



Llywodraeth Cymru
Welsh Government



Local air quality management in Wales

Policy guidance

June 2017

Part IV of the Environment Act 1995

Local air quality management in Wales

Policy guidance

PG(W)(17)

Contents

Introduction	1
1 Ways of working	3
2 Long-term thinking	6
3 Policy integration.....	8
4 Involvement	12
5 Collaboration.....	16
6 Prevention.....	18
Annex A Air quality objectives and standards	20

Introduction

Air quality management is a public health priority. Integrated action to improve the air people breathe must be taken internationally, nationally, regionally and locally. The Welsh Ministers issue this guidance to Local Authorities in Wales in accordance with section 88 of the Environment Act 1995 (“the 1995 Act”). Local Authorities, in carrying out any of their functions under Part IV of the 1995 Act, must have regard to this guidance insofar as it relates to those functions.

For Local Authorities to be effective in working towards the national air quality objectives¹, local air quality management (LAQM) must encompass more than just Local Authorities’ functions under Part IV of the 1995 Act. The exercise of those functions must be properly joined up with the management of local air quality under the land use and transport planning, environmental permitting and statutory nuisance regimes, as well as with the carrying out of any other activities, not confined to the public sector, which have a bearing on local air quality.

The Welsh Government wishes Local Authorities to adopt the five ways of working set out in the Well-being of Future Generations (Wales) Act 2015 (“the WFG Act”) when carrying out LAQM. As these ways of working include policy integration and collaboration with partners, this guidance does not confine itself solely to Local Authorities’ functions under Part IV of the 1995 Act but rather seeks to convey the importance of joined-up working to achieve multiple outcomes.

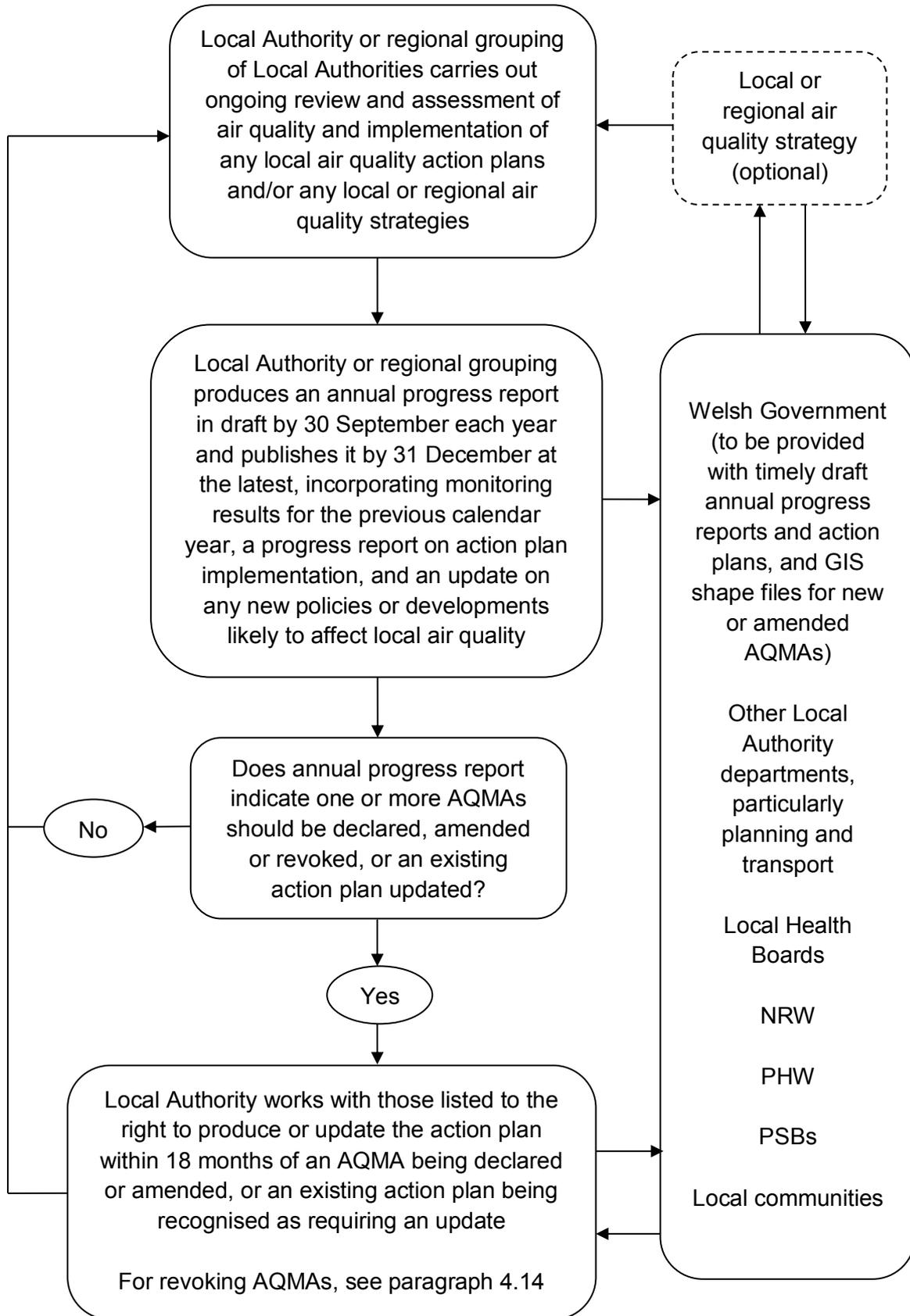
This document is considerably shorter than previous iterations of the Welsh Government’s LAQM policy guidance. It no longer spells out in detail how Local Authorities should go about such activities as public consultation and the processes of developing strategies and action plans. While these remain vitally important, they need to be tailored to local circumstances, and Local Authorities, being bound by the WFG Act, are expected to manage such activities as that Act requires.

Nor does this policy guidance list potential air quality improvement measures and where to find further information on them. Any such list quickly becomes out of date. The intention is for this guidance to provide stability in terms of Welsh Government policy expectations and for it to always be read by Local Authorities in conjunction with the latest expert advice on what works in practice.

¹ The national air quality objectives for Wales are set out in the Air Quality (Wales) Regulations 2000, as amended by the Air Quality (Wales) (Amendment) Regulations 2002.

The purpose of LAQM remains the improvement of human health and quality of life, and the Welsh Government currently has no plans to broaden Local Authorities' specific duties under Part IV of the 1995 Act to include managing the effects of air pollution on sensitive natural habitats. The management of those effects should continue to be addressed robustly through the land use and transport planning regimes, environmental permitting and any other regulatory activities focused on mitigating the environmental impacts of agricultural practices.

THE STREAMLINED LAQM PROCESS



1 Ways of working

- 1.1 The WFG Act requires public bodies such as Local Authorities, Local Health Boards, Natural Resources Wales (NRW), Public Health Wales (PHW) and the Welsh Government to carry out sustainable development. This is the process of improving the economic, social, environmental and cultural well-being of Wales by taking action, in accordance with the sustainable development principle, aimed at achieving the seven national well-being goals².
- 1.2 The sustainable development principle defined in the WFG Act is a fundamental part of how public bodies and Public Services Boards (PSBs) must now operate. They must act in a manner which seeks to ensure the needs of the present are met without compromising the ability of future generations to meet their own needs.
- 1.3 The principle is made up of five ways of working public bodies should follow when carrying out sustainable development. These are:
- looking to the **long term** so we do not compromise the ability of future generations to meet their own needs;
 - taking an **integrated** approach;
 - **involving** a diversity of the population in the decisions affecting them;
 - working with others in a **collaborative** way to find shared sustainable solutions; and
 - acting to **prevent** problems from occurring or getting worse.

Box 1.1

The Welsh Government expects Local Authorities in Wales to follow these five ways of working when carrying out LAQM.

² A prosperous Wales, a resilient Wales, a healthier Wales, a more equal Wales, a Wales of cohesive communities, a Wales of vibrant culture and thriving Welsh language, a globally responsible Wales.

DOS AND DON'TS

1.4 In light of the above, LAQM in Wales **should not** be carried out in the following ways:

- seeking only short-term solutions to instances of non-compliance with the national air quality objectives;
- seeking to manage air quality separately from the pursuit of other, related outcomes such as better soundscapes, reduced carbon emissions, safer roads, healthier lifestyles and more resilient ecosystems;
- letting the experts decide what's best, and informing the public only after it's all been settled;
- Local Authority air quality officers trying to do it all on their own; or
- waiting for the national air quality objectives to be breached before starting to do something about it.

1.5 Instead, LAQM in Wales **should** be carried out by:

- pursuing long-term, enduring solutions to any existing instances of non-compliance with the national air quality objectives;
- seeking to manage air quality at the same time as achieving other, related outcomes;
- taking every opportunity to talk to the public about air quality challenges, listen to their concerns and seek their views on potential solutions and their involvement in delivering them;
- working actively with internal and external partners to mutual benefit in the delivery of desired outcomes; and
- keeping exposure to air pollution as low as reasonably practicable across the whole of the population, looking out in particular for areas where the national air quality objectives might be at risk of being breached at some point in the future and acting pre-emptively to prevent those breaches from occurring.

2 Long-term thinking

- 2.1 Development Plans are a key element of the planning system in Wales. They are fundamental to planning for sustainable development and provide a firm basis for decisions on land use planning applications and appeals. Planning authorities should work closely with air quality officers when preparing Development Plans and when determining land use planning applications.
- 2.2 Development Plans should ensure consideration is given to the long-term air quality effects of proposed developments and the demand for transport associated with them. They should also ensure consideration is given to the long-term effects air quality may have on people residing in proposed developments.
- 2.3 Land use planning is clearly not the only avenue for addressing the long-term challenges posed by air pollution. Equally important are plans and strategies for promoting cleaner transport and active travel over a Local Authority or regional grouping of Local Authorities, together with the robust assessment of individual transport infrastructure proposals. Transport planners should work closely with air quality officers when preparing and implementing plans and strategies with potential long-term implications for local air quality.
- 2.4 Local air quality action plans drawn up to pursue compliance with the national air quality objectives in air quality management areas (AQMAS) should look for permanent, long-term solutions, not for quick fixes resulting in compliance for only a little while. When prioritising measures, long-term traffic demand forecasting is just as important as understanding the current level of road use.
- 2.5 In all aspects of land use and transport planning, careful consideration should be given to Future Trends reporting³.
- 2.6 The Welsh Government welcomes any Local Authority or regional grouping putting in place a local or regional air quality strategy, whether to keep levels of air pollution as low as reasonably practicable or to tackle non-compliance strategically over an area wider than individual AQMAS. However, such a strategy must not operate in isolation from other policy areas, but be integrated with land use and transport planning, public health, active travel, green infrastructure, road safety and climate change wherever potential long-term synergies and conflicts with those other policy areas are known to exist.

³ <http://gov.wales/statistics-and-research/future-trends>

2.7 Any public body or group of public bodies developing or implementing a local or regional long-term plan or strategy with potential implications for air quality should as a minimum ensure it does not contribute to future breaches of the national air quality objectives. However, the national air quality objectives are not 'safe' levels of air pollution. Rather they represent a pragmatic threshold above which government considers the health risks associated with air pollution are unacceptable. Air just barely compliant with the objectives is not 'clean' and still carries long-term health risks. Nitrogen dioxide and particulate matter currently have no safe threshold defined, and the lower the concentration of those pollutants, the lower the risks of adverse health effects in the exposed population. Therefore, while compliance with the national air quality objectives is essential, it is desirable to keep levels of pollution as low as reasonable practicable.

Box 2.1

Our long-term goal for air quality should be twofold, to achieve compliance with the national air quality objectives in specific hotspots and to reduce exposure to pollution more widely, so as to achieve the greatest public health benefit.

3 Policy integration

- 3.1 Airborne environmental noise pollution, meaning unwanted or harmful sound from transport and industry, has much in common with air pollution. The sources of air and environmental noise pollution tend to be either identical or else closely linked, their transmission pathways are similar, and the most affected receptors are also often the same, typically the people situated closest to the source.
- 3.2 For road traffic travelling at a fixed speed, emissions of both air and noise pollution increase or decrease in proportion to the number of vehicles. The noisiest and dirtiest vehicles are often the same, as are the quietest and cleanest. The levels of both air and noise pollution are highest at the road itself and fall off with distance. Buildings and terrain can obstruct or channel both air and noise pollution. Traffic travelling at very high speeds and congested traffic can result in high levels of both air and noise pollution. In addition, some adverse health effects have been linked to both air and noise pollution, for example increased risk of cardiovascular disease.
- 3.3 For all these reasons, it makes sense to consider both forms of airborne traffic pollution together. Pursuing them separately would at best result in duplication of effort and missed opportunities, at worst in the implementation of conflicting policies.
- 3.4 Whenever developing local air quality action plans or wider policies with a view to improving air quality, Local Authorities should ask themselves the following questions:
- Are there existing environmental noise pollution issues associated with the known air quality issues? If so, can we address them at the same time?
 - Is there a risk of some of our proposed air quality actions making the environmental noise pollution situation worse? If so, how can we mitigate this risk?

Box 3.1

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

- 3.5 Green infrastructure refers to natural or semi-natural areas partially or completely covered by vegetation or water in or near built-up areas. It includes parks and gardens, woodlands, allotments, nature reserves, ponds, lakes, rivers, canals, wetlands and off-road paths bordered by vegetation or water, which provide habitat for wildlife and can be used for recreation, education or active travel.
- 3.6 Trees, hedgerows and green infrastructure more broadly can contribute to reducing the harmful effects of air and noise pollution in a number of ways:
- By removing pollution from the air and aiding its dispersion, and by absorbing, scattering and reducing the perception of noise.
 - By putting a buffer distance between sources and receptors.
 - By enabling off-road active travel and making it an attractive alternative to motor vehicle use, thereby reducing both the user's vehicular emissions and their personal exposure.
 - By providing tranquil environments and positive soundscapes, which reduce the stress levels associated with busy roads.
 - By encouraging sport and other outdoor recreation, improving people's overall state of health and thereby building their resilience to the health risks posed by air and noise pollution.
- 3.7 In addition, the presence of trees and hedgerows by the roadside or along a central reservation may have a calming effect, causing motorists to drive more smoothly. However, with regard to the significance of effects such as this, along with the potential of trees, hedgerows and other vegetation to absorb or disperse air pollution, the Welsh Government urges Local Authorities to always refer to the latest advice issued by bodies such as the UK Government's Air Quality Expert Group⁴.

Box 3.2

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

⁴ <https://uk-air.defra.gov.uk/library/ageg/publications>

- 3.8 The adverse impact on local air quality of the uptake of diesel vehicles, which were promoted as being more environmentally friendly for having lower emissions of greenhouse gases than petrol vehicles but later found to have unacceptably high emissions of oxides of nitrogen, is now clearly acknowledged. It is essential we identify and avoid any further potential conflicts between climate change and air quality policy going forward.
- 3.9 There are potentially strong synergies between policies to improve air quality and policies to reduce emissions of greenhouse gases. In general, the sources tend to be the same, with emissions related to fuel consumption in the case of combustion sources, and to levels of activity in the case of other types of source such as intensive livestock units and composting. Measures to reduce emissions of air pollution will often reduce emissions of greenhouse gases, and vice versa.

Box 3.3

Local Authorities' climate change and air quality plans and policies should be closely aligned and integrated where appropriate to maximise any potential synergies and avoid any potential conflicts.

- 3.10 The primary source of local air pollution tends to be road traffic. The solution to local air quality challenges must therefore lie in large part with local and regional transport policies. This includes road traffic management, encouraging the uptake of cleaner technologies, modal shift and active travel. If LAQM cannot influence and work in a joined-up fashion with these policy areas, it cannot possibly succeed. LAQM must also be closely integrated with road safety initiatives, so as to achieve multiple benefits and avoid conflicting policies.
- 3.11 Similarly, LAQM cannot hope to prevent air quality from deteriorating further, nor take advantage of the potential for development to improve air quality, if air quality officers do not maintain an extremely close working relationship with their planning colleagues, both on broad policy and on individual cases.

Box 3.4

Alongside integrating air quality with other environmental policies, interdepartmental policy integration is absolutely essential, particularly in relation to land use and transport planning.

- 3.12 Reducing exposure to air and noise pollution can lead to a healthier, safer and more productive population and a reduced demand on the health service. It is therefore in the interests of the health and public health professions to support action by Local Authorities to reduce the risks and inequalities associated with airborne pollution.
- 3.13 Health and public health professionals, including those in research establishments, can make a valuable contribution to LAQM by helping Local Authorities target their actions to maximum effect, not only in the most polluted areas but also in places where airborne pollution exists alongside deprivation and other risk factors associated with health inequalities.
- 3.14 Health and public health professionals can also help lower risks and disproportionate disease burdens, including in disadvantaged populations, by working in partnership with Local Authorities to communicate important air quality information and advice to the public, particularly where this leads to behaviour change. It is important for such information and advice to be co-ordinated, so as not to send confusing mixed messages from public bodies working in partnership on LAQM.

Box 3.5

Local Authority air quality officers should work with health and public health professionals to integrate LAQM effectively with other local initiatives aiming to reduce health risks and inequalities in affected communities.

4 Involvement

- 4.1 For local communities, including residents and businesses, to play their part in the solution to local air quality challenges, they must first be engaged. This requires they be provided with clear, accurate, timely information on the nature of any problem. Members of the public always have a right to know the state of air quality in their area, even when there is full compliance with the national air quality objectives.
- 4.2 Section 82 of the 1995 Act requires every Local Authority to review the present and likely future air quality within its area. Section 83 requires Local Authorities to designate an AQMA when a national air quality objective is not being achieved, or is not likely to be achieved. Section 84 then requires a Local Authority to develop an action plan for the AQMA. Local communities should be informed and engaged in the course of the first two of these activities so they can then make a useful contribution to the development and implementation of any local air quality action plans or related strategies.
- 4.3 Local Authorities in Wales should focus on monitoring and reporting nitrogen dioxide and particulate matter (PM₁₀). Monitoring and reporting of fine particulate matter (PM_{2.5}) is encouraged but not mandatory. Routine monitoring of other pollutants is no longer required unless there is reason to believe there is a particular local problem with one of them. Such a reason could be a non-compliant reading from the national air quality monitoring network, or a prediction of non-compliance by the national air quality model.
- 4.4 The public is becoming increasingly interested in the health issues associated with nitrogen dioxide and particulate matter, in part due to heightened media coverage. It is no longer uncommon for members of the public to know about the air quality concerns associated with diesel vehicles, while activities seen to generate smoke, dust or odour are likely to make people concerned about the potential health impacts of those activities. It is therefore vital to publish accessible, up-to-date, accurate information on the air quality where they live.

Box 4.1

Local Authorities or regional groupings of Local Authorities should produce a draft annual air quality progress report every year by the end of September, written for the general public and following a template issued by the Welsh Government, and publish the finalised report before the year ends.

- 4.5 Each annual progress report and the data associated with it should be published in an open format and be made available for general re-use under the Open Government Licence⁵.
- 4.6 Local Authorities who are late in submitting their draft annual progress reports will be issued with a reminder and then a warning letter by Welsh Government officials. If they fail to produce their draft report by the end of the calendar year, they will, in the absence of a compelling explanation, be issued with a direction from the Welsh Ministers under section 85(3) of the 1995 Act.
- 4.7 Members of the public have a right to know not only the extent to which they are exposed to airborne pollution, but also whether the relevant public bodies are treating it as a priority. From 2018 onwards, in addition to reporting progress in relation to AQMAs, each annual progress report should also state:
- whether air and/or environmental noise pollution are addressed in the Local Authorities' well-being objectives under the WFG Act, and if so, in what form, and what progress has been made in meeting those well-being objectives to date; and
 - what policies, if any (e.g. relating to land use and transport planning, green infrastructure and active travel), Local Authorities have in place to reduce overall levels of nitrogen dioxide, particulate matter and environmental noise pollution for the population as a whole, taking into consideration the Welsh air quality exposure indicators⁶ and national noise maps⁷.
- 4.8 A Local Authority must by order designate as an AQMA any part of its area in which it appears one or more of the national air quality objectives is not being achieved, or is not likely to be achieved.
- 4.9 When determining the boundary of an AQMA, the Local Authority should make an appropriate judgement based on the extent of predicted areas of non-compliance, the locations of relevant receptors, the nature and location of relevant sources, and other local factors.
- 4.10 The exact wording of an AQMA order is at the discretion of the Local Authority. However, it should include the date on which it comes into force, the pollutant(s) and national air quality objective(s) for which the AQMA is being designated, a map showing the AQMA and a description of the area.

⁵ <http://www.nationalarchives.gov.uk/doc/open-government-licence>

⁶ <https://statswales.gov.wales/catalogue/environment-and-countryside/air-quality>

⁷ <http://lle.gov.wales/map/airbornepollution>

- 4.11 Local Authorities should declare or extend an AQMA as soon as possible after recognising the need for it to be declared or extended. A copy of the new or amended AQMA order should be submitted to the Welsh Government and Defra, together with a GIS shape file of the AQMA boundary. The order must also be made public and drawn to the attention of people living and working within the AQMA boundary.
- 4.12 Following the declaration or extension of an AQMA, the Local Authority should immediately begin working with the local community and other stakeholders to develop an effective local air quality action plan in pursuit of full compliance with the national air quality objectives. Ideally the initial draft should take no more than a year to prepare. A draft action plan must be produced for review by the Welsh Government within 18 months of the coming-into-force date of the AQMA order, and the action plan must be formally adopted before two years have elapsed. A Local Authority failing to produce a draft action plan for review by the Welsh Government within two years of declaring or extending an AQMA will, in the absence of a compelling explanation, be issued with a direction from the Welsh Ministers under section 85(3) of the 1995 Act.
- 4.13 Local air quality action plans should be reviewed and updated whenever deemed necessary, but certainly no less frequently than once every five years. Such reviews should involve input from the local communities.
- 4.14 Local Authorities wishing to revoke or reduce an AQMA should only do so with the approval of the Welsh Government following a review and consultation with the local communities affected. The review should clearly demonstrate national air quality objectives are being met and will continue to be met. In other words, the Local Authority should have confidence the observed improvements will be sustained. Typically this requires three years or more of full compliance, but once the revocation or reduction has been agreed by the Welsh Government, it should occur without delay. Following a revocation, the Local Authority should ideally put in place a local or regional air quality strategy to ensure air quality remains a high-profile issue and conditions are prevented from deteriorating in future.

Box 4.2

Local communities should be involved from the outset in the development of a local air quality action plan. Local Authorities should not wait until the plan exists in draft form before seeking their input. Within 18 months of declaring or extending an AQMA, a draft action plan informed by local community engagement should be submitted for inspection by the Welsh Government.

SCHOOLS AND OTHER SENSITIVE RECEPTOR LOCATIONS

- 4.15 Certain groups are considered to be at greater risk of suffering ill health as a result of exposure to air pollution than the rest of the population. These particularly vulnerable groups include older people and those with pre-existing medical conditions. Babies and children are also particularly vulnerable, since harm suffered at a young age can have impacts lasting far into the future. People undertaking vigorous exercise and therefore breathing heavily may also be at particular risk if simultaneously exposed to high levels of air pollution over a sustained period.
- 4.16 Care homes, hospitals, nurseries, schools, sports grounds and active travel routes are examples of locations where people falling within the above groups may be expected to be found in large numbers. However, older people, those with pre-existing medical conditions, babies, children, and people undertaking prolonged physical activity are not confined to the aforementioned locations and may be found on any residential street in Wales. They deserve the same level of protection wherever they may be. Local Authorities must take a risk-based approach in siting their monitors. This should be informed by where the evidence, including evidence drawn to their attention by local communities, indicates people are likely to be exposed to the highest levels of air pollution.
- 4.17 Schools have a unique role to play in LAQM not so much because they are a place where children are found (they may also be found living in any residential air pollution hotspot), but for two other particular reasons. The first is the significant contribution made by the “school run” to levels of air pollution and traffic congestion on roads within many school catchment areas during term-time rush-hours. (Children are likely to be exposed to far higher levels of air pollution when travelling to and from school than when actually on school grounds.) The second is the potential for schools to help educate children and parents on the issues around air quality and explore potential solutions, such as car sharing and no-idling policies on and around school grounds. Local Authorities should consider engaging with schools as part of their LAQM activities, both to explore options for mitigating the impacts of the school run on society in general and children in particular, and to educate children and grown-ups on local air quality more generally.

Box 4.3

In working towards the well-being of future generations, Local Authorities should give special consideration to the long-term risks posed to babies and children by exposure to air pollution, whether in their homes, in their school or nursery, or travelling between the two.

5 Collaboration

- 5.1 For LAQM to be effective, Local Authority air quality officers must undertake it collaboratively with both internal and external partners. If planning authorities and transport departments within Local Authorities do not take part-ownership of the LAQM work programme, it is likely to amount to little more than an endless cycle of monitoring the problem and, in some places, watching it get worse.
- 5.2 The Welsh Government would like to see Local Authorities undertake LAQM on a regional rather than an individual Local Authority basis wherever it makes sense to do so. Regional working should enable a greater focus on prevention and help bring about better outcomes for people and communities in both the short and the long term. It offers practical benefits in terms of economies of scale, removing duplication, reducing complexity, simplifying activity, ensuring consistency and building workforce resilience in what is a highly specialised policy area, too often dependent for delivery on small numbers of specialist staff. It should decrease the likelihood of missed deadlines due to unplanned staff absence. It should also help to identify, at an early stage, situations where air quality in one Local Authority may be adversely affected by land use or transport decisions made in a neighbouring Local Authority, and to pursue cross-border solutions to shared problems.
- 5.3 The WFG Act puts on a statutory footing PSBs made up of Local Authorities, Local Health Boards, fire and rescue services and NRW. Each PSB must improve the economic, social, environmental and cultural well-being of its area by contributing to the achievement of the national well-being goals. PSBs must carry out an assessment of local well-being, which should take account of Local Authorities' reviews and assessments of local air quality. They must then set well-being objectives and implement a local well-being plan. Each PSB must publish an annual report on progress towards meeting its well-being objectives.
- 5.4 The Environment (Wales) Act 2016 gives NRW a statutory duty to produce a State of Natural Resources Report (SoNaRR) and area statements which will facilitate the implementation of the National Natural Resources Policy and prioritise action at a local level. Area statements will provide a vital evidence base for the sustainable management of natural resources, including air, to inform and influence public service delivery in Wales. NRW should take account of Local Authorities' reviews and assessments of local air quality when carrying out this work. Both PSBs' assessments of local well-being and Local Development Plans must have regard to NRW's area statements.

- 5.5 Local Health Boards and PHW are well placed to educate and inform the public and decision-makers on matters relating to public health. In addition to preparing SoNaRR and area statements, NRW is the regulator for emissions to air (including noise) from large industrial and waste facilities. Local Health Boards, PHW and NRW should all support Local Authorities wherever they can in the development and implementation of local air quality action plans and local or regional air quality strategies. This support could be through work within PSBs. However, collaboration between Local Authorities and other public bodies on air quality and noise management can and should occur even where it is not a priority for the local well-being plan adopted by the PSB.
- 5.6 Where an appropriate level of co-operation from partner organisations is not forthcoming, Local Authorities should seek to resolve this directly with the organisations in question, escalating to a higher level if necessary. If, and only if, this fails, Local Authorities should bring the case to the attention of the Welsh Government.
- 5.7 Each annual progress report should state whether and how LAQM monitoring, the Welsh air quality exposure indicators and national noise maps have informed or will inform PSBs' assessments of local well-being. If a local air quality action plan does not naturally align with any of the objectives in the PSB's local well-being plan, this should be clearly stated. Air quality officers should find it easier to access this information as the requirements for integration and collaboration required by the WFG Act become embedded in their organisations. The Welsh Government recognises if lines of communication within a Local Authority are not functioning as well as they should, the information being requested here could be more onerous for officers to obtain. This may result in some additional work for officers in the short term.
- 5.8 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 needed, engage constructively with individual Local Authorities and/or PSBs (of which the Welsh Ministers are a statutory invitee) to seek effective remedies to air quality and noise problems arising from the motorway and trunk road network. Conversely, where the national air quality monitoring network or national air quality model identifies or predicts non-compliance with EU air quality limit values (or UK equivalent following EU exit) and the roads in question are the responsibility of a Local Authority, the Welsh Government will expect the Local Authority to register this in their annual progress reports, consider developing remedial plans and work with the Welsh Government to bring those roads back into compliance as quickly as possible.

6 Prevention

- 6.1 Air pollution is estimated to reduce the average life expectancy of each person living in the UK by several months. In Wales, over a thousand deaths and over 10,000 lost life-years are attributed annually to both nitrogen dioxide and particulate matter, and the financial cost of air pollution in the UK has been estimated at around £20 billion per year⁸. In Wales, Local Authorities have declared more than 40 AQMAs to date, one for particulate matter, the rest associated with nitrogen dioxide from road traffic.
- 6.2 Noise emitted by sources of air pollution affects people primarily through sleep disturbance and annoyance, but also through an increased risk of hypertension-related health conditions and impacts on productivity and learning, with a cost to the UK valued conservatively at around £10 billion per year⁹. According to the national noise maps produced in 2012, the homes of more than 200,000 people in Wales are exposed to levels of road traffic noise exceeding World Health Organisation (WHO) night noise guidelines.
- 6.3 The legislation we have inherited is strong when it comes to identifying the problems. However, it has had limited success, to date, in resolving them. We should be able to do better than this, in terms of both finding innovative solutions to existing problems and preventing further problems from arising.
- 6.4 Regardless of where they live and work, people's peak doses of traffic-related airborne pollution will tend to come when they are in transit, travelling along or by the side of busy roads. People living and working in AQMAs are likely to be exposed to higher concentrations of airborne pollution at home and in the workplace than people living and working elsewhere. However, the air pollutants of greatest concern from a public health perspective hold 'non-threshold' status, which means there is no 'safe' level of exposure. As a consequence, the majority of the avoidable health burden is the result of population exposure to airborne pollution outside AQMAs.
- 6.5 The land use and transport planning regimes are key to preventing fresh instances of non-compliance with the national air quality objectives and unacceptable levels of noise from arising as a consequence of new development. There is also some scope for using those regimes to try to maintain levels of public exposure to airborne pollution at as low a level as is reasonably practicable.

⁸ <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>

⁹ <https://www.gov.uk/noise-pollution-economic-analysis>

- 6.6 Local Authorities and partner organisations may decide something extra is needed to prevent ill health caused by airborne pollution, over and above the air quality and noise provisions contained within the land use and transport planning regimes. Where this is the case, one option which might be considered is a local or regional air quality strategy. The Welsh Government would welcome public bodies working together to produce such strategies. Depending on the priorities emerging from their assessments of local well-being, PSBs could choose to focus on this issue and/or address it as part of wider consideration. Public bodies who choose to come together to develop a local or regional air quality strategy will be best placed to determine what is most appropriate in terms of its scope, form, content and overall level of ambition. The Welsh Government does not intend to impose a one-size-fits-all model in this regard.
- 6.7 Local Authorities who have declared AQMAs should use their local air quality action plans not only to pursue compliance with the national air quality objectives within the AQMA, but also to try to prevent or reduce the harmful effects of airborne pollution both inside and outside the AQMA. This could be achieved in part through work with schools and Local Health Boards.

Box 6.1

Any new or updated local air quality action plan from 2017 onwards should state how actions are being taken forward not solely with a view to achieving technical compliance with the national air quality objectives, but also with a view to maximising their contribution to reducing overall levels of nitrogen dioxide, particulate matter and environmental noise pollution for the population as a whole, so as to achieve the greatest public health benefit.

- 6.8 To be clear, the Welsh Government is not suggesting Local Authorities should be able to demonstrate reductions in air and noise pollution across their entire territory through measurement and attribute those reductions to local air quality action plans. They are, however, being asked to factor any potential benefits in terms of more widespread airborne pollution reduction into the selection and prioritisation of measures in their action plans. This way of thinking should come naturally over time as the ways of working set out in the WFG Act become more prevalent within Local Authorities. In working in accordance with the sustainable development principle, Local Authorities should, as a matter of course, be looking to exploit any opportunities for wider benefits arising from their activities, including the public health consequences of how they select and prioritise actions in their local air quality action plans. Narrative on these wider considerations should be included in action plans.

Annex A Air quality objectives and standards

Table A.1 National air quality objectives contained in the Air Quality (Wales) Regulations 2000, as amended by the Air Quality (Wales) (Amendment) Regulations 2002

Pollutant	National air quality objective	
	Concentration	Measured as
Benzene	16.25 $\mu\text{g}/\text{m}^3$	running annual mean
	5 $\mu\text{g}/\text{m}^3$	annual mean
1,3-butadiene	2.25 $\mu\text{g}/\text{m}^3$	running annual mean
Carbon monoxide	10 mg/m^3	maximum daily running 8-hour mean
Lead	0.25 $\mu\text{g}/\text{m}^3$	annual mean
Nitrogen dioxide	200 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 18 times a year	1-hour mean
	40 $\mu\text{g}/\text{m}^3$	annual mean
Particles (PM ₁₀) (gravimetric)	50 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 35 times a year	24-hour mean
	40 $\mu\text{g}/\text{m}^3$ (WHO guideline 20 $\mu\text{g}/\text{m}^3$)	annual mean
Sulphur dioxide	266 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 35 times a year	15-minute mean
	350 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 24 times a year	1-hour mean
	125 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 3 times a year (WHO guideline 20 $\mu\text{g}/\text{m}^3$)	24-hour mean

Table A.2 Other air quality standards relevant to human health

Pollutant	EU limit or target value	
	Concentration	Measured as
Arsenic	6 ng/m ³	total content in the PM ₁₀ fraction averaged over a calendar year
Benzo(a)pyrene	1 ng/m ³	total content in the PM ₁₀ fraction averaged over a calendar year
Cadmium	5 ng/m ³	total content in the PM ₁₀ fraction averaged over a calendar year
Nickel	20 ng/m ³	total content in the PM ₁₀ fraction averaged over a calendar year
Ozone	120 µg/m ³ not to be exceeded on more than 25 days a year averaged over three years (WHO guideline 100 µg/m ³)	maximum daily running 8-hour mean
Particles (PM _{2.5}) (gravimetric)	25 µg/m ³ (WHO guideline 10 µg/m ³)	annual mean