))). Therefore, the reduction in levels of particulates and NO<sub>2</sub> across the Air Quality Action Plan area will have a public health benefit. Air Quality Action plans which include the objectives of the local well-being plan can highlight measures to promote active travel (walking and cycling) and integrated public transport; these measures will reduce emissions of nitrogen oxides (NO<sub>x</sub>), PM<sub>2.5</sub> and CO<sub>2</sub>, and will improve physical activity levels and related physical and mental health outcomes. It is therefore important to highlight the multiple health and environmental benefits associated with active travel.

Public Health Wales (PHW) (Health Protection Division): Agree. However, Action Plans must also reflect how LAQM is integrating with wider public health activity that

contributes to reducing air pollution, risks and inequalities e.g. behaviour change interventions, active travel, influencing the land-use planning process, incident response.

Rhondda Cynon Taf County Borough Council: An update on how the local air quality plan aligns with the objectives in the Well Being Plan and any mutual noise mitigation, would be beneficial. As with 6.5, guidance could be utilised to ensure consistency in reporting.

Swansea University (College of Law and Criminology): Yes.

University of the West of England (Air Quality Management Resources Centre): Where and when possible the reduction in air pollution attributed to specific interventions should be made explicit to facilitate any evaluation of measures.

Private individual or unattributed response 1: I agree.

Private individual or unattributed response 7: Yes we should have this information, they should already be in technical compliance with the national air quality objectives.

Private individual or unattributed response 15: More details are required to understand how these new actions will be developed and implemented. For existing AQMA's it should be ensured that these new actions do not conflict with the existing actions based on the air quality objectives which should remain the priority. The new requirements suggest that pressure to reduce pollutants will continue regardless of performance against the air quality objectives. Therefore, if an AQMA is continuously compliant with the objectives then there may not be scope to reduce or revoke the AQMA. A balance is required between effort versus the benefits of achieving the objectives set out in the action plan to ensure available resources are used effectively.

## Question 6.7 – prioritising key pollutants

6.7 *The Welsh Government proposes to retain all the national air quality objectives currently in regulations, but does not expect Local Authorities to spend time and resources monitoring and reporting data on pollutants no longer considered to be of national concern unless there are specific local reasons for so doing.*

***Do you agree to our retaining all the existing national air quality objectives but encouraging Local Authorities to focus just on NO<sub>2</sub> and particulate matter?***

All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council: Agree with these proposals although there needs to be flexibility as some local authorities will have specific local issues with a variety of other pollutants. Obviously this process must retain the confidence of the public and we would not want to give the impression that we were ignoring other localised concerns.

British Heart Foundation (BHF) Cymru: Studies suggest that traffic pollution is specifically associated with cardiovascular risk. Experts believe this one of the major public health burdens today because we're all exposed to traffic pollution so often. (American Heart Association (2010) Particulate matter air pollution and cardiovascular disease. An update to the scientific statement from the American Heart Association. Circulation May10, 2010.) The majority of research has focussed on fine particles and cardiovascular disease, and there is now enough evidence to support a causal link. PM2.5 contains many of the disease causing toxic compounds released on combustion, and most studies show a stronger link with PM2.5 than other size particles. (Brook et al (2008) Cardiovascular effects of air pollution. Clinical science 115, 175-187) It is therefore very important that Local Authorities focus on NO<sub>2</sub>, and particulate matter. However other air pollutants may also pose cardiovascular risk alone or in conjunction with fine particle exposure. Additional research is needed to find out about the risks of several gaseous pollutants such as ozone and nitrogen dioxide. (American Heart Association (2010) Particulate matter air pollution and cardiovascular disease. An update to the scientific statement from the American Heart Association. Circulation may10, 2010.)

British Lung Foundation (BLF) Cymru: We are concerned that focusing on these two pollutants alone, while ignoring other known harmful pollutants, could have an adverse impact on the respiratory health of people in Wales. We believe local authorities should be encouraged to reduce any known unsafe levels of any kind of harmful air pollution. In particular, clear World Health Organisation guidelines exist on permitted levels of ozone (O<sub>3</sub>) and sulphur dioxide (SO<sub>2</sub>), both of which are

known to cause significant respiratory difficulties among those with a pre-existing condition, as well as other health effects (Ambient (outdoor) air quality and health, World Health Organisation, September 2016: <http://www.who.int/mediacentre/factsheets/fs313/en/>).

Caerphilly County Borough Council: Agree with the proposals although some flexibility needs to be maintained for those authorities dealing with localised problems of pollutants other than PM and NO<sub>2</sub>.

Campaign for the Protection of Rural Wales (CPRW) (Montgomery and Brecon & Radnor branches): Rural and urban local authorities will face some different challenges in protecting and improving air quality. Local authorities with a high burden of ILUs must consider which pollutants, in addition to particulates and NO<sub>2</sub> are also of concern and these must be included in their local action plan. We would suggest that ammonia would be an additional pollutant which should be included in Powys's air quality action plan.

Carmarthenshire County Council (Environmental Health & Licensing): We would agree with this proposal, except where other AQO's are a potential issue, e.g. SO<sub>2</sub>. Could there be a general question asking whether there has been any changes in the area that requires other AQO's to be considered? This will demonstrate that this has been given adequate consideration whilst also reducing the reporting requirements.

Ceredigion County Council: Agreed

Chartered Institute of Environmental Health (CIEH): The CIEH considers that there is merit to the proposals as made, however we are concerned that the opportunity for local authorities to also report on local issues of concern or significant should not be lost. There must be opportunity for local authorities to report on issues of specific local concern since this will inform members of the public about local conditions as well as maintaining public confidence in the reporting system.

City and County of Swansea (Pollution Control): It is important that local pressures to address other concerns are responded to in the report, but we agree that NO<sub>2</sub> and particulates should be the primary focus.

Environmental Protection UK: This needs to be more specific

Flintshire County Council: We agree with these proposals.

Mineral Products Association: Yes, we would agree.

Natural Gas Vehicles Network: In terms of the focus on NO<sub>2</sub> and particulates outlined in section 6.7, we agree with this suggestion. Although reducing all pollutants would be the most desirable outcome from action taken by local authorities, it is important to acknowledge the financial and resource constraints they face. For this reason, focusing on the most harmful pollutants, namely NO<sub>2</sub> and particulates, is the most pragmatic approach and we welcome the fact that the Welsh Government has identified these pollutants as the priority.

Natural Resources Wales: We welcome initiatives that can potentially reduce the burden on local authorities, and provide them with more opportunity to focus on key pollutants of concern and wider public health benefits of a more co-ordinated approach to managing air quality and noise.

Public Health England (PHE) (Centre for Radiation, Chemical and Environmental Hazards): We note that the existing national air quality objectives are to be retained. As resources have to be prioritised, we agree that it would be advantageous for Local Authorities to focus on NO<sub>2</sub> and particulate matter as the main pollutants of concern, only monitoring and reporting on other pollutants where there is specific local need.

Public Health Wales (PHW) (Health Protection Division): Objectives for NO<sub>2</sub> and PM are the most important. Given that air quality management is a devolved responsibility, and in light of the opportunities offered by the Wellbeing of Future Generations Act and BREXIT, the Welsh Government could and should be doing so much more to introduce new legislation to tighten Air Quality Objectives to offer a greater degree of protection for the population of Wales. The evidence continues to strengthen to confirm that these air pollutants hold non-threshold status and can cause adverse health impacts even at low concentrations. Additionally, the effects of each pollutant are now believed to be independent. Tightening Air Quality Objectives would serve to make air pollution problems 'real' over larger geographical areas and encourage public bodies to tackle air pollution on a much broader scale than currently by reducing risks for all. Finally, an Air Quality Objectives for PM<sub>2.5</sub> should be introduced and the air quality monitoring network should be invested in.

Rhondda Cynon Taf County Borough Council: Agree with this proposal but clarity on PM<sub>2.5</sub> and its status in LAQM would be beneficial.

Swansea University (College of Law and Criminology): I think that there needs to be a continuing obligation to monitor all existing NAQOs and report on them, otherwise any change in status indicating emergent concerns are unlikely to be recognised, captured and communicated. Employing a deeper focus on NO<sub>2</sub> and PM makes sense only against the background of air quality as an holistic issue, which is what the consultation document is geared towards.

University of the West of England (Air Quality Management Resources Centre): We agree with this measure, however there must be a mechanism by which other pollutants can be reintroduced into LA reporting requirements should a need arise. In addition to this, PM2.5 needs to be measured and assessed across Wales in order to understand its potential impact on health at a local level.

Private individual or unattributed response 1: Where applicable other pollutants should also be reported, for example CO and SO2.

Private individual or unattributed response 7: Yes.

Private individual or unattributed response 15: No, the priority pollutants of concern are individual to each Local Authority and therefore the Local Authorities should not unduly focus on certain pollutants without focussing on others. Focussing on only NO2 and particulate matter could result in a significant pollution source not being identified. Additionally, the Local Authorities approach should align with other Local Authorities in the rest of the UK.

## Question 6.8 – implementation timetable

6.8 *Subject to the outcome of this consultation exercise, the Welsh Government would propose to implement all the above changes by issuing new LAQM policy guidance in early 2017, together with a new annual progress report template. These will be published at least three months prior to the new submission deadline of 30 June.*

***Do you agree to our introducing the proposed changes through statutory guidance in time for next year's reporting?***

All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council: Agree with these proposals; although the three month deadline may be a little optimistic.

British Heart Foundation (BHF) Cymru: Moving the submission deadline from April 2017 to June 2017 should give enough time for Local Authorities to report to the new framework, provided to timetable for publication of the new LAQM policy guidance and the template does not slip.

British Lung Foundation (BLF) Cymru: We agree that the proposed changes, subject to our previous comments in this document, should be introduced in time for next year's reporting.

Caerphilly County Borough Council: Agree with the proposals although the 3 month deadline seems optimistic.

Carmarthenshire County Council (Environmental Health & Licensing): Yes, we would agree with this proposal, but would question whether the timescales are overly optimistic. For example, there is no meeting of the WAQF until April 2017 to discuss / debate the content of the reporting template. LA's wouldn't have much time to allow the new requirements to bed-in before the reporting deadline.

Ceredigion County Council: Yes, agreed

Chartered Institute of Environmental Health (CIEH): CIEH agrees with the proposal, we make no comment on the proposed 3 month deadline, this being an operational matter for local authorities.

City and County of Swansea (Pollution Control): We agree with the proposal in principle although the deadline may be optimistic if our previous comments are ignored.



Environmental Protection UK: This timescale may be unrealistic timescale

Flintshire County Council: We agree with these proposals but suspect that the three month deadline may be a little optimistic.

Mineral Products Association: Yes.

Natural Gas Vehicles Network: Finally, if these changes are finalised then the Welsh Government should aim to bring them into force as soon as possible, as suggested in section 6.8, preferably before the round of 2017 reports are due. This would avoid a year's delay in the implementation of these improvements and allow the new system time to bed in whilst substantial reviews of air quality legislation are ongoing at the national level.

Rhondda Cynon Taf County Borough Council: Agree in principle but may need additional time to consider any draft guidance

Swansea University (College of Law and Criminology): Yes.

University of the West of England (Air Quality Management Resources Centre): We agree with introducing the new measures as soon as possible, but this should not be done hastily at the expense of a thorough review of the potential impacts of the proposed changes.

Private individual or unattributed response 1: I agree

Private individual or unattributed response 7: Yes.

Private individual or unattributed response 15: Yes in principle, however due diligence should be given to the impact of the proposed deadline on other stakeholders.

## Question 6.9 – population exposure reduction

6.9 *The Welsh Government proposes the new policy guidance will stress the greater public health benefits likely to result from actions to reduce air and noise pollution in an integrated fashion over a wider area, over and above those expected to result from actions seeking only to achieve technical compliance with the national air quality objectives in AQMAs.*

***Do you agree to an increased emphasis being placed on the importance of population-wide air and noise pollution exposure reduction alongside local measures to tackle pollution hotspots?***

All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council: Agree with these proposals; although air pollution exposure reduction and noise control are not easy targets over the wider area and will significantly complicate the progress reports. For local authorities with significant non-compliance problems this could also reduce the resource they have available to try and deliver improvement actions where most needed. Resources are limited in all councils and this is a significant shift in policy. We agree that in public health terms it is worth doing, and there are synergies with some of the other work we do anyway in terms of planning and transportation. There are also significant benefits in terms of aligning the climate change policies and air quality management actions. This is unlikely to happen without a broader drive on exposure reduction across Wales, not just a focus on making hotspots compliant. There is bound to be resistance from some sectors who already claim that the existing air quality objectives are too onerous. However we feel the evidence is increasingly suggesting that the policy was well founded.

British Heart Foundation (BHF) Cymru: Research suggests that in the UK as many as 35,000 to 50,000 people could die prematurely each year, as a result of short term exposure to air pollution. The Westminster Government's 2007 air quality strategy estimates that PM reduces life expectancy by around seven to eight months averaged over the whole population of the UK. For sensitive individuals the reduction in life expectancy could be as high as nine years. It is therefore extremely important to increase emphasis on population-wide air pollution exposure reduction, as well as local measures to tackle pollution hotspots.

British Lung Foundation (BLF) Cymru: We agree that, in addition to tackling specific pollution hotspots, an increased emphasis should be placed on reducing population-wide air pollution to improve lung health across the board. We would stress the need for greater priority to be given within new policy guidance to reducing pollution around schools and in other areas where children and young people are often present, due to the disproportionately high impact that air pollution can have on a

child's lung health compared to an adult's fully grown lungs. We would also ask that local populations with higher rates of diagnosed lung diseases such as COPD be prioritised for air pollution reduction efforts, in order to reduce exacerbations and therefore lessen the strain on health services.

Caerphilly County Borough Council: Agree with these proposals; although air pollution exposure reduction and noise control are not easy targets over the wider area and will significantly complicate the progress reports. For local authorities with significant non-compliance problems this could also reduce the resource they have available to try and deliver improvement actions where most needed. Resources are limited in all councils and this is a significant shift in policy. We agree that in public health terms it is worth doing, and there are synergies with some of the other work we do anyway in terms of planning and transportation. There are also significant benefits in terms of aligning the climate change policies and air quality management actions. This is unlikely to happen without a broader drive on exposure reduction across Wales, not just a focus on making hotspots compliant.

Campaign for the Protection of Rural Wales (CPRW) (Montgomery and Brecon & Radnor branches): We support the proposals within these sections.

Carmarthenshire County Council (Environmental Health & Licensing): This sounds good in theory and would help with the promotion of Well-being. We feel this is an aspirational requirement and the noise and air pollution indicator would need to be clearly defined. As has been mentioned earlier, some LA's may be struggling to meet minimum statutory reporting requirements. The importance of Noise pollution throughout this consultation seems to be secondary to Air Quality. Noise should be given an equal footing and not considered only in conjunction with AQMAs.

Ceredigion County Council: Fully agreed

Chartered Institute of Environmental Health (CIEH): CIEH strongly supports this proposal. There are clear public health gains to be made by linking climate change targets to air quality management actions.

City and County of Swansea (Pollution Control): We agree with these proposals; although exposure reduction and noise control are not easy targets over the whole County. We also have a concern that as our resources have been significantly reduced this will take time away from compliance action planning in the existing AQMA's. Great care will be needed to address noise reduction on an area basis. We must avoid a simple sectoral approach which could unfairly impact on certain industrial activities. In reality the numbers of people affected by industrial noise are very low, whereas huge numbers are affected by road traffic. In reality local authorities have limited options available to them to achieve road traffic noise reductions whereas much could be achieved by better enforcement of better

standards on road vehicles and tyres. Almost any road resurfacing achieves improvements these days, but all local authorities have cut back significantly on highway maintenance. If we are smart about how we address these reduction policies we can achieve real public health gains and hopefully force a step change in better work across the existing professional and organisational boundaries. It would be naïve to assume that there will not be some kickback from certain sectors who see this as enforcing unreasonable environmental objectives. However it is obvious to us that the evidence has been very clear for many years and the recent NICE guideline summarises some of this in a timely manner.

City of Cardiff Council: We agree that population wide exposure should be given further consideration in addition to 'hotspots'.

Environmental Protection UK: Yes provided sufficient resources are available

Flintshire County Council: We agree with these proposals to stress the greater public health benefits likely to result from interventions to reduce air pollution and noise etc. However we do not believe that noise should be part of the AQ progress reports. Whilst, noise is often an issue related to some AQ issues particularly traffic and some industrial processes it is not exclusive and by trying to merge them in this way will I believe lead to unnecessary complication of the reporting process, an increase of the burdens put on LA's and not least it will lead to confusion with the public

Mineral Products Association: Yes,

Music Venue Trust: The MVT has concerns regarding the fundamental basis of the WG policy in seeking to combine and treat similarly, the substantially different challenges of dealing with noise and air issues. Although the sources can occasionally overlap in transport and industrial sectors, this is not true in all sectors hence the need for distinct and different approaches to dealing with these matters. To adopt a combined approach for all noise and air quality would clearly lead to unintended consequences for other sectors. Noise "pollution" has not been satisfactorily defined in this consultation document and until that is addressed it seem likely that there will remain a risk, no matter how unintended or otherwise, of noise generating activity and noise generating premises being likened to noise pollution. This consultation provides an opportunity for Wales to provide a definition of noise pollution applicable to Wales. A clear definition of a problem is a prerequisite of seeking a solution. The definition needs to ensure that noise pollution is distinct from noise generating activity or intrusive sounds linked to music venue premises or live music activity. The Welsh Government should clearly define what the "likely" public health benefits referred to in the consultation document will be, and do so in a measurable way.

Public Health England (PHE) (Centre for Radiation, Chemical and Environmental Hazards): PHE recognises the importance of taking an integrated, nationally consistent approach on air quality and noise management which should facilitate implementation of action plans and reduce costs. The new guidance will stress the greater benefits likely to result from air and noise pollution integration over a wider area. See comments to 6.6. Locally tailored measures are also required for controlling NO<sub>2</sub> as this pollutant is mainly generated from local transport sources.

Public Health Wales (PHW) (Health Protection Division): Agree, but any new guidance should also provide detailed evidence-based descriptions of intervention effectiveness (i.e. what works in different settings and situations) to tackle localise air pollution problems AND reduce risks for all.

Rhondda Cynon Taf County Borough Council: Agree with this proposal but any additional burdens on LA's need to be considered.

Stephen Turner Acoustics Ltd: I presume in this question that pollution hotspots refer to noise as well as air. And are your hotspots your noise management areas?

Swansea University (College of Law and Criminology): Yes, but this suggests the need to answer question 6.7 as above.

University of the West of England (Air Quality Management Resources Centre): We agree that there should be an increased emphasis on the importance of population-wide air pollution exposure reduction alongside local measures.

Private individual or unattributed response 1: I agree that more emphasis should be placed on particular hotspots. I live within 1km of Wrexham Industrial Estate and it has been an up hill battle which has lasted for more than 2 years to get NRW to take out complaints of noise from the estate seriously.

Private individual or unattributed response 7: Pollution hotspots are 'life threatening' and a solution should be found.

Private individual or unattributed response 15: Yes in principle, although it is not explained how this will be achieved. Also, this should be aligned with other statutory requirements that businesses are required to adhere to on a UK and global level.

## Question 6.10 – working with other public bodies

6.10 *The Welsh Government proposes the new policy guidance will stress the need for Local Health Boards and NRW to support Local Authorities to strengthen the effectiveness of local air quality action plans and local strategies in reducing exposure for the population as a whole. This support could be through work within PSBs.*

***Do you agree to an increased emphasis being placed on the importance of partnership working?***

All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council: Agree with these proposals as our hope is that PSB's will make a difference in changing attitudes within local health boards and Natural Resources Wales. There is very little evidence so far that other agencies have been willing to engage in a local air quality management or exposure reduction. Traditionally there was some engagement around large industrial installations, but recent changes seem to have weakened collaborative working.

British Heart Foundation (BHF) Cymru: BHF Cymru welcomes the increased emphasis on collaborative working. Tackling population health and well-being and improving their local environments cannot be done in isolation. We would encourage collaboration with third sector organisations where appropriate as well as partnership working between Local Authorities and Local Health Boards.

British Lung Foundation (BLF) Cymru: We would welcome increased joint working between LHBs and NRW in order for air pollution to be tackled as a public health issue. We also believe that bodies such as Public Health Wales should do more to publicise warnings and appropriate health and impact mitigation advice ahead of periods of high pollution. Advice on managing exposure to pollution should also form part of clinical guidelines for all relevant disease areas, so that at-risk groups are aware of how they can better manage their condition. We would also welcome further collaboration and partnership working between LHBs, NRW, local education authorities and education consortia to ensure air pollution within the vicinity of schools is addressed. Given the particular impact pollution has on children's lungs, Welsh Government should support the production and dissemination of accurate, practical advice for schools to help them (with the participation of parents and guardians where necessary) reduce the impact pollution has on their students.

Caerphilly County Borough Council: Agree with these proposals as the hope is that PSB's will make a difference in changing the way we work collaboratively. There is very little evidence so far that other agencies have been willing to engage in a local

air quality management or exposure reduction. Again this could be due to the fact that resources are decreasing.

Campaign for the Protection of Rural Wales (CPRW) (Montgomery and Brecon & Radnor branches): We support the proposals within these sections.

Carmarthenshire County Council (Environmental Health & Licensing): Yes, agree with this in principle. The need for partnership working is crucial and well recognised, but formalising the requirement for LHB's and NRW to support LA's in discharging their duties would strengthen this.

Ceredigion County Council: Totally agree. NRW in particular should be much more involved in the NAQS (they permit the biggest industries)!!

Chartered Institute of Environmental Health (CIEH): For this to succeed we suggest that PSBs will have to demonstrate strong leadership and engage with the Local Health Boards and with Natural Resources Wales to encourage collaborative working in noise reduction and air quality improvement. We applaud the ambition but note that local authorities cannot be relied on to deliver the outcomes alone. We question whether PSBs consider noise reduction and air quality improvement to be a priority and whether they will drive collaborative planning and working to achieve it without being required to do so.

City and County of Swansea (Pollution Control): We agree with these proposals as the way forward clearly has to increase collaborative work through the PSB's. It is sad that our real strength in previous decades has been good collaboration in Wales, when currently that is diminishing very quickly and significantly. We must recognise that NRW and local public health officials do not have the experience or the statutory tools to deal with many of these issues but we will need to see behavioural change and success in terms of educating the general public and business which can only happen through better collaborative work.

Environmental Protection UK: Yes provided this is clearly spelt out. Air quality and noise need to be considered a priority for those who control the sources, such as traffic planners and managers, strategic planners and development control, those who deal with the consequences, including the public health teams and NHS, as well as environmental protection.

Flintshire County Council: We agree with these proposals.

Mineral Products Association: Partnership working will be critical to delivery.

Public Health England (PHE) (Centre for Radiation, Chemical and Environmental Hazards): PHE supports an emphasis on partnership working and the need for better

integrated and collaborative long-term solutions to the problem of air and noise pollution through the provision of the Well-being of Future Generations (Wales) Act 2015. Many organisations and professions have a role to play in improving air quality and health, including local public health teams. Local engagement across all partners who have the necessary drivers to improve air quality is essential for implementing decisive and appropriate public health interventions. It is important to recognise the opportunities for air quality improvements provided by the Climate Change Act 2008 which requires substantial reductions in carbon emissions. Combustion sources emitting NO<sub>2</sub> also emit carbon dioxide (CO<sub>2</sub>), therefore many low-carbon policies in the transport, housing and industry (including energy generation) sectors primarily aiming to reduce carbon emissions will also benefit air quality.

Public Health Wales (PHW) (Health Protection Division): Agree, but in addition to Health Boards, the role and expected contribution from Public Health Wales should also be defined. Making Public Services Boards accountable to deliver on LAQM should be a priority, requiring all Public Bodies to commit, collaborate, invest and act. Importantly, all relevant disciplines within Public Bodies should be held to account e.g. Transport and Land-use planning departments should be required to report on and implement improvement actions.

Rhondda Cynon Taf County Borough Council: Agree with this proposal but important it leads to actual partnership working rather than just viewed as an ideal scenario. Comments from RCTCBC Countryside Colleagues in respect of questions 6.9/6.10: Air and noise pollution have become normalised, people don't realise their levels of exposure and the risks associated with exposure. This can make managing the source of the pollution (generally traffic) difficult to promote as a public benefit. This needs to be tackled via an effective communication strategy which is reflected across all Welsh Government and public service board activity (including traffic and transport). This would reflect the integration required by the Well-being of Future Generations Act. It might also help to minimise the unintended consequences for pollution of other legislation (eg the proliferation and increasing volume of reversing vehicle warnings, or the pressure to minimise green infrastructure in new developments due to viability assessment).

Swansea University (College of Law and Criminology): Yes – this would improve substantive coverage in this area and sit well with the collaborative bent of the Well Being of Future generations (Wales) Act 2015.

University of the West of England (Air Quality Management Resources Centre): There is a need to integrate health agencies within the LAQM process and merely emphasising their importance does not go far enough. The updated guidance should explicitly recommend the formation of these partnerships.



Private individual or unattributed response 1: I agree

Private individual or unattributed response 7: Yes

Private individual or unattributed response 15: Yes

## Question 6.11 – supporting guidance

6.11 *At the same time, references to evidence in the current interim policy guidance will be brought up to date, for example to reflect more recent evidence on the effects of 20 mph zones on local air quality.*

***Are there any other areas where you think our current policy guidance (<http://gov.wales/topics/environmentcountryside/epq/airqualitypollution/airquality/guidance>) needs to be updated?***

All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council: No observations at present, although we would like this debate to continue rapidly if we are to see new reporting templates agreed by next spring. Clearly we have already touched upon certain areas that are very difficult to undertake in any clear transparent fashion. We would hope that new guidance would be rapidly forthcoming, particularly if we are going to address exposure reduction practices. The role of green infrastructure in the management of air and noise pollution should be explicit in policy. We accept that the right amount of detail is a difficult issue as noted in the NICE guidelines. This needs further detailed discussion with Welsh Government. Consideration should be given to including more guidance on assessing air pollution impacts on ecology.

British Lung Foundation (BLF) Cymru: Research undertaken by the British Lung Foundation using Freedom of Information requests showed major discrepancies in the quality and quantity of air pollution monitoring across Wales. This was due to inconsistent interpretation of guidance, in particular in relation to whether schools were viewed as a priority for air quality monitoring. Recent statistics from the World Health Organisation found that levels of particle pollution in Port Talbot, Swansea and Cardiff are unsafe. Levels of nitrogen dioxide (NO<sub>2</sub>) also exceeded legal limits in 2013 in the Cardiff area. Despite this, our FOI research found that one school in Swansea has a pollution monitor nearby, and not a single school in Cardiff did. We believe the guidance given to local authorities should be amended to ensure there is adequate monitoring of air pollution near schools, and other areas where vulnerable communities frequent. Pollution and transport should be mandatory material considerations in all local authority planning application assessments relating to new schools, in order to cut the number of children being schooled in areas high pollution over time. All existing schools should conduct regular monitoring of air pollution, the results of which should be made accessible to parents/guardians, and published as part of school inspection reports. Actions and measures should also be taken to reduce the level of pollution inside and outside schools, through the use of good air filtration systems and other pollution absorbing measures, as appropriate.

Caerphilly County Borough Council: No comments on this at present. It is hoped that new guidance would be rapidly forthcoming, particularly if Local Authorities are going to be expected to address exposure reduction practices. The role of green infrastructure in the management of air and noise pollution should be explicit in policy.

Carmarthenshire County Council (Environmental Health & Licensing): Further Policy direction could be given in relation to Ecology and Noise.

Ceredigion County Council: Yes, not only 20mph zones but traffic calming measures, speed ramps etc tends to increase emissions. There also needs to be a focus on indoor air quality, air quality in commercial properties such as garages and air quality in multi-storey car parks etc. Most people spend most of their time indoors and indoor air quality can be poorer than out door air quality. It is the OVERALL exposure to air pollutants that impacts on health (indoor and outdoor). This would enable important issues such as carbon monoxide and radon in buildings to be brought into the Air Quality Strategy Regime. Also, it is important to remember that it is local air emissions that lead to global issues such as global warming, climate change, acid rain and ozone depletion etc. Greenhouse gas emissions (CO<sub>2</sub>, methane etc) need to be more formally included in the Strategy some way

Chartered Institute of Environmental Health (CIEH): As noted in the preamble to our specific response we consider the use of green infrastructure to be a useful tool in improving air quality. CIEH suggests that planning guidance should be specific as to its use for air quality purposes as well as for its proven beneficial impact on mental health and wellbeing. We question whether Welsh Government will be in position to introduce new reporting templates in the spring of 2017 given that the current debate around form, content and format has yet to be resolved.

City and County of Swansea (Pollution Control): We need to be at the cutting-edge of this discipline and as such guidance must be agreed quickly and clearly, particularly if we are to address exposure reduction practices.

Environmental Protection UK: All guidance should be kept under review, to reflect the current research, new and effective approaches, and best practice.

Mineral Products Association: No.

Public Health Wales (PHW) (Health Protection Division): An evidence review is needed to appraise and communicate the effectiveness of all air pollution management interventions, not just 20mph speed limits. The imminent NICE guidelines may help, but is unlikely to provide all the answers required. A systematic review of available literature, while a significant undertaking, is desperately needed.

Rhondda Cynon Taf County Borough Council: Updates on the use of green infrastructure to reduce NO<sub>2</sub>/PM<sub>10</sub> and any transportation/traffic management case studies, demonstrating practical measures which can be utilised by LA's to reduce NO<sub>2</sub>/PM<sub>10</sub>. Comments from RCTCBC Countryside Colleagues in respect of question 6.11: The role of green infrastructure in the management of air and noise pollution should be explicit in policy. The role is two-fold. • Green Infrastructure can contribute to pollution free alternatives to car traffic, especially for short journeys, both for active travel and for leisure purposes. The design quality, maintenance and promotion of these routes is critical to increasing their use and their appeal as an alternative to car travel. There is a balance to be struck between accessibility, visibility, proximity to roads (where noise and air pollution levels will be higher) and more segregated and vegetated corridors. • Green infrastructure can assist in mitigating the impacts of air and noise pollution. Some of this mitigation may be perceptual (a green space seems quieter than a built space, even when noise levels are similar) and contribute purely mental health/ wellbeing benefits, but some mitigation has physical impacts on pollution reduction.

University of the West of England (Air Quality Management Resources Centre): Recent guidance from NICE which are out for consultation here: <https://www.nice.org.uk/guidance/indevelopment/gid-phg92> will show the most up to date understanding of appropriate measures and their costs and benefits. The Local Air Quality and Noise Management in Wales consultation should not be finalised until the finalised NICE document has been reviewed.

Private individual or unattributed response 1: I don't have an opinion on this matter.

Private individual or unattributed response 7: Yes, diverting traffic away from built up areas, e.g. Flintshire Bridge to Northop.

## Question 6.12 – grant funding

6.12 *The Welsh Government proposes to amend its guidance on the environment and sustainable development single revenue grant for Local Authorities, emphasising its expectations in respect of the implementation of effective local air quality action plans, where AQMAs have been declared.*

***Do you agree it would be helpful to highlight this potential source of funding for the implementation of local air quality action plans?***

All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council: No, we do not believe it would be helpful. Firstly, our position is that we do not support hypothecated funding streams and where there are expectations on local authorities these should be adequately funded through the general settlement. Secondly, the single revenue grant already only constitutes a proportion of the funding that local authorities invest in activities potentially eligible under this grant. It is not understood how WG believe it could be helpful to simply increase the expectations upon what the grant be used for without increasing the funding proportionally (especially in the light of the proposed 6.7% grant reduction). Such a proposal would essentially mean the necessary monies having to be found from elsewhere within a local authority's wider funding, which can obviously be done directly more efficiently without the wasteful bureaucratic administrative process that surrounds the single revenue grant.

British Lung Foundation (BLF) Cymru: We would encourage the maximum promotion of any available additional resources that enable local authorities to tackle air pollution and implement local air quality action plans.

Caerphilly County Borough Council: I don't see how this would be helpful. Where there are expectations on local authorities these should be adequately funded through the general settlement. Secondly, the single revenue grant already only constitutes a proportion of the funding that local authorities invest in activities potentially eligible under this grant. It is not understood how WG believe it could be helpful to simply increase the expectations upon what the grant be used for without increasing the funding proportionally (especially in the light of the proposed 6.7% grant reduction).

Carmarthenshire County Council (Environmental Health & Licensing): If the process is streamlined and made less bureaucratic this may encourage LA's to apply for additional funding through this stream.

Chartered Institute of Environmental Health (CIEH): This is an operation matter for local authorities; CIEH make no comment.

City and County of Swansea (Pollution Control): We have reduced funding over recent years because of the obvious pressures on all of us in this sector. Anything that can be done within the Welsh system to ensure that this important public health work is properly funded needs to be done quickly to protect the current monitoring network. Innovation needs to be encouraged, but routine networks need proper revenue funding.

Environmental Protection UK: It is vital to not just identify air quality funding, but also to supply more. The barriers identified in paragraph 3.9 highlighted lack of funding as a clear reason for the failure of the LAQM system to deliver effective measures to date. This must be addressed in the current review. Air pollution alone costs the UK an estimated £20 billion in health costs a year.

Flintshire County Council: We do not agree and would refer you to the reply of the All Wales Pollution Panel's response attached: "No, we do not believe it would be helpful. Firstly, our position is that we do not support hypothecated funding streams and where there are expectations on local authorities these are adequately funded through the general settlement. Secondly, the single revenue grant already only constitutes a proportion of the funding that local authorities invest in activities potentially eligible under this grant. It is not understood how WG believe it could be helpful to simply increase the expectations upon what the grant be used for without increasing the funding proportionally (especially in the light of the proposed 6.7% grant reduction). Such a proposal would essentially mean the necessary monies having to be found from elsewhere within a local authority's wider funding, which can obviously be done directly more efficiently without the wasteful bureaucratic administrative process that surrounds the single revenue grant."

Mineral Products Association: Yes.

Public Health Wales (PHW) (Health Protection Division): Yes, but Welsh Government should go further if it is serious about reducing air pollution, risks and inequalities. A ring-fenced environmental sustainability fund should be made available to Public Service Boards to encourage collaborative action to tackle local and regional air pollution problems in the broader context of environment and health sustainability. Guidance should make it clear that evaluation is a formal component of any grant-funded project.

Rhondda Cynon Taf County Borough Council: Addressing any funding gap will be essential if Action Plan proposals are to be implemented. Any guidance which provides an opportunity to use the Single Revenue Grant to implement Action Plans will be beneficial. It would be helpful if the guidance sets out clear targets and expectations regarding funding allocation to assist decision making by LA's when there are a number of competing priorities. Comments from RCTCBC Countryside

Colleagues in respect of question 6.12. This is difficult because the bulk of the budget is for waste. The element for replacement of the NRW partnership funding is small and has not been used specifically for air and noise pollution, although it has contributed to green infrastructure development and management, especially (in RCT) the off road community route network. Ring fencing of part of the grant for pollution reduction runs counter to the integration ethos. New funding is likely to be required to make significant progress in reducing pollution levels. It is anticipated that funding for the implementation of active travel schemes will contribute towards this but the benefits may be long-term rather than immediate.

Swansea University (College of Law and Criminology): Yes and again marrying resource to an expectation of delivery would underline the need to act in this regard and in fact ring fencing funding for this purpose would be desirable in signalling the importance to be attached to it.

University of the West of England (Air Quality Management Resources Centre): Yes we agree it would be helpful to highlight this potential source of funding.

Wildlife Trusts Wales: One of the reasons stated (section 3.8) for the ineffectiveness of local air quality action plans to date is a lack of funding for their implementation. The Welsh Government currently makes funding support available for the implementation of local air quality action plans through its environment and sustainable development single revenue grant to Local Authorities in Wales. The consultation highlighted that "Local Authorities draw up their own spending plans for the money allocated to them under the single revenue grant. In the latest round of spending plans submitted to the Welsh Government, Local Authorities did not allocate any of this money specifically to the implementation of local air quality action plans". It is worth highlighting that the same grant to Local Authorities is also supposed to be used to fund ecological expertise such as County Ecologists. However, many Local Authorities have either reduced the ecologists or got rid of them entirely. If any new responsibilities are coming to NRW and Local Authorities they should be fully funded in order that they can deliver green infrastructure and air quality and noise improvements.

Private individual or unattributed response 1: Any funding that improves the general quality of Welsh citizens lives should be encouraged.

Private individual or unattributed response 7: Another policy that should already be in place.

Private individual or unattributed response 15: Yes

## Question 6.13 – local authority chapters in the noise action plan

6.13 *As the noise action plan for Wales 2013-2018's final year approaches, the Welsh Government proposes to ask the Local Authorities in large urban areas to review and update the chapters they wrote in 2013, which summarised numbers of noise complaints received, current levels of service to the public, and commitments to take noise into account in local development plans and road resurfacing programmes. Local Authorities would also be asked to assess any changes that may have occurred over the last five years. This would inform not only a future noise action plan for Wales but also the local well-being plans, also due in 2018.*

***Do you agree the need to monitor what has changed in terms of noise regulation in our largest towns and cities over the last five years?***

All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council: Agree with these proposals. This is timely given the very significant cuts in resources made by some of those authorities over the last few years. Clearly this is an area where it is not easy to make a direct public health link to studies showing significant population benefits, but these are matters of huge importance to the individuals affected who rightly feel very concerned that the level of service should not diminish. Much is said about the growing concerns for mental health amongst these populations, and practitioners strongly feel the links here which could well be overlooked by a more traditional approach to well-being plans etc. Regarding noise pollution, in England changes to the planning law and permitted development regulations have led to residential development in the vicinity of pre-existing noise generating establishments (such as nightclubs, music venues) and consequent noise complaints to local authorities and in some cases removal of licenses from noisy venues. There is now widespread concern about the cumulative impact this is having on the night-time economy and the availability of facilities for residents and businesses. This needs to be part of the consideration of planning changes in Wales.

Atkins: I like the sound of monitoring changes to noise regulation, and it would be interesting to see if there is a change as a result. Will also be interesting to see if such changes would be picked up by re-modelling in subsequent rounds of mapping.

British Heart Foundation (BHF) Cymru: Long-term exposure to air pollution is linked to a greater incidence of high blood pressure, according to the largest study to investigate the effects of both air pollution and traffic noise by following over 41,000 people in five different countries for five to nine years. (Long-term exposure to ambient air pollution and traffic noise and incident hypertension in seven cohorts of the European study of cohorts for air pollution effects (ESCAPE)", by Kateryna B.



Fuks et al. European Heart Journal. doi:10.1093/eurheartj/ehw413) For exposure to chronic traffic noise, the researchers found that people living in noisy streets, where there were average night time noise levels of 50 decibels, had a six percent increased risk of developing hypertension compared to those living on quieter streets where average noise levels were 40 decibels during the night. BHF Cymru would therefore support the proposal to monitor changes in noise regulation in Wales' largest towns and cities.

Caerphilly County Borough Council: Agree with these proposals. This is timely given the very significant cuts in resources made by some of those authorities over the last few years. Clearly this is an area where it is not easy to make a direct public health link to studies showing significant population benefits, but these are matters of huge importance to the individuals affected who rightly feel very concerned that the level of service should not diminish.

Campaign for the Protection of Rural Wales (CPRW) (Montgomery and Brecon & Radnor branches): Rural sources of noise nuisance must not be ignored. We would recommend a requirement for rural authorities to carry out a similar review of changes in numbers of noise complaints received, current levels of service to the public, and commitments to take action against noise nuisance. This is essential to the preparation of appropriate action plans.

Carmarthenshire County Council (Environmental Health & Licensing): Yes we would agree to these proposals, but would question whether this could also be extended to include authorities that are not considered "large urban areas"

Chartered Institute of Environmental Health (CIEH): CIEH agrees with these proposals. There is clear evidence of the links between sleep disturbance and mental health issues and sleep disturbance and recovery times after ill health episodes. Whilst we fully recognise the importance of promoting a night time economy and further the value of opening up empty properties where these are in town centres or are flats over shops etc. we also recognise that this can lead to exposure to noise levels that may be detrimental to sleep and therefore to mental health and wellbeing, although generally on an individual rather than at a population level. We endorse the use of Health Impact Assessment as a tool in the planning process to ensure that where development may cause noise problems the extent of the problem can be limited and the most expedient ways of reducing it can be planned into the development or redevelopment.

City and County of Swansea (Pollution Control): This is very important in the current round of cutbacks to council services. Having officers on standby or working shifts, is unfortunately seen as a luxury by senior managers with no regulatory experience. Given the amount of evidence growing on mental health and sleep interference, it is critical that all local authorities are encouraged to maintain a high quality service on

noise control. There are real risks in dumbing down the service to save money, not least to the reputation of all involved in this aspect of environmental regulation.

Environmental Protection UK: Yes provided it includes Environmental and Neighbourhood Noise and that the process is not over burdensome. It should also be remembered that not all complaints about Transportation Noise go to LA's, so any figure may not give a true position.

Flintshire County Council: Agree with these proposals.

Mineral Products Association: Yes

Music Venue Trust: The MVT propose that information on the "changes in the number of noise complaints in larger urban areas received" should not just rely on research by local authorities but rather that the information should then be published annually and be freely available with a detailed breakdown of the sources of complaints (eg local residents, neighbouring premises), the nature of the activity that led to the complaint and how the matter was resolved. In the compilation and publication of this information a clear distinction should be maintained between public houses, night clubs and small music venues. The information should be published in a variety of formats including in map form preferably using GIS so that clustering can better understood and collective positive mitigation considered. This would also be an opportunity for urban areas to map music venue locations and begin to understand more about the contribution that such small businesses contribute to the local and national economy of Wales.

Public Health Wales (PHW) (Health Protection Division): Agree. The requirement to report noise complaints should be extended to social housing providers (where they undertake nuisance noise control for their residents) and Network Rail and the Trunk Road Agencies. A requirement to review and update assessments will help prioritise protective actions.

Rhondda Cynon Taf County Borough Council: Agree with this proposal. Comments from RCTCBC Countryside Colleagues in respect of question 6.13. Regarding noise pollution, in England changes to the planning law and permitted development regulations have led to residential development in the vicinity of pre-existing noise generating establishments (such as nightclubs, music venues) and consequent noise complaints to local authorities and in some cases removal of licenses from noisy venues. There is now widespread concern about the cumulative impact this is having on the night-time economy and the availability of facilities for residents and businesses. This needs to be part of the consideration of planning changes in Wales.

Stephen Turner Acoustics Ltd: I think I would extend this from not just development plans but also development control or decision making. Given David Hunter's

comments, the planning decisions that are made affect the noise environment as much as the content of local plans. Also why restrict to road resurfacing. There are other traffic management measures available. For example, given the recent report from NICE advocating reducing speeds for air quality benefits, lower speeds can provide noise reductions in most cases. Did you really mean what has changed in terms of noise *regulation* (my emphasis). Isn't the issue what has changed in terms of impact and effect?

Swansea University (College of Law and Criminology): Yes.

Private individual or unattributed response 1: Noise complaints are also submitted to NRW. I feel that these complaints should be captured within the statistics. I agree that changes should be highlighted.

Private individual or unattributed response 7: Yes, not just in towns and cities but anywhere where people live next to a busy road.

Private individual or unattributed response 15: Yes

## Question 6.14 – future rounds of national noise mapping

6.14 *The Welsh Government proposes to give NRW a greater role in delivering and interpreting Wales' national noise maps, aligned with its new statutory duties to prepare SoNaRR and area statements. However, the details of any future national noise mapping cannot be decided until we know whether or not the UK will continue to be subject to the EU Environmental Noise Directive.*

***Do you agree NRW should have a greater involvement in any future rounds of national noise mapping?***

All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council: Natural Resources Wales have not traditionally been involved in noise, although there may be benefit in respect of industrial noise; however the majority of experience and expertise in this area lies with local authorities so these should continue to take the lead role for national noise mapping. There are concerns that the current lack of engagement between Natural Resources Wales and other regulators does not auger well for the future of national reporting or area statements, particularly in specific human health fields such as air quality and noise. Again there needs to be some clearer thinking around reporting on resources and what drives well-being.

Atkins: NRW having a greater involvement sounds OK, but there may be other ways of doing the same thing.

British Heart Foundation (BHF) Cymru: Given that Natural Resources Wales has new statutory duties to prepare SoNaRR and area statements it would make sense for them to have a greater involvement in any future rounds of national noise mapping.

Caerphilly County Borough Council: Natural Resources Wales have not traditionally been involved in noise, although there may be benefit in respect of industrial noise; however the majority of experience and expertise in this area lies with local authorities so these should continue to take the lead role for national noise mapping. There are concerns that the current lack of engagement between Natural Resources Wales and other regulators does not auger well for the future of national reporting or area statements, particularly in specific human health fields such as air quality and noise. Again there needs to be some clearer thinking around reporting on resources and what drives well-being.

Campaign for the Protection of Rural Wales (CPRW) (Montgomery and Brecon & Radnor branches): Noise mapping must be an entirely transparent process if it is to provide useful information and be useful in the protection of residents. We cannot be

confident that Natural Resources Wales has sufficient distance from Welsh Government renewable energy policy to be an appropriate partner in noise mapping exercises in rural Wales.

Carmarthenshire County Council (Environmental Health & Licensing): We feel that the Local Authorities would be in a better position to provide and comment upon this information, as generally, the NRW does not routinely deal with noise issues and do not have the expertise / experience that can be found in LA's.

Chartered Institute of Environmental Health (CIEH): The CIEH supports partnership working, however we note that at present in Wales expertise regarding noise monitoring lies in local authorities. We are not aware that NRW has had any role in noise monitoring to date. Pragmatically it would seem to be sensible for local authorities to take the lead role in noise mapping, particularly since local authority EHOs are also engaged in the wellbeing agenda and will use the noise maps to focus wellbeing interventions aimed at reducing exposure to noise.

City and County of Swansea (Pollution Control): We are not at all clear on what the role would be for NRW. Clearly that agency has a very limited role around permitting, with no experience in any other aspect of noise control or planning. It would be good to perceive any alignment with preparing SoNaRR or area statements, however this question highlights a genuine concern over strategies and reports on resources and assets as opposed to pollution impacts on human health. Currently we see little scope for alignment which in itself is concerning.

Environmental Protection UK: It is not accepted that the future of mapping is solely dependent on post directive legal duties. The Great Repeal Bill will ensure continuation of duties until there is National and Regional debate on any changes

Flintshire County Council: Whilst, we do not object to NRW being involved in any future rounds of national noise mapping they have not traditionally been involved in wider noise issues beyond their permitted processes and their benefit may be limited to industrial noise. The vast majority of experience and expertise in relation to noise lies with LAs and should continue to take the lead role for national noise mapping.

Mineral Products Association: It is not clear how the interaction between the LAs and NRW will be advanced and this is not really explained in the Consultation. We see no reason the EU agenda should delay matters.

Music Venue Trust: A greater role for NRW in delivering and interpreting Wales Noise Maps is welcomed if it means that additional resources will be applied to the maps and the need for improvements in our response to 6.13 can begin to move forward. We would not welcome the involvement of NRW as a statutory consultee for

noise in the planning process. Any role for NRW should be clearly thought through and form part of a new TAN 11 Noise, which is long overdue an update.

Natural Resources Wales: In principle, we have no objection to taking on a greater role in the delivery and interpretation of Wales' national noise maps but this would be subject to the provision of appropriate funding and training. We would welcome further discussions with Welsh Government official on this matter prior to any final decisions being made.

Rhondda Cynon Taf County Borough Council: NRW involvement would be beneficial but the key noise expertise at local level lies with LA's. Any delegation of duties for noise mapping would need to be carefully considered. May need to consider any additional reporting burden on LA's if there is a need to supply information to NRW by specified deadlines.

Swansea University (College of Law and Criminology): Yes – adopting a more systemic approach to this issue would provide a sound basis for developing collaborative responses to shared concerns for LAs across Wales and NRW can act as a conduit for this.

Private individual or unattributed response 1: You state that the EU legislation is a positive thing. I don't see why post Brexit the Legislation either cannot still equally apply, or be enshrined into UK / Welsh Law. NRW should have involvement in the noise mapping, so long as they act upon any hotspots.

Private individual or unattributed response 7: Yes.

Private individual or unattributed response 15: Yes

## Question 6.15 – assessments of local well-being

6.15 *The Welsh Government proposes to add, through regulations, Local Authorities' annual progress reports on air quality and national noise maps to the list in section 38(3) of the WFG Act of things to be taken into account by PSBs when preparing assessments of local well-being.*

***Do you agree Local Authorities' annual progress reports on air quality and national noise maps should be taken into account in assessments of local well-being, as well as the national indicator in Annex A?***

All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council: Agree with these proposals.

Atkins: This seems a good idea.

British Heart Foundation (BHF) Cymru: BHF Cymru welcomes this proposal to ensure greater synergy across complementary policy and legislation.

Caerphilly County Borough Council: Agree with these proposals.

Campaign for the Protection of Rural Wales (CPRW) (Montgomery and Brecon & Radnor branches): We support the proposals within these sections.

Carmarthenshire County Council (Environmental Health & Licensing): Yes, we would agree that this is a good idea. We would question why this is limited to Noise maps. Could other noise criteria also be considered, such as AADT on roads (which could be used to identify the potentially noisiest roads), number and type of industrial estates in the County, night-time economy issues etc. Data reported in the annual noise statistical returns relating to number and type of complaints could also be a useful source of information to be taken into account by PSB's when considering Well-being. Could a GIS register of noise complaints be created indicating a number and type of complaints within an area based on LA data or Noise APP data?

Chartered Institute of Environmental Health (CIEH): We agree with these proposals.

City and County of Swansea (Pollution Control): We agree

Environmental Protection UK: Yes

Flintshire County Council: We agree with these proposals provided that adequate funding for any additional reporting burdens is provided to support those officers carrying out any extra duties within LAs.

Mineral Products Association: Yes

Music Venue Trust: The MVT would wish to see the inclusion of noise generated by local music venues as a positive indicator of well-being and not a negative noise concern.

Public Health England (PHE) (Centre for Radiation, Chemical and Environmental Hazards): PHE supports the inclusion of air quality and noise in well-being assessments: links between air quality, noise and health are well established. Formally accounting for this will provide a means of measuring and comparing improvement over time.

Public Health Wales (PHW) (Health Protection Division): Yes, this requirement should be made explicit.

Rhondda Cynon Taf County Borough Council: Agree with this proposal.

Swansea University (College of Law and Criminology): Yes and furthermore the reporting of this information should ideally be undertaken in a fashion that readily maps on to both local assessments of well-being and the national indicator. There is a need to develop a working lexicon of indicators that are coherent and that 'nest' within one another both on grounds of efficiency (minimising the need to repackage information for different ends) and as a prerequisite to effective communication of the direction of travel of these policy areas. Effectively harmonised indicators would also be likely to make the task of their communication to the public and their wider use for public education considerably more streamlined and effective.

Private individual or unattributed response 1: I agree.

Private individual or unattributed response 7: It is well known that noise can cause various serious illnesses, and has an adverse affect on well-being. Yes noise maps should be taken into account in assessments of local well-being,

Private individual or unattributed response 15: Yes in principle, however when assessing local well-being, consideration needs to be given when using measured versus modelled data to ensure that the correct actions are prioritised. For example, in Annex A, Neath Port Talbot is ranked 9th in terms of modelled average PM10 concentrations and the values are around the national average. However, the measured PM10 concentrations in Port Talbot's AQMA are higher than the national average. Also, the national indicator for PM10 should include key information from the other Local Authorities and not just Neath Port Talbot.



## **Review of national planning policy and guidance**

### ***All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council***

Protection of existing standards relating to noise and air quality is essential. There needs to be clarity in terms of actual standards for many reasons but in particular development control discussions are difficult enough already without having any added uncertainty or complexity. In a similar vein this needs to be backed up by better well-being and sustainability thinking across more strands of Welsh Government and local delivery. If we are to address exposure reduction for example, we should have policies on siting schools and sharing local facilities for English and Welsh medium education as well as adult and continuing education. Too often the planning debates are completely focused on other issues and this topic slips further down the agenda as all developers (public and private) feel that sustainable transport and access is too expensive or complicated.

Recognition of the impacts in planning terms that events have on individuals rather than simple reliance on noise levels expressed over a reference time period. Local Authority officers can find themselves in dispute with planners and consultants who may not consider the real impact of activities. BS 4142 tries to allow this with new penalties but this is open to misuse. Statements like “only one delivery” or “only one complainant” are common. From some local authority experiences there is a distinct lack of knowledge and experience of some planning colleagues and it would be helpful to have more robust guidance for planners on noise issues to ensure a consistent approach across Wales. This is particularly important as pressure on the system inevitably means that non-statutory consultees are less likely to be fully engaged.

There should be recognition of the fact that 1dBA as a noise index can be the degree of perceptible change rather than 3dBA, which is often misinterpreted.

Existing planning guidance and practice is not helpful in delivering sustainable development with enforceable conditions. An obvious example are the many local arguments over providing inadequate parking arrangements because we are trying to force a modal shift. Clearly we understand why this happens but local residents and local councillors never agree on the aim or practice. The end result is that difficult decisions are avoided in terms of how much development should go where, while unenforceable conditions over parking continue to annoy existing residents. There are no easy answers here but if the new approach to more sustainable plans is to have any real chance of success, a rapid overhaul of planning guidance will be very necessary to deliver the right outcomes.

The All Wales Pollution Expert Panel recognises this approach being considered by Welsh Government is positive and forward thinking and welcomes the opportunity to engage with this process.

***Campaign for the Protection of Rural Wales (CPRW) (Montgomery and Brecon & Radnor branches)***

Powys residents are already suffering severe noise problems associated with turbines, and this is receiving insufficient recognition by the Local Authority. A government which supports both intensive farming and renewable generation in rural areas must take full account in policy of the noise nuisance and pollutant potential of both and ensure that policies fully protect citizens. Noise nuisance from turbines, including AM noise and low frequency noise, is well researched and documented. In areas of small hills and 'sound box' valleys any noise issues are likely to be exacerbated and central and local government can only fulfil wellbeing obligations and ambitions for the reduction of noise and air pollution by adopting precautionary approach in terms of the siting of turbines. Government must recognise that residents' experience of noise nuisance in Powys demonstrates that existing guidance/practice is currently failing to ensure the protection of homeowners. The 'Well-being of Future Generations (Wales) Act 2015' has created specific obligations on local and central government to address these issues – see national indicators 26, 29, 31. We have expanded on this in Qu.3 below and our specific recommendations are that:

1. Those within Local Authorities with responsibility for advice to planners and complaint investigation regarding turbine noise should receive appropriate training from independent acoustic bodies with expertise in this field;
2. LA Environmental Health departments must acknowledge an underpinning responsibility for the protection of human health (a requirement of the Well-being of Future Generations Act);
3. Local Authorities must be required to publish a clear noise nuisance investigation policy;
4. Existing wind developments which have given rise to residents' complaints must be investigated for compliance with existing noise limits i.e. ETSUR-97;
5. New wind energy developments should be subject to an extended period of monitoring;
6. Government should commit to the overhaul of ETSUR-97 which, now twenty years old, requires to be brought up to date by a body independent of the wind industry, and account taken of the potential for noise nuisance from low frequency noise and amplitude modulation.

We are aware that many complaints have been made to Powys Council about noise from wind turbines, but FOI evidence provided by the council demonstrates that Powys Environmental Health has no policy for the investigation of these complaints and keeps no systematic log of complaints, their investigation and outcome. Local

Authorities must have both the knowledge and the tools to protect residents against harm from development. This requires understanding of the issues within authorities and appropriate industry regulation. This also requires adoption of a consistent precautionary approach, and recognition of the changing noise profile of turbines as they age.

There is a great deal of evidence and research supporting the view that poorly placed wind turbines can have a major impact on local residents (whether or not developments are compliant with industry designed noise compliance regulations) of which this is just a sample:

1. Research undertaken by the Independent Noise Working Group:  
<https://www.heatonharris.com/reports-publications>
2. "Cotton Farm Wind Farm Monitoring Experience. May 2015"  
<http://www.intertwined.co.uk/The%20Cotton%20Farm%20monitor%20experience0615.pdf>
3. "Wind Turbines, Noise and Health" by Dr. Amanda Harry  
<https://www.windturbinesyndrome.com/wp-content/uploads/2012/11/Amanda-Harry-Wind-Turbines-Noise-and-Health-2007.pdf>
4. Research papers on wind turbine noise and health  
<http://waubrafoundation.org.au/>

If it is central and local government policy to encourage wind energy generation, this must not be done at the expense of residents' quality of life and health. We would strongly advocate that adoption of the recommendations within our response to Qu.2 above.

The issues of wind turbine noise are well summarized by the Noise Abatement Society (<http://noiseabatementociety.com/campaigns/wind-turbines/>) below:

"Each year the NAS receives many complaints about noise from wind turbines. The noise and penetrating sound of the rotating blades has been compared to the low thud of base notes from loud music or the sound of a constant helicopter at a distance. While there remains dispute regarding the source and definition of this sound, there is no doubt that residents remain disturbed and distressed by its promulgation. A group of turbines produce pulses of sound which cause greater effect when they synchronise. The sound then resembles distant pile-driving, or as one resident put it, "an endless train". The turbine sound acquires a distinct 'beating' character, the rhythm of which is in agreement with the blade passing frequency and this effect is stronger for more modern, taller wind turbines.

#### *Felt as much as heard*

A family living near a wind farm in Askam, Cumbria (7 turbines, 62.5m tall) describe the noise as 'a washing machine that's gone wrong. Its whooshing drumming just goes on and on, it's torture' and 'it is an audio version of Chinese Water Torture. The

noise is such that it is felt as much as heard'. So far there has been no success in reducing this invasive noise, caused by wind turbines, which can continue unabated day and night for extended periods and can travel several miles. There are recognised health problems such as pulse irregularity and sleep disturbance associated with this type of low-frequency sound.

#### *Low Frequency Noise and Infrasound*

Wind energy developers measure the audible range of noise, but not the lower frequencies – which are sometimes below audible limits. In 2004, the DTI commissioned the Hayes McKenzie Partnership to report on claims that LFN and infrasound were causing health effects. Their report noted that a phenomenon known as Aerodynamic Modulation was occurring in ways not anticipated by UK regulations relating to wind farms ETSU-R-97 (ETSU). Research by Dr. Amanda Harry showed that all but one of the fourteen people living near Bears Down wind farm in Cornwall had experienced increased incidents of headaches, migraines, nausea, dizziness, palpitations, tinnitus, sleep disorders, stress anxiety and depression.

#### *Vibration*

Wind turbines are now being built to a greater height and blade span than when the original environmental assessments were made for smaller turbines. It is in anticipation of such changes that ETSU guidance itself called for its own review. Unsurprisingly, therefore, recent research studies have highlighted previously unidentified problems. Professor Peter Styles, Keele University, in the UK, published a study on vibrations from the 60m high wind turbines at Dun Law, Scotland. He found that '... when the windfarm starts to generate, even at low wind speeds, considerable infrasound signals can be detected at all stations out to circa 10Km' and '... we have clearly shown that wind turbines generate low frequency sound and acoustic signals which can be detected at considerable distances (many kilometres) from wind farms on infrasound detectors and on low-frequency microphones'. Whilst earlier studies conclude that there was no significant risk to human health from vibrations produced by wind farms, these studies are dated, and refer to older, much smaller turbines. Concern has increased as most modern wind turbines are in excess of 100 metres high, (much bigger than those at Dun Law). Some developers are proposing to install these devices as close as 650 metres to human habitation and, in some cases, closer. (D. M. J. P. Manley. P. Styles and J. Scott 'Perception of the Public of Low Frequency Noise'. Journal of Low Frequency Noise, Vibration and Active Control, Vol. 21 No1 2002) While it is noted in the report that turbines should be placed at least 10Km away from any resident, it must also be stressed that acoustic signals relative to distance and disturbance of residents and siting of wind turbines must be reviewed on a case by case basis.

#### *Out of date regulation*

Doubts are shared by many acousticians with regard to the continued usefulness of current UK noise regulations relating to wind turbines, ETSU-R-97, which are now some ten years old and refer to a previous generation of much smaller turbines. The current method of calculating noise from a wind turbine is not able to predict noise levels accurately. A range of factors affect the possible noise pollution: the turbine design, atmosphere, wind speed, terrain, time of day, all of which cannot be contained within even the most complicated algorithm. A study carried out on a 30MW, 17 turbine wind farm on the German/Dutch border showed that 'there is a distinct audible difference between the night and daytime wind turbine sound'. (G.P. Van Den Berg 'Effects of the wind profile at night on wind turbine sound' Journal of Sound and Vibration Vol. 244 2004") The study found that night time wind speeds were some 2.6 times the expected levels calculated which resulted in sound levels from turbines some 15dB higher than the predicted emissions. The national calculation models used measured wind speeds at a height of 10m, however, at a hub some 58m above the ground, they were up to 18dB noisier than the calculated value suggested.

#### *New research required*

In order to protect the public, the Noise Abatement Society would like to see this problem addressed by government, urgently, through the commissioning of further research into the multiple health and environmental effects caused by wind turbines and the amendment of ETSU-R-97 regulations. While the Society commends generation of renewable energy through natural resources, this must not come at the price of extreme disturbance and health risks to residents. To this end, we intend to help motivate government to review its current regulations.

#### ***Carmarthenshire County Council (Environmental Health & Licensing)***

We would like to see Welsh Government continue to recognise Air Quality and Noise to be important factors that influence people's health and Well-being. To support this, noise policy should be enhanced, particularly where development control is concerned, and where action is proposed against a noise nuisance using the Environmental Protection Act 1990.

Too often, noise is given inadequate consideration at the Planning stage and maintaining good external (and internal) amenity in residential areas that could be affected by excessive noise should be supported and protected.

The work Environmental Health Departments already undertake in Noise Control seems well placed and synergistic to the principles/ethos of the Future Generations Act. Officers already achieve much of this through their day to day work in protecting the public from noise sources through the investigation of Noise Complaints, responses to Planning and Licensing Applications. Unfortunately the work that EHO's undertake are often viewed as being obstacles to developments as opposed

to protecting the public from unwanted noise. Experience has showed that through careful consideration early on during the development stages most noise sources can be either planned or managed to positively reduce or eliminate noise at source. Through increasing/raising the importance of noise as a pollutant in national documents/policies, would assist EHO's in becoming involved more in educational or promotional capacity. Also this would encourage EHO's to become more involved in developing other departmental policies such as Planning Control, Housing, Transport etc.

### ***Chartered Institute of Environmental Health (CIEH)***

The CIEH would like to see health considerations play a much more prominent role in the planning process, with more weight being given to objections to development on health and wellbeing grounds. It is not acceptable to allow development on the basis that any nuisance that may arise post development can be dealt with using statutory nuisance provisions as currently happens, it is far preferable to develop out or condition out so far as is possible noise and pollution generation.

The CIEH considers that insufficient regard has been given to the role that protecting air quality and reducing exposure to noise through the planning system should have. It is entirely right that Welsh Government should focus on development that creates jobs and homes and the infra structure necessary to support those efforts, however all too often the question of the impact in health terms of a development is not properly considered or weighted. It is not acceptable to give planning permission for development that will have to be controlled using statutory nuisance provisions or where, as in the case of homes over shops or in town centres near night clubs or pubs noise nuisance is inevitable. The Public Health (Wales) Bill currently progressing the Welsh Government will make the use of Health Impact Assessment mandatory for some development, but we are concerned that this will impact only at population level. Due regard in planning terms must be paid to the health and wellbeing of individuals and to ensure due regard is paid to this requirement it should be included in robust planning guidance.

We welcome the collaborative approach of Welsh Government to taking forward this agenda and would be pleased to engage further with it.

We would be happy to provide expansion on or clarification of any of the issues discussed above.

### ***City and County of Swansea (Pollution Control)***

Some of the obvious short and medium term objectives for Wales should involve a far smarter approach to planning and service delivery of other public sector operations. We certainly have a number of concerns about the planning system in

Wales. In Swansea we have always had a very good relationship with development control colleagues and significant input to planning committee or local plan issues. This requires considerable effort and resource – which we have always been happy to commit to, however many developers feel that we are not statutory consultees and do not understand our objectives. There is also considerable confusion around case law on statutory nuisance. Our role here is not just to protect existing or future residents but also to protect existing business. This is never easy to deliver while developers (and sometimes the planning Inspectorate) seem happy to ignore this advice and walk away from nuisance enforcement processes which we have to do exercise at further expense at some future point.

Clearly regulating noise and air quality through the planning system is not straightforward but it is an issue where all the parties could collaborate quickly to produce guidance that should be more useful than anything currently available in England or Wales. Similar problems have occurred when dealing with national infrastructure projects and inspection panels have particularly found difficulty in dealing with local air quality management.

The desire to have more sustainable homes in city centres has also conflicted with the night-time economy and led to dozens of enforcement actions in Swansea alone. We agree with the theory, but in practice there needs to be far more robust simple design guidance which developers must accept as necessary if mixed use city centres are to succeed. This is particularly the case since the liberalisation of licensing laws.

Other public sector operations such as the planning and site sharing of Welsh and English medium schools, the delivery of healthcare, access to social care etc could all assist improve the position on exposure reduction if we stop working in silos. It is surprising given the current financial position that we are not sharing more facilities to reduce the number of unnecessary car journeys forced upon the general public who need to access these facilities on a daily basis.

There are many other practical examples we could give as this subject clearly crosses many traditional boundaries. Perhaps it would be useful to examine some of the more recent evidence to see whether we could agree quickly on some more practical up-to-date guidance.

### ***Flintshire County Council***

My own comment would be the completion of the work, already started, on the production of an SPG on Noise for use by all LA's to provide guidance and a consistent approach across the Principality.

I would support the observations reported by the All Wales Pollution Technical Panel repeated below:

“Recognition of the impacts in planning terms that events have on individuals rather than simple reliance on noise levels expressed over a reference time period. Local Authority officers can find themselves in dispute with planners and consultants who may not consider the real impact of activities. BS 4142 tries to allow this with new penalties but this is open to misuse. Statements like “only one delivery” or “only one complainant” are common. From some LA experiences there is a distinct lack of knowledge and experience of some planning colleagues and it would be helpful to have more robust guidance for planners on noise issues to ensure a consistent approach across Wales.

“There should be recognition of the fact that 1dBA as a noise index can be the degree of perceptible change rather than 3dBA, which is often misinterpreted.

“With regard to air quality planning conditions for new developments need to be realistic and fit into what the residents of residential developments would view as important for their well-being. A model shift is difficult to achieve but reducing car spaces is often unrealistic. Residents in practice move in and used amenity spaces to park their cars on. This in turn will lead to stress and pressures for these residents who will not utilise amenity spaces and will be too close to each other. It would be better to have more parking but less units overall and provide what residents will need.”

My own comments would include some additional consideration of improving the carbon footprint of new build properties and premises through the Planning Process. This could be through a requirement to provide enhanced insulation and built in sustainable energy projects on all new properties. Whilst it is appreciated that there will be an increased cost to developers this would overall reduce energy demand, provide additional business and employment opportunities and as a by-product improve AQ.

### ***Hunter Acoustics Ltd***

We feel the Noise Action Plan for Wales needs to provide guidance to address the overly critical assessment of industrial noise applied by EHO's when reviewing planning applications for new residential development.

It is well documented that the lack of affordable housing is a major issue for younger generations in particular.

<http://www.independent.co.uk/news/uk/politics/lack-of-affordable-housingblamed-for-50-drop-in-young-homeowners-10515982.html>



There is an urgent need to encourage affordable housing development on less than ideal sites, with appropriate conditions to protect incoming residents. However EHO's in Wales currently apply an idyllic standard for industrial noise, based on the old BS4142 1997, which effectively prevents residential development on sites where the residual noise climate happens to be controlled by industrial noise. The standard applied would indicate a potential issue at the vast majority of existing industrial sites in Wales, yet most sites do not have an issue, probably because local residents purchased the property knowing the industrial site was present, and therefore treat it like road traffic noise, which has traditionally had a more pragmatic planning approach applied to it.

The scope of the latest BS4142 2014 has been expanded to include assessing sound at proposed new dwellings or premises used for residential purpose, as well as investigating complaints.

In section 11, BS4142 2014 confirms mechanical ventilation giving residents the option not to open the window, can be used as a means of alleviating industrial noise intrusion. Please note, we are not suggesting fixed glazing, only providing mechanical ventilation giving residents the option not to open their window. However we are finding EHO's in Wales are still not allowing this option to be considered for new residential schemes where industrial noise is present, possibly because BS4142 advises 'the determination of noise amounting to a nuisance is beyond the scope of this British Standard'.

The Welsh Government needs to give clear unequivocal guidance to local authorities on how to take the latest guidance on board, in order to encourage sustainable and affordable housing development in Wales. In England for example 'Guidance on Enforcement Action against Statutory Nuisance' under the National Planning Policy Framework (NPPF) advises;

'When assessing whether a statutory nuisance exists, local authorities will consider a number of relevant factors, including the noise level, its duration, how often it occurs, the time of day or night that it occurs and the 'character of the locality'. The factors influencing the 'character of the locality' may include long-established sources of noise in the vicinity - for example, church bells, industrial premises, music venues or public houses.'

The latest planning guidance therefore allows EHO's to take account of noise mitigation measures incorporated into the building envelope of residential development, when assessing any future complaint, as well as taking account of the context where a resident has purchased a new property near a well-established industrial site.

If we do not take on board these updates, we will continue to restrict sustainable affordable housing development in Wales. We will also accelerate more expensive development on Green belt land, with the associated transport infra-structure to cope with increased use of private and public transport over longer commuting distances to access employment and leisure resources. This in turn results in increased traffic noise for society as a whole.

Please note we are not suggesting residential development is acceptable on any site, only that a site exposed to reasonable industrial noise levels should not be excluded.

TAN11 (1997) advises NEC noise levels should not be used to assess the impact of industrial noise on proposed residential development because the nature of this type of noise, and local circumstances, may necessitate individual assessment and because there is insufficient information on people's response to industrial noise to allow detailed guidance to be given.

It is outside our remit as independent consultants to specify criteria, however we would advise guidance that includes specific criteria tends to be significantly more effective/useful for developers, EHO's and planners.

Bearing in mind the more comprehensive corrections included in BS4142 2014 to account for the tonality/intermittency or industrial nature of the source, we would suggest comparing rating levels of industrial noise with planning guidance in TAN 11 1997 could now be considered. An example table is shown below;

Table 2: RECOMMENDED NOISE EXPOSURE CATEGORIES FOR NEW DWELLINGS NEAR EXISTING INDUSTRIAL NOISE SOURCES					
Noise Levels <sup>(1)</sup> corresponding to the Noise Exposure Categories for New Dwellings $L_{Aeq,T}dB^{(1)}$ , where T = 1 hour 0700-2300hrs, 15 minutes 2300-0700hrs)					
Noise Source		Noise Exposure Category			
		A	B	C	D
Industrial Noise	0700-2300	<55	55-63	63-72	>72
	2300-0700	<45	45-57	57-66	>66
<b>Notes</b> <sup>(1)</sup> <b>Rating Noise levels;</b> as defined in BS4142 2014 ( $L_{Aeq,T}$ ) used when deciding the NEC of a site should be representatives of typical conditions.					

This would have the significant benefit of using existing references and methodology consultants, planners and EHO's are all familiar with, with a penalty applied to account for the nature of the industrial sound source referring to BS4142 2014.

It should be possible for local EHO's to confirm, based on their experience, the typical threshold (lower rating level limit) for industrial noise, below which they would assess statutory noise nuisance is unlikely to occur (in the context of a resident who has purchased a property next to an existing industrial site). If our hypothesis is correct, this is likely to be at around 55dBLAr day, 45dBLAr night, the boundary between NEC A and B in TAN 11. This appears reasonable based on our experience.

Where this threshold is exceeded, mechanical ventilation and acoustic glazing could be conditioned to meet internal noise criteria in line with BS8233 2014 guidance, in the same way it has for traffic noise for many years.

Internal rating noise level limits in habitable rooms;  
35dB daytime LAr(1 hour)  
30dB night LAr(15 minutes)

50% of garden areas to meet 55dBLAr(1 hour) as far as is practicable , bearing in mind the advice given in BS8233 which states;

“It is also recognised that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs to be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited.”

EHO's could also suggest an external upper rating level limit outside residences, above which residential development is not recommended unless alternative quieter sites are not available. Based on our hypothesis, this is likely to be at around 63dBLAr day, 57dBLAr night – NEC C of TAN 11.

The above are suggestions for discussion. If we are serious about getting affordable sustainable residential development in Wales, it is essential we move from the existing situation where in many areas it is virtually impossible to get planning permission for sites exposed to 40dBLAeq/45dB LAr industrial noise, while there is no issue where a similar site is exposed to 55dBLAeq traffic noise (10dB represents a doubling in subjective noise level). In order for this to happen, Central Government needs to give clear direction to EHO's and planners to take on board the latest planning guidance.

Additional comments from Hunter Acoustics Ltd: Entertainment sector had responded about new flats being built in city centres causing venues to close due to

noise complaints – Because EHO's are loathed to condition mech vent/acoustic glazing to control noise intrusion from anything other than traffic noise, people open their windows at night and are disturbed either by the music or by people on the street/smoking areas etc. If we can clarify that façade sound insulation can be taken into consideration when assessing noise complaints/nuisance, attenuation measures could be conditioned to be built in to the new flats/conversions – in the context of people choosing to live in city centres.

TAN 11: Please do not be tempted to go the English route where they abolished PPG24 (exactly same as TAN 11), and not replacing it with anything – leaving a planning vacuum. The new ProPG is due out in England in the new year at some point, (though I had serious issues with the draft version).

### ***Music Venue Trust***

All policy should be based on the most up to date evidence available from Wales, the UK and internationally. The Music Venue Trust can provide up to date evidence on how progressive parts of the UK are successfully managing sound and noise from music venues.

Current Planning Guidance in Wales Technical Advice Noise 11 was last updated in 1997 almost 20years ago, surely it is time to update this document and reflect current thinking on best practice and management of noise and planning matters. This should be a priority for the Welsh Government in its current term.

The Wales National Noise Map needs to be published in a more sophisticated manner. Simply publishing noise generated by road, rail and industry does little to help business or developers and is only of very limited use in making strategic planning decisions.

The plans need to be developed to show where noise impacts on sensitive receptors and also where it is possible to mitigate noise impacts sensibly either through interventions in the planning system, or proactive measures to help sensitive receptors using Welsh Government funding.

The Wales National Noise Map could be a more useful tool in the planning process and for environmental health practitioners if it took an alternative view of the acceptability of some noise and sound in certain locations. To be clear this is not a reference to an acceptance of the impact of noise generated by transport and industry on sensitive receptors but an opportunity for Wales to demonstrate more progressive approaches to noise and sound management from music venues in urban areas by using a mapping tool to create zones where different sounds and noise generated by activities such as live music is not a problem to be solved but an activity to be welcomed and managed with agreed parameters.

A finer grain of detailed information could be captured using noise impact assessments submitted during the planning process and the daily activity of EHOs across Wales could also be captured and entered into a GIS database to provide a much more useful and detailed representation of existing noise levels in urban areas. This would then show where noise generating activity and development are currently clustered in towns and cities.

Ultimately this data would then provide the basis for an alternative view of sound and noise generating existing development, not as a nuisance but demonstrating that reasonable level of noise and sounds generated by activity from music venues and other entertainment sources in urban areas, is an indication of vibrancy and vitality and to be welcomed given the contribution to the night time economy.

The MVT would request that the Welsh Government take this opportunity to create zones defined in urban areas where a higher than normal level of noise should be expected due to entertainment activity. In planning terms this would help to better manage the need for residential development in urban areas, and better protect the amenity of future residents. This approach would reduce the potential for complaints following new residential development near to these local noise generating activity areas, or night time economy zones. It would also reduce the risk and opposition to new development from existing businesses whose contribution to local vitality is a factor in the desirability of living in urban areas and therefore one of the main reasons why central locations are highly sought after by residential developers.

Given Wales unique legislation protecting the interests of Future Generations the MVT believe that there is a strong and valid argument that Future Generations are entitled to at least the same levels of enjoyment from music venues in our towns and cities that previous and current generations have and therefore noise regulations should avoid creating a framework of regulation that threatens the future of live music venues and instead move to a framework that actively maintains, enhances and expands live music venues and opportunities to experience live music performance in Wales.

The Music Venue Trust would wish to see the following positive steps:

- Adoption of the agent of change principle. Wales has a unique opportunity to build the Agent of Change principle in to both legislation and regulation (see response to Q3 below)
- Creation of zones in city centres where an increase level of noise generated from live music venues is acceptable in order to reduce risks to music venues from future occupants of new residential development
- Measures to reduce vexatious complaints against live music venues including the imposition of a modest charge for full investigation by EHO.

- Preparation of a new TAN 11 Noise last updated in 1997 and long overdue a revision with a more proactive approach to the management of noise rather than a reactive approach to complaints that can often be vexatious.
- Higher thresholds for a valid complaint including factoring the pre-existence of a noise source such as a music venue when new residential development occurs within a defined radius
- Use of Section 106 or Community Infrastructure Levy to provide a source of funds for noise insulation measures at music venues in new local “night time economic zones”, or “local entertainment noise areas”
- Dedicated resource in Wales with responsibility for promoting and protecting the night time economy similar to the post of Night Mayor created by Sadiq Khan in London.
- Establish a route in the planning process for applicants for residential development to contribute to the costs of not just noise mitigation measures in their developments but also outside red line boundaries by contributing to mitigation of noise directly at the source for example improved sound insulation at music venues.

The Music Venue Trust believes that Wales has a unique opportunity to develop a forward thinking and progressive approach to managing development and noise in a more equitable manner, through adoption of the Agent of Change principle.

The Agent of Change Principle is not complicated or controversial, it's simple common sense: Agent of Change says that the person or business responsible for the change is responsible for managing the impact of the change.

This means that an apartment block to be built near an established live music venue would have to pay for soundproofing, while a live music venue opening in a residential area would be responsible for the costs. A resident who moves next door to a music venue would, in law, be assessed as having made that decision understanding that there's going to be some music noise, and a music venue that buys a new PA would be expected to carry out tests to make sure its noise emissions don't increase.

At the moment, UK law says that whoever is making a nuisance is always responsible for that nuisance. How long it has existed, whether there were any historic instances of the same noise being a nuisance, if somebody moved right next door to the noise and decided it was a nuisance, these are all, unbelievably, currently irrelevant to British law. If a noise exists, you can deliberately move next to it and demand it be turned off and UK law will support you. You can build balsawood huts next door to a music venue and simply wait for your residents to complain and the venue will have to pay all the costs to reduce their noise.

Music Venues are in the frontline of the impact of our current laws, with an avalanche of cases potentially closing down music across the UK. But these are not the only community activities under attack.

Complaints have been made against church bells, a new development next to a speedway race track where the residents don't like the sound of the bikes, the brand new build next to a farm where the sheep are now, according to British law, too loud and a nuisance. Community activities and cultural activities across the UK are under threat – Music Venues are just the first affected.

Agent of Change has been trialled and tested in Australia and it works; better planning, better developments, people thinking about what exists where they want to live and how they will live with it, music venues and others thinking more about their neighbours.

### ***Natural Resources Wales***

It is important to ensure spatial planning and individual planning applications consider development in terms of location, impacts (to and from the development) and remedial actions in areas of poor air quality and noise, if a significant issue. For regulated operations, although some issues relating to noise and air quality can be addressed through the Environmental Permitting Regulations, the location of a planned or existing development cannot.

Section 2 defines the “Legal Landscape” and identifies the provisions of the Environmental Impacts Assessment Directive. The Directive is key to understanding and mitigating the impacts of cumulative development. Further guidance needs to be provided to deliver this as well as the requirements of Habitats Risk Assessment and SEA.

### ***Royal Town Planning Institute (RTPI) Cymru***

The response has been formed drawing on the expertise of the RTPI Cymru Policy and Research Forum which includes a cross section of planning practitioners from the private and public sectors and academia from across Wales.

We note that the consultation refers to a Welsh Government clarification letter for Technical Advice Note (TAN) 11: Noise to highlight factual updates and cross references to other documents, and has now initiated a more substantive review of national planning policy and guidance on air quality and noise. Which RTPI Cymru supports.

What the consultation does not appear to address is noise from elsewhere. This is particularly relevant in the planning process when determining applications for

development which themselves would not generate noise, but which would be impacted upon by existing noisy uses.

RTPI Cymru would recommend the creation of defined zones in urban areas where a higher than normal level of noise should be expected due to entertainment activity. This would help to better manage the need for residential development in urban areas, and better protect the amenity of future residents, through town and country planning. This approach would reduce the potential for complaints following new residential development near to existing local noise generating activity areas, or night time economy zones. It would also reduce the risk and opposition to new development from existing businesses whose contribution to local vitality is a factor in the desirability of living in urban areas and therefore one of the main reasons why central locations are highly sought after by residential developers.

### ***Stephen Turner Acoustics Ltd***

And on David Hunter's response

Over the years, I have encountered the issue of local authorities being reluctant to permit new housing next to existing industry because of the fear of a subsequent complaint and the noise from the industry coming under pressure. This has been particularly pertinent when the industry was a large local employer.

Although you would expect me to say this, but proper application of the English policy along with the 2014 version of BS 4142 can now minimise the risk. I am not sure, though, that many English LAs realise how they could address this.

The combination of avoiding a significant adverse impact; mitigating and minimising the adverse impact and taking account of the building envelope insulation (in particular) as advocated by BS4142:2014 can come together to reach a situation where if there was a subsequent complaint – it is highly unlikely that a statutory nuisance is occurring (unless the industry has become noisier or its hours of operation have markedly increased).

PPG 24 did and TAN11 still does actually allow local authorities to choose what levels they like for the NEC categories.

The key sentence in TAN11 is this from A2:

However, in some cases it may be appropriate for local planning authorities to determine the range of noise levels they wish to attribute to the various NECs.

It goes on to say



Where there is a clear need for new residential development in an already noisy area some or all NECs might be increased by up to 3 dB(A) above the recommended levels. In other cases, a reduction of up to 3 dB(A) may be justified

It tends to be forgotten that there is/was any flexibility and if flexibility is recalled, there is a view that it is limited to +/- 3dB. In fact LAs could / can do what they like.

The crucial point in my view is that the boundaries (or in England's case, any numerical values in local policy) should not be regarded as fixed thresholds. Treat each situation on its merit including the need for the housing.

He is right in his criticism of EHOs rejecting the full BS4142:2014 context approach on the basis that the standard cannot be used for the assessment of nuisance.

Firstly, what the standard is saying, in my view, is that there is no application of the standard that will give you a result from which according to the standard a statutory nuisance exists. The standard of course can be used to help form a view about nuisance, but that is different. However, in a planning situation, the question is not about where there will be statutory nuisance, it is about meeting the relevant planning tests – a very different point.

One of the advantages of our NPPF is that the planning tests are quite clear in terms of the desired outcome. "Avoid noise giving rise to significant adverse impacts etc."

Given you have TAN11, there may be a case for identifying some NEC categories for industry in terms of rating levels in order to help the situation. An issue though is that the new BS 4142 gives such a wide range of possible rating corrections. Would the uncertainty of what the rating correction should be in any situation make this less helpful than might have been the case. The 1997 version with a correction of either 0dB or +5 dB was more straightforward. Using the precautionary principle, you'd just add 5 dB and see where you were.

On page 4 it must be remembered that the values in Table 4 of BS8233:2014 are not limits. They are 'desirable' levels. In English policy speak they are LOAELs. That is why Note 7 to Table 4 says you can have a further 5 dB and life will not be much worse off.

His interpretation of the external guidance is broadly correct. I think what the standard intends is that for those elements of the garden where you want to sit and relax, eg the patio – then try to keep the level to 50 /55. However, it is debatable whether it needs to be that for the vegetable patch and certainly not where the wheelie bins are kept. The standard is clear – ideally achieve 55 dB somewhere (presumably somewhere useful like the patio) but it doesn't have to be achieved everywhere.

For industrial noise, I have found that the garden values are increasingly being described as a rating level (but again with the issue of what the rating correction should be).

I have also had one authority agree that front gardens don't count if there is a back garden – so housing layout can help.

***Private individual or unattributed response 7***

Why have you allowed the construction of new family homes adjacent to known pollution 'hot spots'?

***Private individual or unattributed response 10***

What about light. There is a lot of illumination in rural areas from the buildings of farms. Working on a 24 hour operation. No thought seems to be given to this by planning authorities. Large buildings can be screened by trees and disappear from view. Light is different.

## Other comments received

*There is considerable uncertainty about the extent to which we will still be bound by our current EU obligations relating to air and noise pollution following the UK's withdrawal from the European Union. Therefore, we are not yet in a position to state precisely what further action we propose to take forward in the second, third, fourth and fifth years of this Assembly.*

*Bearing this uncertainty in mind, along with the information provided on the current state of play in Wales in sections 1 to 5 and Annex A of the consultation document, please tell us what further action, if any, you would like to see taken forward on air and noise pollution in the next five years?*

*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.*

### ***All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group) and Pembrokeshire County Council***

Clearly looking at the longer term some other suggestions could be: Educational development of air quality/noise topics/implications with educational establishments, public, interested groups within for example a local authority area in conjunction with Local Health Boards to include the use of existing resources, for example Welsh Air Quality Forum. To develop appreciation of a bigger picture in relation to the adverse impacts of pollution upon health and environments. To assist in development of healthy lifestyles where physical well-being are encouraged to enhance health outcomes, combat susceptibility and recognise sustainable transport methods as an option for travel. Robust standards/methods of assessment for air quality parameters that utilise technology and remote monitoring; as well as utilising the technology already available to deal with traffic management and patient management in real-time.

A key link for reducing NO<sub>2</sub> will be the future transportation strategy for Wales. The requirement to improve air quality and any mutual noise mitigation needs to form part of a long term sustainable transportation policy. Further action could be taken to raise the profile of air quality and noise pollution plus any associated impact on health, as well as making appropriate connections with relevant transport/highways policies.

### ***Association of Directors Public Health Wales***

We have read the Consultation document on 'Local Air quality and management in Wales' detailing the proposed changes to the way the effects of air and noise pollution will be managed in Wales. The Association of Directors Public Health Wales fully endorses the comments contained within Huw Brunt's consultation response (appendix attached).

Air pollution is a significant threat to Public Health which has disproportionate effects on vulnerable sectors of the population. We welcome the invitation to respond to the consultation.

### ***Association of Noise Consultants***

We would like to see no dilution of the existing standards in relation to noise and air quality and indeed would like to see a continued commitment to improving air quality, regardless of the status of our EU membership

### ***Atkins***

I think that the general approach of identifying the worst affected population and writing a plan for how to address these issues is a good idea, and helps to reduce the often unacceptable health burden on this section of the population.

### ***British Heart Foundation (BHF) Cymru***

British Heart Foundation (BHF) Cymru is the nation's leading heart charity. We are working to achieve our vision of a world in which people do not die prematurely or suffer from cardiovascular disease. In the fight for every heartbeat we fund groundbreaking medical research, provide support and care to people living with cardiovascular disease and advocate for change and improvement in services and care.

BHF Cymru is interested in air pollution because of the links between air pollution and cardiovascular disease. The association between elevated levels of air pollution and increased cardiac death rates was first recognised in the early 1950s. Since this time scientists have been researching the nature of the link, and the evidence shows a causal relationship. Experts believe that air pollution can make existing heart conditions worse and cause cardiovascular events in vulnerable groups.

### ***British Lung Foundation (BLF) Cymru***

We are the only charity in Wales campaigning for the nation's lung health, with the aim of ensuring everyone in Wales breathes clean air with healthy lungs. Being specifically a health charity, we respond to this consultation with the health impact of

air pollution in mind. Due to the nature of our work we will not respond to the questions regarding noise pollution.

Research has shown that dirty air has a huge impact on all our health. For people who already have a lung condition, it worsens their conditions and increases their chance of hospitalisation. For all of us, it increases our risk of lung cancer and conditions like asthma. For children's growing lungs, pollution can do lasting damage to their development. Pollutants in the air have been linked to over 1,300 early deaths a year in Wales and 40,000 across the UK (Department for Environment, Food and Rural Affairs (DEFRA), 2013: Impact pathway guidance for valuing changes in air quality.). Overall air pollution is estimated to cost the UK economy around £27 billion a year.

Our response to this consultation seeks to help reduce the effects of air pollution on Wales' lungs.

We would hope that the Welsh Government's commitment to tackling air pollution does not depend on being required to meet its current EU obligations, but rather would use EU directives as a starting point upon which to build plans of action.

We are concerned that the air pollution indicator under the remit of the Wellbeing of Future Generations Act exclusively concerns nitrogen oxides. We believe a national indicator is also required for particulate matter (PM) pollution, due to the significant adverse effect PM pollution (in particular PM2.5) has on lung health.

We also believe that more needs to be done by Welsh Government to actively monitor daily air pollution levels from a public health perspective. Forecasting by DEFRA and the Met Office means it is possible to prepare for expected high levels of pollution and warn those most susceptible to its effects beforehand, but Public Health Wales and local health boards do not currently routinely do this. Undertaking this activity would help ensure air pollution is viewed as an ongoing public health issue, reduce the risk of avoidable exacerbations for those with chronic obstructive pulmonary disease and other prevalent lung conditions, and therefore potentially reduce hospitalisations.

We would like to welcome recent moves by the Welsh Government to encourage active travel, in particular through the passing of the Active Travel (Wales) Act. Encouraging active travel can in itself help combat air pollution, as well as the other stated health benefits.

We are however concerned that the Act in its current form does not give regard to the safety of active travel routes in terms of air quality. Given that a person's lungs are more susceptible to the effects of air pollutants during exercise, we would argue that walking and cycling routes should be subject to regular air pollution monitoring

and should also be prioritised if a reduction in pollution levels is needed. We also call for an amendment to the Act to ensure air quality is taken into account when creating new active travel routes.

## **Calor**

Calor is supportive of the Welsh Government's consultation on Local Air Quality and Noise Management in Wales.

Calor recognises that air pollution and air quality is a major issue in Wales and is committed to helping to reduce the levels of air pollutants.

Calor feels that one of the best ways to help the problem of air quality in Wales is through the use of LPG vehicles.

Calor is the UK's leading supplier of Liquid Petroleum Gas (LPG) and is fully supportive of a cost-effective and ambitious approach to improve Local Air Quality in Wales. As such we welcome this Welsh Government consultation and are grateful for the opportunity to respond. It is Calor's view that the Welsh Government are yet to realise the full potential of clean LPG technologies for the cost-effective reduction of emissions and improvement of air quality, across all fields, but particularly in the automotive sector.

Automotive LPG: lower emissions, lower cost, better air quality

Automotive LPG has been in wide use by UK drivers since 2000. To date around 150,000 drivers benefit from using this cleaner and more affordable fuel, available from 1,400 refuelling sites across the UK. Given current concerns about air pollution in towns and cities, much of which is attributable to the high numbers of diesel vehicles on our streets, LPG offers the opportunity to switch immediately to a cleaner fuel, with an already existing refuelling infrastructure, which can be expanded at no cost to the taxpayer if demand increases.

LPG can significantly improve local air quality. In comparison to a typical diesel engine, based on real world emission testing results:

- The European Commission's GHG intensity calculations contained within the Fuel Quality Directive confirm that, on a well to wheel basis, LPG emits up to 21% less CO<sub>2</sub> than Petrol and up to 23% less CO<sub>2</sub> than diesel.
- LPG emits 99% fewer particulates (PM)
- LPG emits 80% less Nitrogen Oxides (NO<sub>x</sub>)

Calor believes that LPG has a role to play in making the transition to a low and zero emission future for vehicles. Converting a vehicle to LPG is a pragmatic solution, which will be of particular interest for those organisations with fleets of LGVs, for taxi

drivers or other businesses with vehicles, which need to operate in town and city centres. By choosing LPG, there would be an immediate and quantifiable impact in Wales as it would contribute towards improving air quality in Wales' Air Quality Management Areas (AQMAs). AQMAs began in 1997 and mark out areas where local authorities feel air quality objectives are not like to be met. There are currently ten Welsh authorities that contain such areas: Powys, Monmouthshire, Cardiff, Rhondda Cynon Taf, Swansea, Carmarthenshire, Neath Port Talbot, Newport, Caerphilly and Pembrokeshire. Alongside combatting emissions across Wales, policy should focus on facilitating a choice for those wanting to transition from gasoline and diesel fuelled vehicles to alternative fuels, such as LPG or electric vehicles.

Considering the taxi fleet in particular, there is further opportunity to drastically improve local air quality in urban areas of Wales. Black cabs and private hire vehicles are a major source of urban air pollution. However, existing diesel taxis can easily and economically be converted to run on LPG, with no loss in performance. LPG taxis emit significantly fewer harmful emissions such as NOx and PM. This has been demonstrated in the extensive real world testing programme that Autogas Ltd (a joint venture between Calor and Shell) has recently completed at the Millbrook proving ground with an LPG conversion of a TX4 black cab taxi. The testing revealed that, when running on diesel, the TX4 was below Euro 3 emission standards under real life conditions – despite the fact that the taxi, which is a 2010 model, should have been meeting Euro 4. After being converted to run on LPG, the TX4 not only met Euro 4 standards but actually achieved Euro 6 N1Class3 emission standards, delivering significant reductions in both NOx and PM. Further to this, additional test data gathered from the PCO Cenex London taxi drive cycle tests has revealed that the LPG taxi had reduced emissions not only for NOx and PM but also for CO2.

The final point to mention is that in 2017 Calor will be bringing bioLPG to market. This gas is chemically indistinct to normal LPG but has up to 80% fewer carbon dioxide emissions, thus providing a low carbon future for LPG fuelled vehicles. As such Calor believes that converting existing diesel taxis to LPG could deliver significant air quality benefits to Wales' urban areas and offers a long term low carbon, low emission solution to Welsh taxi fleets.

This focus need not contradict current policy to support electric vehicles, but it provides a cost effective immediate solution for those, who can't afford to buy a zero emission capable vehicle now. If progress on air quality is to be made quickly, a transitional and cost-effective pathway to zero-emission vehicles must be adopted. To do so it will be essential for Wales to fully appraise what conditions are required to enable consumers to make the switch. This should be done in discussion with vehicle manufactures, and by looking at equivalent examples across Europe.

While some aspects of this work can only be done at a Westminster level, it is vital that the Welsh Government looks at what can be achieved at a devolved level (especially given the additional powers contained within the draft Wales Bill). For instance, local authorities and public sector organisations could choose to use LPG to cut emissions and reduce operating costs, as is already being done in Anglesey by the county council.

In conclusion there are a number of ways in which LPG could be deployed across Wales to improve air quality levels which also tackle emissions and reduce costs. We are keen to work closely with Government over the months and years ahead to support them in action taken to address these issues.

### ***Campaign for the Protection of Rural Wales (CPRW) (Montgomery and Brecon & Radnor branches)***

We welcome the recognition of the importance of air quality and noise management for the health and well-being of residents in both urban and rural areas. We welcome also the recognition of the potential for nuisance from agricultural activities in rural areas. The consultation paper though remains focussed on those sources of nuisance most associated with urban living. Welsh Government and local government policy needs to recognise rural sources of air and noise pollution, chief amongst which are intensive livestock units and renewable energy generation, in particular wind energy.

We welcome the recognition of the importance of reduction of air and noise pollution and of serious health/mental health and quality of life issues associated with both, and the recognition of agricultural sources of air quality and noise pollution. We also welcome the recognition that ‘tranquil soundscapes’, as generally experienced in rural areas, contribute to human wellbeing, for residents and visitors alike.

However, the consultation document fails to identify:

- Wind turbines in any proximity to homes as a very significant source of rural noise pollution;
- ILUs as important sources of both noise pollution and air pollution. In the case of ILUs, authorities must recognise the likelihood of multiple air pollutants including poultry dust, particulates and ammonia.
- Traffic implications of both the above as a source of both air and noise pollution.

Annex A, A.4: We don’t understand how ‘population-weighted’ averages are computed in relation to air quality and question whether this may be tending to underestimate air pollution issues in low population areas. We would welcome mapping and presentation of data which gives directly comparable data for urban and rural areas as more informative.



The consultation paper as a whole has played down air and noise pollution in rural areas at the same time as central government policy is contributing to both. We have mentioned the specific issues of ILUs and wind turbines in rural areas, it's also relevant to mention the government's encouragement of closures of local schools and removal of funding for local transport as substantially increasing the number and length of car journeys in rural areas and so having consequences for rural air pollution.

### ***Carmarthenshire County Council (Environmental Health & Licensing)***

We also feel that the noise regulator's group could be further developed in much the same way that the WAQF has been developed into a true discussion and best practice sharing environment. Placing the group on a formal footing, with some reporting to Welsh Heads of Environmental Health would also benefit the group, as would representation on the group by the CIEH Wales.

There could be further emphasis on education and promotion of noise issues. This would help with a population wide change rather than individual change at the points of intervention or after problems/complaints have been caused.

Incorporating discussions and statements about noise early on in tenancy agreements/housing policy could greatly assist with improving noise at individual households with regards to social letting. There are a wide range of benefits that could be accrued from this approach.

### ***Ceredigion County Council***

Brexit may allow regions to develop more focused Strategies that are more relevant to local circumstances. For example, as far as air quality is concerned, ozone is the pollutant of most concern in many rural areas (but it is not currently contained in Regulations even though it is one of the pollutants most closely associated with the increased incidence of asthma in the wider population). It may also allow devolved areas to work on a more regional / national level as far as managing air quality is concerned and even to set up an Air Quality Standards Agency (the air equivalent of the Food Standards Agency to coordinate activity, to educate and inform, to set up and run a website and to advise on and bring about improvements). Alternatively, Natural Resources Wales could lead and co-ordinate activity on the Air Quality Strategy in Wales (as they do on bathing water quality in Wales where their web based information and data is excellent).

There needs to be some debate and better guidance on monitoring equipment. Real time monitoring is a currently topical issue but some of the real time monitors now being deployed have not been approved for Air Quality Strategy purposes and are

already being used to produce results that are causing issues (monitoring outside schools etc for example).

### ***Chartered Institute of Environmental Health (CIEH)***

The Chartered Institute of Environmental Health (CIEH) is pleased to respond to this consultation, addressing as it does an area of growing public health significance and concern.

Addressing air pollution and its impacts is a policy focus for the CIEH in 2017, we will be calling for inter alia a new Clean Air Act to replace the Act of 1993, and Act that is now outdated and fails to address the most significant sources of air borne pollutants, being motor vehicle emissions. In line with the aspirations of the Wellbeing of Future Generations Act we urge Welsh Government to promote a shift in modal transport thinking, encouraging more trips by public transport, cycling and walking, which would have the dual benefit of reducing emissions and increasing physical activity levels. We also encourage activities to control, mitigate and reduce airborne pollutants even in areas where air pollution objectives are being met, such as tree planting, use of green walls and encouraging uptake of energy efficient programmes that have a less significant impact on air borne pollutants.

CIEH Wales would be very happy to engage fully with Welsh government on this opportunity to rationalise and improve environmental regulations in Wales. We are cognisant that environmental regulation is extremely complex and is interwoven with other regulation, and that any amendments to the system must be made with great care, ensuring that there are no adverse unintended consequences.

We are strongly of the view that Welsh Government need to retain clear numeric air quality objectives that are no weaker than the current European standards. Any international review will conclude that most countries are working to very similar standards because the health evidence is strong and well presented by the World Health Organisation.

We believe that the present UK law is adequate to deal with individual noise exposure, however it is weak when applied to road traffic noise. It is, in our view essential that Welsh Government address the issue of noise generated by road traffic, particularly in the light of the very clear links between exposure to road traffic noise and health issues.

We are encouraged by the current government's commitment to increasing and improving the public transport network in South East Wales by improvements to the Valley line network and the proposed Cardiff Metro system, in our view it is important to promote a modal transport shift to public transport reducing the number of private car journeys.

We strongly advocate exploring the greater use of technology to reduce the number of car journeys made, e.g. by using on line consultations between GP surgeries and hospital consultants as currently happens in some rural areas, and by promoting a far better integrated public transport system such that use of public transport is a practical first option.

We also endorse the use of technology to address pollution problems before they arise – use of real time monitoring of air pollution levels in acknowledged hot spots to allow for active traffic management as is used in Swansea, and to control traffic density at peak times.

We have, in a number of our responses to Q1 above noted that the issues of air pollution and noise exposure are not high on the agendas of the PSBs, and that there appears to be no effective mechanism for local authorities to ensure that due regard is given by PSBs to them. We suggest that the importance of the issues is such that they should be a focus for PSBs, and if it becomes clear that they are not being given sufficient focus Welsh Government should instruct PSBs to do so.

### ***Chirk Branch Labour Party***

I think more general lessons can be learned from the experience of people in Chirk. Public meetings have been held recently with Wrexham Environmental Control, Public Health Wales and the Planning Department in attendance as well as Kronospan Ltd. There was nobody from HSE Freedom of Information requests have revealed that none of the agencies conduct unannounced inspections outside normal working hours. Local people believe that pollution frequently occurs in the early morning when management is thin on the ground. They have frequently evidenced this on Chirk Forum Facebook page. - The Environmental Protection Department believe the biggest threat to public health in Chirk is from particulates from diesel vehicles rather than the chipboard factory. The company has proposed a road to the nearest roundabout on the A5 but planners oppose this as they feel powerless to resist further industrial development along such a road which would cut through countryside. - Local people talked of local doctors jokingly referring to Kronospanitis. Public Health Wales explained that it is difficult to conduct a public health study that would focus on a single source of pollution. - In short, there appear to be a range of agencies involved with nobody taking a lead and coordinating action to assist.

### ***City and County of Swansea (Pollution Control)***

We would be very happy to engage fully with Welsh government on this opportunity to rationalise and improve environmental regulations in Wales. We all accept this is a very complex interwoven system which should be altered with great care. Certain critical 'backstop' regulation (such as statutory nuisance) has already been damaged

by careless improvements and we must ensure that this is protected for everyone's sake. Fortunately some examples are pre-1973 but we must be careful not to limit their use. Air, noise, water and waste need consideration in the round – not forgetting contaminated land and nuisance. There are some European Regulations/Directives that work well, but even then there are details that need updating. Certainly we need to retain clear numeric air quality objectives that are no weaker than the current European standards. Any international review will conclude that most countries are working to very similar standards because the health evidence is strong and well presented by the World Health Organisation. In Swansea we would argue that UK law deals well with an individual's noise problems, but has been traditionally weak on transport noise. Our European colleagues rightly comment on this gap and whilst we may well walk away from some of the END requirements, we must look for mechanisms to reduce exposure, particularly to road traffic noise. Some obvious practical steps could be put in place very quickly by Welsh government and this would bring together some of the essential players who have not recognised the significance of this issue. It is important to note some very useful German research on the health impacts of road traffic noise which are additional to the air quality impacts. In Swansea we would certainly like to see real-time data being used more for traffic management purposes and for a much more targeted approach on patient care. The latter needs to be done carefully, using the expertise of clinicians, to avoid simply transferring a problem from primary care to A&E departments.

### ***City of Cardiff Council***

The City of Cardiff Council recognises the current uncertainty regarding Wales's future air and noise pollution obligations. We welcome the incorporation of air quality into the Well-being of Future Generations Act and would support further actions/policies which address air quality through the development of the most efficient and effective legal framework, as referenced in the consultation document (2.4). We would also welcome any developments which would provide local authorities with the full range of tools which may be required to address this complex and multi-faceted issue.

### ***Environmental Protection UK***

The document talks about integrating AQM and Noise Pollution and reducing population exposures to both, but does not appear to explain how it envisages exposure to different noise sources, environmental (primarily transportation) and neighbourhood (primarily domestic) are to be achieved save from requiring local authorities to publish information about whether air and/or noise pollution figure in the Local Authority's well-being objectives, and if so, in what form, and what progress has been made in meeting those well-being objectives to date.

If it is the case that LA's are required to do this then the Welsh Government must make sure that sufficient resources are provided to them to achieve these aims.

The Noise Committee of EPUK would welcome this as it would require LA's to say what they are going to do to reduce exposure and how they expect to do it and to provide evidence it is being done.

It is recognised that many LA's achieve economies of scale by having officers who have sufficient expertise Air and Noise Pollution Control. Where this is not available development of widened expertise should be encouraged. However care should be taken if LA's are exploring shared use of resources to ensure that the particular expertise in each LA area is not diluted giving rise to unrealistic expectation on levels of service.

### ***Flintshire County Council***

I would support the observations reported by the All Wales Pollution Technical Panel repeated below:

“Protection of existing standards relating to noise and air quality is essential. However, some other suggestions could be: Educational development of air quality/noise topics/implications with educational establishments, public, interested groups within for example a LA area in conjunction with Local Health Boards to include the use of existing resources, for example Welsh Air Quality Forum. To develop appreciation of a bigger picture in relation to the adverse impacts of pollution upon health and environments. To assist in development of healthy lifestyles where physical well-being are encouraged to enhance health outcomes, combat susceptibility and recognise sustainable transport methods as an option for travel. Robust standards/methods of assessment for air quality parameters that utilise technology and remote monitoring.”

I would also like to raise the issue of training and staff retention. Through the austerity measures all LA's have gone through a considerable amount of expertise has already been or will soon be lost. Therefore, I would like Welsh Government to consider additional funding to maintain standards for the future e.g. noise, because of its complexity, applicability and importance across the Pollution and Planning disciplines. There is no short course that can replace the need for the Institute of Acoustics Diploma. Any additional burdens put on LA's should include a calculation for the provision of additional training.

I know through my direct involvement with the Welsh Air Quality Forum and Noise Regulators Forum that Welsh Government approach to the issues of AQ and Noise is positive and forward thinking and I thank you for the opportunity to participate in this process.

### ***Institution of Civil Engineers Wales Cymru***

The constant monitoring and control of pollution is important in Wales and speedy replacement legislation should be enacted as soon as possible

your proposals seem suitable – provided LAs have the resources

### ***Mineral Products Association***

We do not agree that this “uncertainty” should delay progress

We note from the preamble to the consultation that there is no recognition of the existing guidance on air quality matters pertaining to the heavily regulated minerals sector. This is long established and recognises best practice for the sector. We would question the need for any further regulation for the sector. Some clarification over air quality categories for specific processes would be beneficial.

### ***Natural Gas Vehicles Network***

We do not feel able to make a substantive comment on this question given the level of uncertainty currently surrounding the process of the UK leaving the European Union. It appears that EU legislation will be transferred into UK law, at least initially, and so we do not anticipate a major change in the UK Government’s overall strategy on air quality.

### ***Natural Resources Wales***

Natural Resources Wales (NRW) welcomes the Welsh Government initiative to update the local air quality management regime established by the Environment Act 1995.

The approach to better integrate local and national management the impacts of air quality and noise will help inform and influence public bodies in Wales, such as NRW when discharging the requirements of the Well-being of Future Generations (Wales) Act 2015 and the Environment (Wales) Act 2016.

As well as building the links between the LAQM process and the PSBs, it is important to build and/or maintain links to other policies and strategies that influence both air quality and noise. To help deliver “shared outcomes” it is important that policies and strategies contained in the Road Traffic Reduction reports, air quality and noise reduction plans and local Well-being plans are consistent and integrated with Development Plan Strategies and policies to ensure an integrated approach to national policy and guidance on noise and air quality.

We would welcome the continuation of Welsh Government's support of the Green Flag Award scheme in Wales, including working with the sub-licence holder to ensure those involved in the scheme understand the implications of Welsh noise policy for sites which they may be called upon to judge. We would hope this support continues until a more suitable means is found of independently auditing that the management of statutory Quiet Areas is fit for purpose.

### ***Noise Abatement Society***

The NAS welcomes the overall approach taken by the Consultation, particularly integration with the air quality management process. All the measures proposed seem well-designed to maximise effectiveness at a time of such constraints on staffing and spending.

It is difficult to go beyond an expression of support for the overall approach without detailed familiarity with the ways current processes have been working on the ground in Wales, particularly specific blockages that may have been encountered. The NAS would hope that there has been some sort of forum through which Welsh local authority officers and others have been co-ordinating their responses.

The document refers to potential changes with Brexit, although without any discussion of likely options. While the first Brexit battle may likely need to be defending the science-based health objectives, the policy discussion is likely to then switch to reassessing the balance between national and local action. It needs to be acknowledged that local air quality and noise management have both been labour-intensive, but relatively ineffective in the face of national and international trends. It would be positive, therefore if proposals for stronger national action, including evolving approaches aligned with soundscape practices and the new International and British standards (e.g. on incentives for electric vehicles over diesel, on tougher type-approval and in-use testing for all vehicles, and further investment in road resurfacing, including more R&D on new materials and design based interventions and approaches) were ready and available. This work may have already been done, but NAS wishes to emphasise the importance of these approaches.

### ***Public Health England (PHE) (Centre for Radiation, Chemical and Environmental Hazards)***

The role of the EU has been significant in driving measures to control air pollution.

It is also important to recognise the opportunities for air quality improvements provided by the Climate Change Act 2008 which requires substantial reductions in carbon emissions. Combustion sources emitting NO<sub>2</sub> also emit carbon dioxide (CO<sub>2</sub>), therefore many low-carbon policies in the transport, housing and industry

(including energy generation) sectors primarily aiming to reduce carbon emissions will also benefit air quality.

Such policies include measures to promote active travel (walking and cycling) and integrated public transport (Woodcock et al., 2009), energy efficiency in houses (Wilkinson et al., 2009), energy generation from renewable sources (Markandya et al., 2009), sustainable procurement (SDU, 2014), and city development and planning.

For example, replacing non-essential private car journeys with walking and cycling will reduce emissions of nitrogen oxides (NOx), PM2.5, CO2 and noise, and will improve physical activity levels and related physical and mental health outcomes. It is therefore important to highlight the multiple health and environmental benefits associated with active travel.

There may be some unintended negative effects of policies aiming to reduce air pollution if consideration of other influences is not taken into account, for example, the promotion of active travel has the potential to increase road injury risks without separation of cyclists and pedestrians from other road traffic (Woodcock et al., 2009). Therefore, a holistic systems-based approach simultaneously addressing outdoor and indoor air quality, climate change and environmental sustainability issues at local level is needed. Such an approach will bring multiple public health benefits and help minimise any unintended negative effects.

For sound and noise, it is important to focus not just on the negative effects of noise pollution, but also on the health benefits offered by tranquil soundscapes (as stated in para. 1.3). Once again a holistic systems-based approach should be used to demonstrate the return for investment of protecting existing tranquil areas, and creating new ones.

### ***Public Health Wales (PHW) (Abertawe Bro Morgannwg Public Health Team)***

There needs to be a link to what makes a difference and is it sustainable or just temporary. Strengthen the ownership by all partners and raise awareness to all vehicle users of the collective responsibility and consequences. can councils stop older diesel vehicles being used?

The data needs to be presented in a way that is meaningful to the public - what level worsens asthma? what level means hospital admission if you have chronic heart disease? how long can you stay out without getting ill effects? who is at risk and at what level? - How does reducing traffic pollution improve health? What do people think we should do to reduce car use?



seems very process driven what about what makes a difference? what improvements have been made? has anything changed in terms of reduced vehicle use, better electric public transport or just any public transport with cars out of city centre areas? What measures have the best evidence?

### ***Public Health Wales (PHW) (Health Protection Division)***

- Introduce revised legislation to tighten Air Quality Objectives
- Introduce Environmental Sustainability guidance for Wales' Public Services Boards (incorporating expectations around air pollution reduction in a broad public health context)
- Clarify the statutory responsibilities of NHS agencies in LAQM
- Shift the implementation lead for LAQM from Local Authorities to Public Service Boards
- Invest in technology to support LAQM e.g. monitoring equipment, smart apps, information dashboards to make it easier to 'see' air pollution problems and the impact of action to tackle them
- Make available an Environmental Sustainability grant for Public Services Boards to encourage joint action at local and regional levels.
- National communications strategy linked to LAQM to communicate risks to public bodies, policy-makers, politicians and the public, and provide practical advice on measures to take to reduce air pollution, risks and inequalities.

Directors of Public Health, supported by local and national public health specialists, have a valuable contribution to make to local air and noise quality management. Their influence can extend beyond the NHS and can help shape public health improvement and protection actions across sectors.

### ***Rhondda Cynon Taf County Borough Council***

A key link for reducing NO<sub>2</sub> will be the future transportation strategy for Wales. The requirement to improve air quality and any mutual noise mitigation needs to form part of a long term sustainable transportation policy. Further action could be taken to raise the profile of air quality and noise pollution plus any associated impact on health, as well as making appropriate connections with relevant transport/highways policies.

### ***Royal Society for the Prevention of Cruelty to Animals (RSPCA) Cymru***

RSPCA Cymru welcomes efforts to reduce noise pollution due to the effect on wild animals from anthropogenic noise such as cars, trains and planes. Tests have shown that traffic noise has reduced the density and species richness of woodland birds nesting in the immediate area

(<http://link.springer.com/article/10.1007/s103420130732z>) and impairs the foraging

activity of bats.

([http://ec.europa.eu/environment/integration/research/newsalert/pdf/noise\\_from\\_hum\\_an\\_activity\\_can\\_impair\\_foraging\\_in\\_bats\\_425na2\\_en.pdf](http://ec.europa.eu/environment/integration/research/newsalert/pdf/noise_from_hum_an_activity_can_impair_foraging_in_bats_425na2_en.pdf)) Wild animals are affected by noise through acoustic masking, reduced attention and noise avoidance, affecting their ability to detect a target sound, impairing mental ability to forage and generally the animals avoiding the noisy forage area.

However, RSPCA Cymru is concerned that the focus of reducing noise pollution is aimed at road, rail and air and not from the variety of domestic causes that happen across the year and the affect they have on domestic, farm and wild animals. In particular RSPCA Cymru would like to highlight the noise pollution created by fireworks and the issue of dog barking. Although the consultation is to tackle permanent situations of air and noise pollution, temporary incidences of intense air and noise pollution equally can negatively affect the welfare of pets, their owners and wildlife.

Currently, fireworks can only be sold from licensed premises between 15 October to 15 November, 26 to 31 December and three days before Diwali and Chinese New Year and should not be set off between 11pm and 7am. It is estimated that around 45 percent of dogs show signs of fear when they hear fireworks (Blackwell, E., Casey, R., & Bradshaw, J. (2005). Firework Fears and Phobias in the Domestic Dog. Scientific Report for the RSPCA, University of Bristol, UK). This is distressing for the animal but also the owner. Local authorities should be encouraged to tackle incidents of firework use past 11pm. The RSPCA is calling for the Fireworks Act 2003 to be amended to reduce the maximum sound for fireworks from 120 decibels the equivalent to a jet engine taking off at 100 metres to 97 decibels.

Barking is a form of communication and is a normal part of dog behaviour. However, if the amount a dog barks increases or becomes excessive it can indicate a potential welfare problem including poor health, separation related behaviours, a lack of exercise and boredom. In addition, excessive barking may be considered a significant noise nuisance for other people. RSPCA Cymru would like to raise the issue of dog barking under this consultation to help ensure that owners of barking dogs are given sufficient support and advice to ensure their dogs welfare needs are met and to reduce noise disturbance for those in the community who may be affected.

Where dogs are considered by the community to be a noise nuisance, owners should be supported through advice and information to help identify and treat the underlying cause of the barking in a way which does not compromise the dog's welfare. Public Space Protection Orders (PSPOs) may be considered one tool for reducing dog barking but should be used sparingly and must always come with education to support the dog owner.

Under proposal 6.5 RSPCA Cymru would recommend that these incidents are included in the Local Air Quality Management report and what plans are in place for the local authority to reduce the noise pollution affecting domestic dwellings across the local authority area.

Following the UK's withdrawal from the European Union, there is an opportunity to include domestic noise pollution into the Welsh Government's guidance over the next five years. The current EU Environmental Noise Directive focuses on transport, road, rail, air and industrial noise pollution but does not take into account domestic incidents.

The Wellbeing of Future Generations (Wales) Act 2015 requires the Public Services Boards (PSBs) to improve the social and environmental wellbeing of the area they cover. RSPCA Cymru believes that a failure of residents to be responsible dog owners, can be detrimental to the social and environmental wellbeing of an area, with dog owners being demonised for a number of factors including dog faeces and uncontrolled barking.

Improving responsible dog ownership PSBs can meet two of the Wellbeing goals; a healthier Wales and a Wales of cohesive communities, as well as improving the welfare of dogs locally. Pet ownership improves the mental health of the owner and increases their physical activity and by increasing responsibility, areas can become more attractive with less dog faeces and decreased noise pollution from barking dogs as well as ending the divide between dog and non-dog owners.

The Review of Responsible Dog Ownership in Wales, submitted to the Welsh Government in March 2016, by RSPCA Cymru, Dogs Trust and Environmental Health Wales defined one aspect of responsible dog ownership as taking "reasonable steps to ensure that their dog's, and their own behaviour in respect of their dog, does not compromise the health, safety or well being of other persons, animals and the community."

<http://politicalanimal.org.uk/wpcontent/uploads/2016/03/ResponsibleDogOwnershipReviewMarch2016.pdf>

RSPCA Cymru would welcome the opportunity to consider other pollutants, such as sky or Chinese lanterns and helium balloons, that have an impact on pets and wildlife which can be affected through behavioural change. The Society, along with other organisations including farming unions, landowners and other animal welfare charities, have long campaigned for the outright ban on releasing sky lanterns. The Welsh Government, in July 2013, wrote to local authorities in Wales encouraging them to consider the risks posed by sky lanterns and helium balloons.

<http://gov.wales/about/cabinet/cabinetstatements/previousadministration/2013/sky lanterns/?lang=en>

RSPCA Cymru have been encouraging members of the public to contact their local authority to introduce a voluntary ban of the release of sky lanterns from public land and venues, so far 15 of the 22 local authorities in Wales have put a ban in place. A recent case of a horse being burnt from the shoulders up to their face from a sky lantern have been reported. Another case of the dead barn owl is well documented, having starved to death. RSPCA Cymru would also like to see the Welsh Government lead on an end to mass helium balloons releases which cause choking hazards to pets and wildlife, as they are released with no knowledge of where they will land and may be considered as littering.

### ***Stephen Turner Acoustics Ltd***

Para 4.1: Aviation also has to be covered in large urban areas, along with road, rail and industry. When I last looked, what activity there was at Cardiff airport did not impinge on the agglomeration, so there was no need to map aviation in Wales. The key part of the Welsh regulations is this (Reg 12(5)) – "relevant agglomeration" ("crynodref perthnasol") means an agglomeration in which air traffic from the airport results in air traffic noise of- (a) an Lden value of 55 dB(A) or greater; or (b) an Lnight value of 50 dB(A) or greater, anywhere within the agglomeration. I don't think that has been amended

In the last para, my immediate response was – 'how is significant defined?'. Furthermore, are you not actually looking at areas where there has been a change in traffic flow that might lead to a material change in noise impact. An arguably pedantic point I admit – but it is surprising how that sort of language sometimes comes back and bites.

Para 5.7 Again, my thought was – how are noise problems defined? Are these your noise management areas?

### ***Swansea University (College of Law and Criminology)***

In the first instance, regardless of any uncertainty attached to many of the specific implications of the UK's withdrawal from the EU, in the context of air pollution this is less of an issue than in other contexts. With reference to air pollution it would be reasonable to assert, given the contribution that domestic air pollution ultimately makes to the global environment that international law obligations provide some predictability here. The UK is a signatory to a number of salient international agreements in this area that are quite distinct from EU law, for example, the UNECE Convention on Long Range Transboundary Air Pollution (LRTAP) 1979 and its 1988 Protocol concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes (which extends to NO<sub>2</sub>) and its 1999 Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (this was revised in

2012 to include PM, while the amendments are not yet in force, it could provide a sound regulatory platform in this area). These will not be affected by Brexit. The LRTAP also invokes Principle 21 of the UN's Stockholm Declaration 1972 (echoed in Principle 2 of the Rio Declaration 1992) which invokes the responsibility of states to ensure that their activities do not damage the environments of other states.

In light of these international law factors, one would expect that the UK and Wales, as responsible global citizens will adopt an approach founded on the principle of non-regression toward environmental provision of this nature. This means viewing international law obligations as requiring that there should be no backsliding in substantive standards. Such an approach would, where applicable, dispose of problems of uncertainty.

WHO air quality guidelines, which apply to NO<sub>2</sub> and PM, would also provide a persuasive basis for predictability in standard setting.

Ideally, however Brexit could be viewed as offering an opportunity to express greater ambition and (particularly important given how slowly EU legal processes tend to move in respect of the environment) more swift action than is currently possible in this regard.

On the basis of these observations, Wales can confidently proceed in this area at least without the need to adopt a form of legal and administrative stasis pending the outcome of Brexit.

### ***University of the West of England (Air Quality Management Resources Centre)***

- Tightening of Air Quality Objectives
- Clarification of the statutory responsibilities of NHS agencies and public health practitioners in LAQM
- Develop a strategy for communicating air pollution risks (both health and financial) to the public, policy-makers and politicians.
- Strongly support the development of active and sustainable transport measures financially and politically to reduce the number of vehicles on the road and thus to bring about a likely reduction in concentrations of key pollutants across Wales.

### ***Wildlife Trusts Wales***

Wildlife Trusts Wales (WTW) represents the six Wildlife Trusts in Wales – Brecknock, Gwent, Montgomeryshire, North Wales, Radnorshire and South and West Wales (hereafter referred to as the 'Wildlife Trusts') working together in partnership to achieve common aims. The Wildlife Trusts collectively speak on

behalf of more than 24,000 members and manage over 200 nature reserves, covering more than 8,000 hectares of prime wildlife habitat, from rugged coastline to urban wildlife havens.

Nature is fundamental to everyday life; it provides the air we breathe, the food we eat, the fuel we use for warmth, and the resources we consume for shelter and modern life. Nature and people are not separate; nor is nature separate from our economy. Without a healthy environment, society cannot be resilient but for nature to look after us, we need to look after nature.

The Wildlife Trusts in Wales strive for a Living Landscapes and Living Seas, recognising this as an inspirational end point where our environment, society, and economy coexist for the benefit of wildlife and people.

In answering all three questions Wildlife Trusts Wales wants to highlight innovative and integrated solutions that deliver multiple benefits, these are summarized below;

1. tackling air pollution by using green infrastructure or nature's high-tech air scrubbers e.g. trees planted along a city street screen residents from sun and noise—and from tiny particles that pollute urban air. A new study shows that tree leaves can capture more than 50% of the particulate matter. Swansea and the Tawe Valley trees removed 136 tonnes of air pollution per year, saving the NHS £715,000 by reducing asthma and heart disease.

2. We recommend that there should be Ecological air quality management areas (eAQMA) in areas where designated sites are being adversely affected by airborne pollution. Following the declaration of an eAQMA, the Local Authority and NRW should work with other partner agencies and the public to draw up and implement an ecological local air quality action plan. This action also should be drawn up based on the recommendations from the Centre for Ecology & Hydrology (CEH) (2015) – Report for DEFRA entitled the Identification of Potential “Remedies” for Air Pollution (nitrogen) Impacts on Designated Sites (RAPIDS) (1Centre for Ecology & Hydrology (CEH) (2015) – Report for DEFRA Identification of Potential “Remedies” for Air Pollution (nitrogen)Impacts on Designated Sites (RAPIDS)

<http://nora.nerc.ac.uk/512980/1/N512980CR.pdf>).

3. The WHO Health Statistics 2016 states that transport systems based primarily on individual motorised transport can lead to further deterioration in air quality ([http://www.who.int/gho/publications/world\\_health\\_statistics/2016/whs2016\\_AnnexA\\_AmbientAirPollution.pdf](http://www.who.int/gho/publications/world_health_statistics/2016/whs2016_AnnexA_AmbientAirPollution.pdf)). The consultation text confirmed that transport is a major source of both air and noise pollution. Therefore, if Wales is to be truly sustainable and implement integrated and innovative solutions to multiple problem, we recommend the following

- areas of high pollution should look at how to reduce the number of polluting vehicles such as London Congestion Charge and low emission zones OR
- Ban diesel vehicles just like Norway, Paris, Madrid, Athens and Mexico City

- Sustainable transport solutions – fully fund sustainable transport solutions as a matter of urgency rather than locking us into new major infrastructure that will add to Wales' pollution problems e.g. M4
  - Do not fund environmentally damaging infrastructure that will increase air and noise pollution such as the M4 Relief Road.
4. If any new responsibilities are coming to NRW and Local Authorities they should be fully funded in order that they can deliver green infrastructure and air quality and noise improvements.

Cabinet Secretary, Lesley Griffiths AM, stated in her foreword to this consultation that that “few environmental issues determine our health and well-being as directly as pollution in the air we breathe and the noise surrounding us as we go about our daily lives ...{we need} innovative solutions to the existing problems we have to deal with now. If the public sector in Wales embraces the Well-being of Future Generations (Wales) Act 2015 and seeks better integrated and collaborative long-term solutions to our problems, we can bring about real change. Dealing with problems like air and noise pollution is not about competing priorities. It is about finding integrated solutions to multiple problems, to deliver the conditions needed for the long-term well-being of people in their communities”

### *Recommendations*

#### 1. Green Infrastructure

(High quality natural and semi-natural areas which consist of a living network of greenspace, water and environmental features including trees, parks, gardens, road verges, amenity grassland etc.) - One of the preeminent tasks of cities will be making themselves vibrant, healthy, attractive places to live. However, air pollution is having a significant impact upon our health and the livability of our towns and cities.

Up until now, every initiative around reducing pollution has taken a top-down approach, such as scrapping old cars, adding catalytic converters, bringing in the congestion charge - some of which have not had the desired effect. However, green infrastructure can form part of an air pollution control strategy on a regional scale (Trees and Design Action Group - Trees in the Townscape A Guide for Decision Makers - [http://www.tdag.org.uk/uploads/4/2/8/0/4280686/tdag\\_trees-in-the-townscape\\_november2012.pdf](http://www.tdag.org.uk/uploads/4/2/8/0/4280686/tdag_trees-in-the-townscape_november2012.pdf)). The benefit of green infrastructure such as trees and green walls is that they clean up the air coming into and staying in the urban areas.

Trees and other vegetation, whether planted along a city street or growing in a park or residential yard, provide multiple benefits to people (Green Infrastructure: A Catalyst for the Well-being of Future Generations in Wales [http://www.wtwales.org/sites/default/files/green\\_infrastructure.pdf](http://www.wtwales.org/sites/default/files/green_infrastructure.pdf)), such as aesthetic



beauty, enhancement of property values, erosion prevention, stormwater management, and noise reduction. Trees also sequester carbon, helping mitigate climate change. Parks also provide space for urbanites to recreate, which brings real physical and mental health benefits. However, green infrastructure plays an important role in making our air healthier, too. Dozens of studies (Janhäll S - Review on urban vegetation and particle air pollution – Deposition and dispersion Atmospheric Environment Volume 105, March 2015, Pages 130–137 <http://www.sciencedirect.com/science/article/pii/S1352231015000758> Fullar et al (2009) Practical mitigation measures for diesel particulate matter: near-road vegetation barriers contract AQ-04-01: developing effective and quantifiable air quality mitigation measures Department of Civil & Environmental Engineering University of California [http://www.dot.ca.gov/hq/env/air/research/ucd\\_aqp/Documents/Mitigation-Measures-Package-Report-5-Micah-v3.pdf](http://www.dot.ca.gov/hq/env/air/research/ucd_aqp/Documents/Mitigation-Measures-Package-Report-5-Micah-v3.pdf)) now show that tree leaves filter out particulate matter (PM) from the atmosphere, along with many other air pollutants such as nitrogen oxide (NO). The effectiveness of PM removal via tree plantings depends on characteristics of the species chosen (e.g., foliage surface, canopy structure, and life span) and varies by particulate size.

The analysis of trends over time suggests that the ecosystem services supplied by trees / green infrastructure will be even more crucial in the future. Not only are the trees that they currently already there important but it will be vital to

- replace lost trees
- expand the numbers of trees, green walls, green roofs etc both within and outwith towns and cities and towns.

Green Infrastructure can be a part of a cost-effective portfolio of interventions aimed at controlling air pollution. While green infrastructures cannot and should not replace other strategies to make air healthier, trees can be used in conjunction with these other strategies to help clean air and provide the other benefits mentioned above.

All trees act as air filters. As with stormwater benefits, tree size matters considerably. However, not all varieties perform this function to the same extent and across the full range of urban air pollutants that are harmful to human health. Gases such as nitrogen dioxide and ozone are captured in the stomata (breathing apparatus) of leaves. Trees with the most leaf area capture gases and particles efficiently.

Planting more green walls and trees in a strategic way could be a relatively easy way to take control of our local pollution problem. Below is a snapshot of the evidence;

a) Planting Healthy Air - i-Tree Eco, is a tool that accounts for both the structural value of the trees (based on replacement costs) and the value of the environmental benefits it delivers, such as carbon sequestration and storage as well as air pollution interception and removal. Some example include



- Swansea and the Tawe Valley (NRW - Swansea and the Tawe Valley Trees- an amazing resource benefiting us all <https://naturalresources.wales/media/679646/engtawe-i-tree-infographic-v2.pdf>) - 136 tonnes of air pollution removed per year, saving the NHS £715,000 by reducing asthma and heart disease.
- Wrexham i-tree survey (NRW Wrexham's Urban Trees- an amazing resource benefiting us all <https://naturalresources.wales/media/679641/eng-wreccsam-i-tree-infographicv2.pdf>) showed that trees of Wrexham removed 60 tonnes of air pollution per year saving the NHS £700,000.
- Bridgend i-tree survey (NRW Bridgend's Urban Trees- an amazing resource benefiting us all <https://naturalresources.wales/media/679644/eng-penarbontarogwr-bridgend-i-tree-infographicv2.pdf>) 61 tonnes of air pollution removed per year saving the NHS £326,000
- Valuing London's urban forest. The London i-tree eco project (Valuing London's urban forest. The results of the London i-tree eco project <http://www.forestry.gov.uk/pdf/LONDONI-TREEECOSUMMARY160331.pdf/%24FILE/LONDONI-TREEECOSUMMARY160331.pdf>) involved hundreds of volunteers conducting the largest city tree survey of its kind in the world in 2014. Using the information collected, the quantity and value of some of the benefits that London's trees and woodland provide were calculated, which included 2241 tonnes pollution removed from the air every year, worth £126M. They remove the equivalent of 13% of PM10 particulates and 14% of NO2 emitted by road transport.

b) Nature's high-tech air scrubbers – trees planted along a city street screen residents from sun and noise—and from tiny particles that pollute urban air. A new study shows that tree leaves can capture more than 50% of the particulate matter (Maher et al Impact of Roadside Tree Lines on Indoor Concentrations of Traffic-Derived Particulate Matter - Centre for Environmental Magnetism & Palaeomagnetism, Lancaster Environment Centre, Lancaster University, Lancaster LA1 4YQ, United Kingdom Environ. Sci. Technol., 2013, 47 (23), pp 13737–13744 <http://pubs.acs.org/doi/abs/10.1021/es404363m?source=cen>). The team placed a screen of 30 young silver birch trees in wooden planters in front of four of the houses, including one of the control houses, for 13 days. Wipes from all eight houses showed that ones with the tree screens had 52 to 65% lower concentrations of metallic particles. A comparison of all of the dust monitoring data from the two original control houses confirmed that drop, showing a 50% reduction in PM1, PM2.5, and PM10 in the house with the trees in front. By examining the silver birch leaves with a scanning electron microscope, the researchers confirmed that the hairy surfaces of the leaves trapped metallic particles. Like the particles measured inside the houses, these metallic particles are most likely the product of combustion and brake wear from vehicles passing by. The author stated that previous work has indicated a strong correlation between the amount of material identified by magnetic remanence and benzo(a)pyrene, a carcinogenic polycyclic aromatic hydrocarbon

found in particulates (Trees are awesome: Study shows tree leaves can capture 50%+ of particulate matter pollution <http://www.treehugger.com/natural-sciences/trees-are-awesome-study-shows-tree-leaves-can-capture-50-particulate-matter-pollution.html>).

c) Transport for London commissioned Biotecture to design, grow and install this eye-catching green wall in a determined effort to counter air pollution in London (Edgware Road Tube Station, Marylebone <http://www.biotecture.uk.com/portfolio/edgware-road-tube-station-marylebone/>). The location, on the corner Marylebone Road, was one of the areas identified as needing urgent air quality improvement. Funded by the government's Clean Air Fund, the air quality benefits of the wall were monitored by Imperial College London who assessed the chosen plants for their ability to remove particulate matter from the air. The huge green wall holds 14,000 plants of 15 different species with smaller leaves and a variety of textures, which were specifically chosen as they are better air filters of PM10 - harmful particulates from traffic fumes. Reach confirmed that they have reduced PM emissions but also had wider benefits such as run-off, temperature regulation and biodiversity ([www.ciht.org.uk/download.cfm/docid/8931E4C8-098A-47D2-A0F1CEBF719152B0](http://www.ciht.org.uk/download.cfm/docid/8931E4C8-098A-47D2-A0F1CEBF719152B0)). Biotecture's green wall at Edgware Road is one of the many projects supported by the Mayor of London's ambitious Clean Air Fund to improve London's air quality. Another green wall, this time at The Warren School (The Warren School launches green wall as part of Mayor's Air Quality Fund <https://tfl.gov.uk/info-for/media/press-releases/2014/july/the-warren-school-launches-green-wall-as-part-of-mayor-s-air-quality-fund>). Students at the school on Whalebone Lane North helped to design the wall and created montages on how the plants should be arranged on the green panels to create their own bespoke living wall. The 54m<sup>2</sup> wall is made up of five plant varieties, has been designed to thrive in its location, along the busy A1112 by trapping NO<sub>2</sub> and PM10 particulates to mitigate air pollution as well as delivering environmental benefits to the local community. Tejay Lumumba, a Year 9 student at The Warren School, said: "It important for us to have fresh air and having the green wall in front of our school will show people that air quality is important to us. I helped with the design of the wall and it gave me the opportunity to learn about the different jobs the plants have and how they help the environment by trapping pollution."

d) Planting trees is a cost-effective way to tackle urban air pollution, which is a growing problem for many cities. A study by US-based The Nature Conservancy (TNC) (McDonald - Planting Healthy Air, A global analysis of the role of urban trees in addressing particulate matter pollution and extreme heat – the Nature Conservancy Council) reported that the average reduction of particulate matter near a tree was between 7% and 24%. The author, Dr McDonald, said the study of the use of trees in 245 cities around the world compared the cost-effectiveness of trees with other methods of cooling and cleaning air. He stated that "On that front, trees are cost competitive with other options...When you change a bus from diesel to

gasoline, for example, you reduce particulate matter pollution, and trees are certainly in the same ball park (Growth of city trees can cut air pollution, says report <http://www.bbc.co.uk/news/science-environment-37813709>). However, the report highlighted that most of the cities featured in the study were losing more trees than they were gaining. Dr McDonald observed: "Trees are by no means a replacement for all the other things cities need to do in order to clean their air but they are part of the suite of tools that cities can draw on... We also looked at how much more trees could help if we planted more trees. We found that there was a lot more scope there. All of the cities we looked at, if all the people in them spent an extra US \$4 a year on planting trees, you could save between 11,000 and 36,000 lives each year. This is mostly as a result of having cleaner air... As well as the avoided mortality, there is even more avoided hospitalization" Planting trees in an urban setting is not without potential pitfalls. One is regarding the flow of air in heavily polluted streets, particularly ones with large volumes of traffic. Thick canopies can limit the circulation of air (contributing to canyoning (Street canyons refer to the effect created by high buildings lining a street, preventing much of the pollution escaping)), trapping the poor quality air at low levels, where people breathe. Dr McDonald said this was an issue that the report considered and the solution is a planting strategy. For example, on streets where there is a lot of traffic and particulate matter, the advice is to ensure there is enough space between your trees to ensure that you are still getting enough air flow in order to prevent that negative outcome. However, on most residential streets, where there is relatively less traffic, we found that the issue of air flow blockage is much less of an issue. Their literature review showed that trees provide meaningful but locally concentrated reductions in PM and temperature, with the majority of mitigation generally within 300 meters of plantings. Targeting the neighbourhoods with the highest mitigation impacts becomes crucial. Their results show substantial variation within cities, with the best neighbourhoods for street tree planting often having 100-fold greater return on investment (ROI) in tree planting compared to the least suitable neighbourhoods. Generally, those neighbourhoods are characterized by higher population density and thus more people who will benefit from cleaner air, and by higher concentrations of PM<sub>2.5</sub> that can be removed by trees. They discussed guidelines for plantings in the report that can be used to select species with high PM removal capacity, as well as appropriate spacing among plantings, since it is important to avoid the trapping of airflow from particulate sources (e.g., highways) in areas where people are present. Nature is a cost-effective solution – their research also shows that urban street tree planting and canopy enhancement can be a cost-effective way to make the air healthier.

e) Increasing deposition rates -Pugh et al (Pugh et al (2012) Effectiveness of Green Infrastructure for Improvement of Air Quality in Urban Street Canyons Lancaster Environment Centre, Lancaster University, Environ. Sci. Technol., 2012, 46 (14), pp 7692–7699 <http://pubs.acs.org/doi/abs/10.1021/es300826w>) stated that judicious use of vegetation can create an efficient urban pollutant filter, yielding rapid and sustained improvements in street-level air quality in dense urban areas. Planting

of vegetation (including green walls (Green walls, consisting of climbing plants such as ivy, built on billboard-like structures could act as air pollution filters)) in street canyons can reduce street-level concentrations in those canyons by as much as

- High wind - 40% for nitrogen dioxide - 60% for particulate matter
- Low wind – 15 % for nitrogen dioxide levels – 23% for particulate matter

They state that deposition rates to vegetation are much higher than those too hard, built surfaces. Substantial street-level air quality improvements can be gained through action at the scale of a single street canyon or across city-sized areas of canyons. Moreover, vegetation will continue to offer benefits in the reduction of pollution even if the traffic source is removed from city centres. However, trees also help reduce air pollution and clean the air, but they can keep street-level air from mixing with the air above. At low-to-medium pollutant levels, planting trees will still reduce air pollution, the team predicts. If a city is very polluted, however, trees could actually increase nitrogen dioxide levels near the street. “By not considering the adverse effects of tree planting on canyon ventilation, urban greening initiatives that concentrate on increasing the number of urban trees, without consideration of location, risk actively worsening street-level air quality,” the authors warn. A planting strategy is required mitigate these issues.

f) CEH and Lancaster University developed an Urban Tree Air Quality Score (UTAQS), using the West Midlands as a typical urban region in Great Britain (The Centre for Ecology and Hydrology alongside the University of Lancaster - Trees and Sustainable Urban Air Quality – Using Trees to improve Air Quality in Cities <http://www.es.lancs.ac.uk/people/cnh/UrbanTreesBrochure.pdf>). They highlighted that

- There was up to 25% reduction on particle concentrations depending on the area planted with trees.
- The reduction in PM10 concentrations which would result from future tree planting would therefore be beneficial to human health. Using these health statistics and their predictions of the effects of tree planting on urban air quality, they estimate that doubling the number of trees in the West Midlands could reduce excess deaths due to particles in the air by up to 140 per year.
- mature, mixed woodland captures airborne particles at approximately three times the rate of grassland
- trees on the edge of woodland are more effective at capturing airborne particles than the trees in the centre of the wood because they have larger leaf areas and are exposed to the wind
- They grouped the tree species according to their effect on air quality with Ash, Alder and Silver birch coming out on top. NB - Ash dieback fungal disease, which has infected some 90% of the species in Denmark, is threatening to devastate Britain's 80m ash population. As well as ecology this could have a profound effect on air quality in Wales.
- The effects on air quality of very large scale planting of almost all tree species in cities would be positive

g) Janhall (2015) in their review on urban vegetation and particle air pollution – (Deposition and dispersion) highlighted the effect of vegetation on urban air quality depends on vegetation design and on level of air pollution in the area. This review identified the following vegetation design considerations based on air quality arguments:

- Dilution of emissions with clean air from aloft is crucial; the vegetation should thus preferably low and/or close to surfaces.
- Proximity to the pollution source increases concentrations of air pollutants and thus deposition; vegetation should be close to the source.
- Air passing above, and not through, vegetation is not filtered; barriers should be high enough and porous enough to let the air through, but solid enough to allow the air to pass close to the surface.
- deposition of coarse particles is more efficient at high wind speeds, while the opposite is true for ultrafine particles; and that vegetation density often changes due to strong winds.
- To improve deposition, the vegetation should be hairy and have a large leaf area index, but still be possible to penetrate

h) Birmingham's Natural Health Improvement Zones (Trees and Design Action Group - Trees in the Townscape A Guide for Decision Makers - [http://www.tdag.org.uk/uploads/4/2/8/0/4280686/tdag\\_trees-in-the-townscape\\_november2012.pdf](http://www.tdag.org.uk/uploads/4/2/8/0/4280686/tdag_trees-in-the-townscape_november2012.pdf)) - A 2007 report by Asthma UK and the Heart of Birmingham Primary Care Trust, highlighted Birmingham as having the highest hospital admissions for asthma in the UK. Tackling air pollution has since become a priority issue for the local authority. The designation of Natural Health Improvement Zones (NHIZ) is one of the initiatives endorsed in the 2011- 15 Health Protection Agency Strategy for Birmingham to tackle this challenge. The programme targets areas where both health and environmental factors are considered poor. NHIZs are centred around those areas most affected by air pollution (called Air Quality Management Areas), and, within these areas, trees and green walls will be planted to facilitate the trapping of pollutants by foliage.

i) Children who live in tree-lined streets have lower rates of asthma (Children who live in tree-lined streets have lower rates of asthma <http://news.bbc.co.uk/1/hi/health/7374078.stm>), a New York-based study (<http://jech.bmj.com/content/62/7/647.abstract>) suggests. Columbia University researchers found that asthma rates among children aged four and five fell by 25% for every extra 343 trees per square kilometre. They believe more trees may aid air quality or simply encourage children to play outside, although they say the true reason for the finding is unclear.

## 2. Ecological AQMAs



We agree with Section 1.7 that “Air and noise pollution can also adversely affect sensitive forms of wildlife and natural habitats. Local air quality and noise management focuses primarily on human exposure, and measures aiming to bring down pollution only in narrowly defined residential hotspots will rarely yield substantial benefits for Nature”. However, we don’t agree that “measures to bring down pollution exposure for the population as a whole through reductions in overall emissions are likely to also reduce exposure for sensitive species and habitats”.

Around 40 air quality management areas (AQMA) have been declared by Local Authorities in Wales (one for PM10, the rest for NO2) – these are mostly if not entirely in urban areas. However, in rural areas atmospheric nitrogen (N) deposition is a significant threat to semi-natural habitats and species in Wales, resulting in on-going erosion of habitat quality and declines in many species of high conservation value. This is mainly via eutrophication.

It is estimated that 68% of UK habitats receive damaging levels of N deposition (i.e. exceeding critical loads, 2010 data). At the same time, substantial proportion of sites is estimated to exceed the 1µg m<sup>-3</sup> NH3 critical level (67% in 2010), with similar numbers predicted for 2020 (26Centre for Ecology & Hydrology (CEH) (2015) – Report for DEFRA Identification of Potential “Remedies” for Air Pollution (nitrogen)Impacts on Designated Sites (RAPIDS) <http://nora.nerc.ac.uk/512980/1/N512980CR.pdf>). This means that the UK will struggle to meet its national and international biodiversity commitment.

A good example of this is the Poultry Units which have a significant impact upon designated sites through airborne disposition of nitrates on designated sites. So far, only the non-airborne pollutions have received attention (Industrial-scale chicken farms 'are polluting Wales' rivers' Rivers at risk include the Wye, the Usk, the Tywi and the Severn <http://www.walesonline.co.uk/news/wales-news/industrial-scale-chicken-farms-are-12179118>). The emission rates from poultry ventilation systems vary with: age of animal, bedding material, lighting & season, ventilation rates, local weather, food types and watering systems. The composition of this dust has been repeatedly studied and is typically reported as containing: faecal matter, skin, feathers, feed, bedding, proteins, fungal and bacterial species and various endotoxins (Maria Cambra-Lo´pez., Andre´ J.A. Aarnink, Yang Zhao, Salvador Calvet, Antonio G. Torres. (2010). Airborne particulate matter from livestock production systems: A review of an air pollution problem Environmental Pollution 158, 1–17) as well as ammonia, odour, nitrogen, phosphorous, heavy metals, methane and nitrous oxides (Melse et al., 2009) with odour being strongly associated with and bound to particulate matter.

It is widely accepted that poultry units contribute considerably to air borne particulate matter, concern is largely focused on particulate matter (PM) under 10µm diameter (PM10) with reported contributions to the total anthropogenic emissions, by poultry

production, being 2% of PM<sub>2.5</sub> and 5.9% of PM<sub>10</sub> (DEFRA AC0104 2009). Results of surveys (Takai, H., Pedersen, S., Johnsen, J.O., Metz, J.H.M., Koerkamp, P.W.G.G., Uenk, G.H., Phillips, V.R., Holden, M.R., Sneath, R.W., Short, J.L., White, R.P., Hartung, J., Seedorf, J., Schroder, M., Linkert, K.H., Wathes, C.M., 1998. Concentrations and emissions of airborne dust in livestock buildings in Northern Europe. *Journal of Agricultural Engineering Research* 70 (1), 59–77.) showed that an average broiler production unit discharged inhalable and respirable dust at a rate of 12 and 2 mg/hr per bird respectively. For an 80,000 bird unit this becomes 960 and 80 g/hr which over one year equates to inhalable emissions of 8400 kg and respirable emissions of 700kg. This would mean that over 9000kg of dust may be emitted to the atmospheric environment annually by the proposed development.

Chemical composition of airborne inhalable PM in a broiler house was undertaken by Aarnink et al., (1999) (Aarnink, A. J. A., Roelofs, P. F. M. M., Ellen, H. H., Gunnink, H., 1999. Dust sources in animal houses, in *Proceedings International Symposium on Dust Control in Animal Production Facilities*. Aarhus, Denmark.) who determined a nitrogen content of 169 g/kg and a phosphorous content of 6.4 g/kg. These figures when combined with the emission rate of dust by Takai et al (1998) (Takai et al. 1998. Concentrations and emissions of airborne dust in livestock buildings in northern Europe. *J Agric. Engng. Res*, 70: 59-77) as ~9000 kg/year would suggest that the proposed development could release over 1000 kg of nitrogen per year and over 50 kg of phosphate per year. This clearly indicates a significant pollution load will result from the proposal within the surrounding catchment area and with such nitrogen and phosphate inputs, the cumulative impacts are clearly in need of consideration.

We recommend that there should be Ecological air quality management areas (eAQMA) in areas where designated sites are being adversely affected by airborne pollution. Following the declaration of an eAQMA, the Local Authority and NRW should work with other partner agencies and the public to draw up and implement an ecological local air quality action plan. This action also should be drawn up based on the recommendations from the Centre for Ecology & Hydrology (CEH) (2015) – Report for DEFRA entitled the Identification of Potential “Remedies” for Air Pollution (nitrogen) Impacts on Designated Sites (RAPIDS) (Centre for Ecology & Hydrology (CEH) (2015) – Report for DEFRA Identification of Potential “Remedies” for Air Pollution (nitrogen) Impacts on Designated Sites (RAPIDS)

<http://nora.nerc.ac.uk/512980/1/N512980CR.pdf>). This paper highlights

- an emphasis on voluntary approaches for UK agricultural NH<sub>3</sub> mitigation has resulted in a very slow uptake of measures, in contrast to mandatory mechanisms elsewhere.
- a number of significant issues from various sources of pollution and potential solutions. They detail a suite of most promising potential measures/remedies, identified from the large body of evidence, including measures for a) reducing emissions from nearby sources and b) reducing deposition through secondary measures including

- Siting new development further from the designated sites.
- improvements to manure spreading (e.g. slurry injection where possible), manure storage (e.g. covering of stores) and agricultural livestock housing (including poultry)
- Landscape measures such as tree buffers are highly relevant for large intensive pig and poultry farms, as they work best around well-defined emission sources such as concentrated livestock houses
- Options for emission reductions from non-agricultural (point) sources are often relevant for NO<sub>x</sub>, though some processes can also emit NH<sub>3</sub>. Many processes under this group fall under either or both the Industrial Emissions Directive (IED) or Large Combustion Plant Directive, which provide stringent requirements for emission levels. Where sources comply with ('Best Available Technology') BAT but are still estimated to contribute substantially to adverse effects at a Natura 2000 site, a permit review in relation to the Habitats Directive may require further mitigation (e.g. BAT+,BAT++). In theory, large pig and poultry farms that have to comply with the IED (accounting for >90% of broilers, >60% of layers and c. 30-40% of pigs in the UK) will already have implemented measures to reduce emissions from housing and on-site manure storage. In practice, there is a lack of robust data as to current uptake of specific mitigation measures on pig and poultry farms.
- A wide range of current and potential future delivery mechanism are relevant for reducing N threats to sensitive habitats: incentive, advice and policy and regulatory options. However, most current instruments lack options for atmospheric N (and NH<sub>3</sub>), but these could be built into incentive schemes (e.g. environmental stewardship schemes, catchment sensitive farming, woodland grant schemes). Much more emphasis on the reduction of atmospheric emissions of N should be given in good practice documents, especially for agricultural NH<sub>3</sub>.
- Agricultural point sources, measures focus on livestock housing and manure storage, though manure spreading measures are also relevant where this occurs on site. Similarly, landscape measures including buffer zones and tree belts are highly relevant. In the case of planning for new sites, local protection of a Natura 2000 site may be achieved simply by siting the new development further from the designated site, for which screening support is provided by the SCAIL model. It should be noted that the delivery mechanism to protect Natura 2000 sites from larger point source cattle farms is currently poorly developed. Given the magnitude of emission from this sector and the need to develop improved cost-effective mitigation techniques (e.g. for naturally ventilated cattle houses), this is a logical priority for further development.
- Lowland agriculture (many diffuse sources): This is a priority area for reducing N emissions and deposition, given that little abatement has so far been achieved, with many 'low hanging fruit' still available. According to



estimates from GAINS (Winiwarter and Klimont, 2011), mitigation of agricultural NH<sub>3</sub> emissions is on average half the cost of further mitigation of NO<sub>x</sub> emissions. Key low-cost opportunities include low emission manure spreading and urea application, covering manure stores and farm nitrogen budgeting (guidance is provided by Bittman et al., 2014). In the absence of a regulatory framework (as implemented in some other countries), there are currently limited available delivery mechanisms in the UK. However, options include increasing emphasis of NH<sub>3</sub> in the HLS under CAP, and of landscape structure approaches

- Evidence gaps - For designated sites, the current Common Standards Monitoring is not designed to detect or attribute gradual trends in species composition change, but could be augmented by the inclusion of permanent monitoring quadrats. Other repeatable surveys at sites with historical data could provide alternatives. The 'biomonitoring chain' concept links key indicators from emission to deposition with species responses for evidence of success. A further major evidence gap is that deposition data used for source attribution and calculating exceedances (from the CBED model) are mapped at a 5 km grid resolution. This spatial resolution may not highlight "hot spots" of deposition from point sources (e.g. large pig or poultry farms). The same applies for NH<sub>3</sub> concentration and critical level exceedance calculations, however a solution for this is currently being implemented in the Defra NFC contract, with 1 km concentration estimates being calculated operationally for the first time (assessment to be carried out annually)

### 3. Transport

How many of the air pollution areas are along the M4? Certainly, Newport, Cardiff, Bridgend and Neath Port Talbot are amongst the highest areas for pollution according to both table 1 and 2.

The WHO Health Statistics 2016 states that transport systems based primarily on individual motorised transport can lead to further deterioration in air quality ([http://www.who.int/gho/publications/world\\_health\\_statistics/2016/whs2016\\_AnnexA\\_AmbientAirPollution.pdf](http://www.who.int/gho/publications/world_health_statistics/2016/whs2016_AnnexA_AmbientAirPollution.pdf)). The consultation text confirmed that transport is a major source of both air and noise pollution. The consultation highlighted (section 3.9) reasons suggested in discussions with Local Authorities and Public Health Wales for the lack of progress to date on AQMAs include the following:

- poorly defined roles at a Local Authority level, and consequently insufficient support from internal partners within the Local Authority, such as highways and planning teams, and those engaged corporately in higher level strategic and financial planning;
- higher than expected emissions from diesel vehicles and an ever increasing volume of traffic on roads

The consultation also stated that

- the Welsh Government are working to produce new noise maps in 2017 for major roads across Wales. (Section 4.2)
- the Welsh Ministers are the highway authority for motorways and trunk roads in Wales, and take seriously their responsibility for managing the environmental impacts of those roads. The Welsh Government will, where appropriate, engage constructively with individual Local Authorities and/or PSBs (of which Welsh Ministers are a statutory invitee) to seek effective remedies to air quality and noise problems arising from the motorway and trunk road network. (Section 5.7)

Diesel fuel use is a key cause of air pollution in cities, as the engines produce nitrogen dioxide, a harmful gas, and tiny particulates that can lodge in the lungs. These forms of pollution can also interact with other substances to create, in some conditions, a toxic soup (Four of world's biggest cities to ban diesel cars from their centres - <https://www.theguardian.com/environment/2016/dec/02/four-of-worlds-biggest-cities-to-ban-diesel-cars-from-their-centres>). Helena Molin Valdés, head of the United Nations' climate and clean air coalition "Soot from diesel vehicles is among the big contributors to ill health and global warming"

Therefore, if Wales is to be truly sustainable and implement integrated and innovative solutions to multiple problem, we recommend the following

- For road transport, emission reductions are mostly derived from technological advances which typically take 5 -10 yrs to filter through the fleet. Acceleration may be possible through legislation (e.g. London Congestion Charge and low emission zones). Therefore, areas of high pollution should look at how to reduce the number of polluting vehicles such as London Congestion Charge and low emission zones OR
- Ban diesel vehicles just like
  - a) Paris, Madrid, Athens and Mexico City will ban the most polluting cars and vans by 2025 to tackle air pollution. Miguel Ángel Mancera, mayor of Mexico City, said increasing investments in public transport would also help clean the city's air, and reduce greenhouse gas emissions. Giorgos Kaminis, mayor of Athens, said his goal was to remove all cars from the city centre. The city authorities will also work with national governments and manufacturers, and promote electric vehicles and cleaner transport.
  - b) Norway to 'completely ban petrol powered cars by 2025 (Norway to 'completely ban petrol powered cars by 2025 - <http://www.independent.co.uk/environment/climate-change/norway-to-ban-the-sale-of-all-fossil-fuel-based-cars-by-2025-and-replace-with-electric-vehicles-a7065616.html>). Norway will ban the sale of all fossil fuel-based cars in the next decade, continuing its trend towards becoming one of the most ecologically progressive countries on the planet. Politicians from both sides of the political spectrum have reportedly reached some concrete conclusions about 100 per cent of Norwegian cars running on green energy by 2025.

- Sustainable transport solutions – fully fund sustainable transport solutions as a matter of urgency rather than locking us into new major infrastructure that will add to Wales' pollution problems e.g. M4.
- Do not fund environmentally damaging road schemes such as the M4 Relief Road.

#### 4. Funding

See collated answers to Question 6.12.

#### ***Private individual or unattributed response 1***

Air pollution is of a major concern, particularly NO<sub>2</sub> as it is reported to shorten human lifespan. I feel that Wales should take the lead in a where possible a non combustion based energy production as this will reduce both NO<sub>x</sub> and CO<sub>2</sub> emissions. - It seems that currently that the UK government has taxed heavily the most polluting types of motor vehicles, which I agree with, yet it has taken the opposite stance with energy production, in that it appears to be welcoming a the burning of fossil fuels via the capacity market auction that appears to potentially subsidise the budding of uneconomic gas fired power plant using tax payers money. - For noise pollution please see our comments in section 3.

I have questioned WCBC Environmental Health about their CO<sub>2</sub> reduction progress after they have granted planning permission for a gas connection from the National Transmission System to the proposed Energy Centre on Wrexham Industrial Estate. I even calculated for them a CO<sub>2</sub> mass emission level and pointed out that it would outweigh their current CO<sub>2</sub> savings in less than 3 months. In true typical Council fashion they have not yet responded. Whilst this may not be the correct forum to air this. You could may be look at the situation on my behalf. - We have had a long on going discussion with NRW about noise on Wrexham Industrial Estate and some process Operators. It took two years from our original complaints (September 2014) for NRW to visit our property and make formal measurements. To now give them their due they are in negotiations with Operators to reduce the ambient noise levels in our village, but I feel that had our initial complaints been taken more seriously, then this matter could have been resolved by now.

#### ***Private individual or unattributed response 2***

Are you looking into the anti-social element of aftermarket exhausts, removal of Catalytic Converters and engine modifications?

#### ***Private individual or or unattributed response 3***

There is very little commercial competition for operating the air quality network. The last tender (Dec 2015) lumped together disparate functions into one large project which only two bidders could possibly supply. The same supplier has always managed the air quality network since inception way back in 1997. What a surprise. These functions ranged from website, air quality forecasting and field work which obviously require completely different skill sets! - Lumping everything together is convenient to manage by civil servants but does not achieve value for money. This is biased against Small and Medium Enterprises (SME). Perhaps a single supplier is best but this cannot be tested without offering lots. - The next tender must be divided into lots as required by the Public Procurement Regulations 2015. Then you will achieve value for money and innovation.

#### ***Private individual or unattributed response 4***

6.1, 6.2, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15 - Generally none of these seem like bad ideas. However it is a shame that such a large proportion of the consultation on this issue is about bureaucracy, coordination, plan writing and monitoring and there is almost nothing about what the welsh government itself can do to improve air quality. While talking, planning and coordinating are important when that is all that is done nothing is achieved.

There is only uncertainty if you decide you want to do less than what the EU would require. Why would you want to do that? If you aspire to do better than EU regulations then the uncertainty evaporates. There are various things that could be done to improve car pollution which come under planning for instance and thus the welsh government could act upon. For example you could set a gradually lowering limit on the pollutants in the table at a point below the top five councils and mandate that within the area of the pollution and noise map for that council the number of car parking spaces needs to reduce as long as the gradually lowering limit is not met. This can be done via planning and via councils swapping their own on road car parking for car-use-reducing measures such as bus and cycle lanes. The assembly could also use it's new tax raising powers to tax car parking spaces in polluted areas.

Most of the worst council areas are also in the region of the south wales metro. The government should ensure that reducing noise and pollution are a key part of the metro planning along with reducing poverty, deprivation and access to services. For instance a slight tweak to the metro plans to produce a 'circle' inside cardiff would reduce internal congestion. There is also a clear opportunity to intercept car journeys at the outskirts of the towns and cites with metro linked park and rides. Finally the metro's provision of east/west links in parallel to newport road in cardiff could be significantly improved. - As for the other major transport projects in the south east - the M4 relief road south of newport - this has a clear benefit for noise and pollution along the current M4 route if it reduces queing on the route. However it is also clear that this route will encourage additional car journeys and thus produce additional

pollution elsewhere. I question the value for money of this project, money which could be more beneficially spent improving public transport. A more limited scope project with a limited amount of extra capacity coupled would a boost to the metro along the m4 route would be significantly better. - Finally the assembly could look at what can be done to spread out the working day from a rigid 9-5 to a flexible 8-6 with core hours policy across government and local government. Spreading out the commute has clear advantages for pollution by reducing queueing. It has almost no downside, since productivity tend to increase under this model as people are freed to concentrate outside of the core meeting times.

***Private individual or or unattributed response 5***

Apply statutory limits to the noise made by children where seniors are @the receiving end. - Increase noise absorbtion insulation in connnecting walls between new housing. - Reduce speed limits along narrow streets designated as trunk road eg Station Rd. Llanrwst (A470). Heavy vehicles passing drown out conversation. A Cardiff prof has said that a passing juggernaut does as much damage to adjacent property as an earthquake tremor - Make it an offence for drivers to rev up souped up engines in residential areas, etc

Use hgh sensitive pollution sensors & don't lie

Noise can wreck peoples' nerves & cause accidents. - Residents have a right to enjoy their homes.

***Private individual or unattributed response 6***

Please do not extend the A494 by widening it past Queensferry on Aston Hill?

***Private individual or unattributed response 7***

Solid effective noise barriers on all roads passing through urban built up areas.

You know where the problems are. Why are there no noise barriers on the east side of the A494 Aston Hill near Aston Mead?

***Private individual or unattributed response 8***

The process of human ingestion the air we breathe and our tolerance to noise is part of what we are. There should be ONE national authority to determine and enforce compliance with clinically determined standards. I can see no justification for making LAQM a devolved issue. - Welsh Government should NOT take this on as a devolved issue! ALL LAQM should be determined by a single UK-wide authority to

be implemented by process and parameter in a consistent and uniform way across the UK

Reference to EU "obligations" are spurious to the need to measure, improve, and publicly account for need to reduce noise and air-pollution. UK leaving the EU should must never be an excuse for INACTION. There is extensive independent academic research to show that air-quality and noise are key factors in human health - especially so for vulnerable members of our communities such as old -people and children. Wales should be considered no different to anywhere else in the UK. Every citizen has a right to a healthy environment regardless of dwelling location and government -be it National or devolved has a clear MORAL obligation to promote and advance the adoption of latest CLINICAL expert recommendations for improved air-quality and noise reduction. The role of Welsh Government should scrutinise and collaborate as required with DEFRA process for determining compliance with INTERNATIONAL (WHO) standards of air-quality and ambient noise. These standards should always be considered as the MINIMUM acceptable to the citizens of Wales. - The current process of monitoring noise and air-quality in Wales is inadequate. It is over-reliant on extrapolated computer modelling and has little relevance to potential "hotspots" that might effect a few people. The concept of "averaging" effects and improvements in an attempt to equalise cost/benefits in some way IS FUNDAMENTALLY FLAWED. In the real world effects of air-quality and noise are unevenly distributed on the population and often the worst effects are inflicted in the most vulnerable -e.g. primary schools and retirement homes located close to busy roads. - IT IS ESSENTIAL that real-time monitoring at local "hotspots" is effected as close as possible to the known source of contamination. e.g. Kerb-side sensors for fine-partical/soot/noise are MUST be installed on roads close to schools/ retirement homes/ etc.

The Crown Publication, Royal Commission report (2008) "The Urban Environment" provides a comprehensive account by accredited professionals on the technical and clinical issues which should be addressed and taken into account in matters to do with communities and air/noise pollution. It should be acknowledged as a prime reference and made compulsory reading for ALL in Welsh Government who are involved in commenting or decision-making in any aspect of these. - In matters of effects of noise and air-quality on HUMAN HEALTH the methodology of that body known as the Welsh Health Impact Assessment Support Unit and individual persons of CLINICAL competence should be given the highest priority by the decision-makers in WELSH GOVERNMENT. - It should be noted that any failure by Welsh Government to give comfort and assurance that noise and air-quality issues are properly addressed will give rise to wide-spread and on-going public concern. Inadequacies of accounting, methodology and implementation will invite citizen-led challenge and expensive confrontation and delays in planning applications for important infrastructure proposals. - The format and inflection of the document Welsh Government have published and to which this response is directed suggests that at

present the issue is little understood by decision-makers in Wales. I would be willing to sit on any advisory panel that might make for better communication and understanding of these important issues.

***Private individual or unattributed response 9***

It is becoming obvious from the recent research on the long term effect of air pollutants that they are hazardous and have been proven to have much more serious effects on the health of the population, than previously acknowledged, though many people in the Milford Haven area, surrounded by many polluting stacks, the associated shipping and storage facilities, have suspected this and queried pollution in the area for many, many years. With this in mind the existing monitoring has been at last proven to be inadequate or non existent and now is the time to review all the pollutants in a comprehensive manner. - What is urgently needed is continuous independent monitoring stations within the proximity of each polluting industry and its associated shipping. Without continuous monitoring stations near to the industrial sites and shipping, where air polluting and noise are not being monitored. - Many towns are now planning to ban the use of diesel vehicles in their towns and cities. But the ships in the Milford Haven Waterway use diesel for their motive power and their axillary power while in port. The shipping should be closely monitored. Milford Haven Port is the largest in Wales with ever increasing shipping.

Irrespective of EU regulations the health and the well being of the population should be given the highest priority and this can only be achieved by closer monitoring of all pollutants and clear stipulation of the permitted levels. This information should be available to everybody 24/7. - I think there should be one single agency responsible for all aspects of pollution, air, water, noise, light, odour etc. available for immediate response 24/7.

I accept that road traffic is a high contributor to air and noise pollution, but every road vehicle already is subject to an annual MOT which checks emissions and noise levels, ie condition of silencers etc. The shipping on the Milford Haven Waterway which burns similar fuels while in port have no similar checks on their emissions to the road traffic. This surely is unacceptable. - Petrochemical storage facilities on the Milford Haven Waterway of which there are many, SemLogistics, Puma, Valero, to mention three, vent unrecorded amounts of hydrocarbon vapour to atmosphere. This will include benzines and other carcinogenic vapours. - Also, there is an ever increasing number of domestic log and coal fire burners all adding to the already high pollution levels in this area.

***Private individual or unattributed response 11***

We agree with the consultation response provided by the All Wales Technical Panel on behalf of the Wales Heads of Environmental Health Group.

### ***Private individual or unattributed response 12***

Furthermore, the technical guidance is useful but I would also suggest a handbook of good practice for Wales is produced. This could cover the process of how to investigate and implement low emission zones, guidance for the sources of funding, electric vehicle charging points, information pack for parents, bus fleet technology, best practice for councils and other government bodies, planning and various other areas.

### ***Private individual or unattributed response 13***

All involved organisations need ISO 9001 including the Government

### ***Private individual or unattributed response 14***

Pembrokeshire Council basically say that they are not aware of any air quality concerns in Milford Haven and they have not been monitoring air quality there. Of course, if they haven't been monitoring air quality, they wouldn't be aware of any problems! Last randomly monitored traffic in 2002. The Milford Haven Waterway is the busiest port in Wales and a major port in the UK, We have 5 top tier Comah plants with over 40 polluting stack and its associated shipping. But to protect the health of the population continuous monitoring stations should be put in place around the Milford Haven Waterway. Letters received from Pembrokeshire County Council Polluting Control Team and a similar letter from Human Resources Wales from our local MP. prove that we have never been monitored for air pollution. Perhaps pollution concerns and health should be part of the same department, Currently Human Resources Wales take readings from the polluting stacks and inform them beforehand that they are coming, different sections of the local County Council are responsible for general monitoring, but all the differing departments only get involved if they are contacted with a complaint during the 5 days a week from 9 -5, that they are at work. Unfortunately in the real world, industrial sites and their shipping work 24 hours a day. - There's a huge difference between emissions monitoring and air quality monitoring. The air quality in an area is affected by many factors: How much traffic pollution there is in addition to industrial emissions, how many sources of industrial emissions there are, what the local climate and geography are. One simply cannot deduce air quality data from industrial emissions data. There's no way of knowing what air quality is like other than monitoring it. Continuous monitoring stations are needed near to the industrial sites and its associated shipping and road traffic. Other industrial towns, for example Ellesmere Port are monitored about two miles from the polluting stacks. The only continuous monitoring station in Pembrokeshire is in Narberth, over 20 miles away, but that only monitors 4 types of pollutants. O3: PM10: NO2: SO2. It does not monitor PM2.5 particulates which are a deadly particulate. - There's clearly a high risk of breaching the legal limits near such



refineries: We refer to the level of monitoring which Falkirk Council considers important in Grangemouth, i.e. a town affected by an oil refinery, a freight port, and other industrial plants. This consists of: - One automatic monitoring station for NO<sub>2</sub>, benzene SO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> in - Grangemouth, a second for NO<sub>2</sub> and SO<sub>2</sub> at another Grangemouth location and a third for NO<sub>2</sub>, PM<sub>10</sub> and SO<sub>2</sub> at a third Grangemouth location; - Automatic monitoring station for SO<sub>2</sub> in nearby Bo'ness; - 6 NO<sub>2</sub> diffusion tubes for NO<sub>2</sub> and benzene in Grangemouth, plus one for benzene and 1,3-butadiene; - One diffusion tube for NO<sub>2</sub>, benzene, 1,3-butadiene in Bo'ness, and another just for benzene. - This is now 2016, air pollution monitoring should at least be carried out to the latest requirements and also monitoring for all pollutants, light, water contamination, noise all should be under review. As should consideration of any further proposed industrial development in this area until there is a health report on the health of the local population.

Scotland already has better pollution regulations. Perhaps we should try to be the most caring government looking after the health of the population. Perhaps less people employed, save tax payers money but using more accurate equipment, continuous monitoring stations near to the polluting industrial sites and shipping, where the results will be open to all and published and pollution levels can be seen if they are being breached.

1. Should a health report on the health of the population near industrial sites and its shipping be undertaken and published? - Certain high levels of noise can have detrimental effect on the health of the population. with this in mind noise level monitoring and limits should be reviewed. It is a very grey area with little or no control. High levels of noise are only acted on when people complain. Is that acceptable, considering these offices are only contactable with difficulty during the hours from 9-5 days a week. - 2. I think there should be just one agency responsible for all pollution. At the moment you can phone, the Human Resources Wales, the Pembrokeshire County Council Port Health and Pembrokeshire County Council Polluting Control Team, Public Health. But it is just a mess - no-one claims responsibility. One pollution department for everything open 7 days a week which would be simpler. The staff would have to be responsible as they would have no other departments to consider or tell you to contact. - I would like to know who is responsible? I don't know if they know. It is not acceptable, it is not working and it is not economical. Please RE-ORGANISATION IS NEEDED.

### ***Private individual or unattributed response 15***

Whilst this consultation provides an indication of the new reporting requirements for Local Authorities, much more information is required on how the objectives will be set and how the new reports will incorporate the principles set out in the WFG act.

## List of respondents

All Wales Pollution Expert Panel (on behalf of Wales Heads of Environmental Health Group)  
Association of Directors Public Health Wales  
Association of Noise Consultants  
Atkins  
British Heart Foundation (BHF) Cymru  
British Lung Foundation (BLF) Cymru  
Caerphilly County Borough Council  
Calor  
Campaign for the Protection of Rural Wales (CPRW) (Montgomery and Brecon & Radnor branches)  
Carmarthenshire County Council (Environmental Health & Licensing)  
Ceredigion County Council  
Chartered Institute of Environmental Health (CIEH)  
Chirk Branch Labour Party  
City and County of Swansea (Pollution Control)  
City of Cardiff Council  
Environmental Protection UK  
Flintshire County Council  
Hunter Acoustics Ltd  
Institution of Civil Engineers Wales Cymru  
Mineral Products Association  
Music Venue Trust  
Natural Gas Vehicles Network  
Natural Resources Wales (NRW)  
Noise Abatement Society (NAS)  
Pembrokeshire County Council  
Public Health England (PHE) (Centre for Radiation, Chemical and Environmental Hazards)  
Public Health Wales (PHW) (Abertawe Bro Morgannwg Public Health Team)  
Public Health Wales (PHW) (Health Protection Division)  
Rhondda Cynon Taf County Borough Council  
Royal Society for the Prevention of Cruelty to Animals (RSPCA) Cymru  
Royal Town Planning Institute (RTPI) Cymru  
Stephen Turner Acoustics Ltd  
Swansea University (College of Law and Criminology)  
University of the West of England (Air Quality Management Resources Centre)  
Wildlife Trusts Wales

A further fifteen responses were received from private individuals or respondents who requested their identity be withheld from publication.