



Llywodraeth Cymru  
Welsh Government

# Air Pollution in Wales 2017



Welsh Air Quality Forum  
Ffôrwm Ansawdd Awyr Cymru



Ricardo  
Energy & Environment



# Introduction

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This is the 15<sup>th</sup> annual report on air quality in Wales to be produced by Ricardo Energy & Environment under the auspices of the Welsh Air Quality Forum (WAQF) for the Welsh Government. It aims to provide Welsh citizens and the air quality community with a user-friendly summary of information on local air quality monitoring, and pollution levels and their impacts throughout Wales during 2017. It also details the WAQF's activities alongside major policy, technical and scientific developments.

More detailed information, analysis and data covering air quality in Wales can be found on the Welsh Government's website (<https://airquality.gov.wales>). All data used in this report are freely available through the website, which has been improved and developed this year. The website is used by 22 local authorities to submit monitoring data and by thousands more individuals to download data and learn about monitoring sites and measurements that take place. It contains comprehensive data, graphs and information on health effects from a continually increasing number of monitoring stations, together with local forecasts of air quality over the next 5 days. This provides people in Wales with access to reliable and accurate information on the quality of the air they breathe. Openair data analysis tools provide a free and open-source tool to analyse, interpret and understand air pollution data. The user-friendly, interactive map interface enables users to access and analyse data at a glance. Improvements to the website include local air quality management pages and educational pages for primary and secondary schools.

Chapter 2 presents the WAQF's activities in 2017. Chapter 3 summarises important policy developments that took place in 2017. Chapter 4 presents key air quality statistics from all monitoring networks in Wales and summarises the data from them. The networks include air quality monitoring stations run by Welsh local authorities; and the national monitoring networks run by the Department for Environment, Food and Rural Affairs and the Welsh Government. Chapters 5 and 6 discuss long-term trends and the spatial distribution of air pollutants across the country. Chapter 7 reports on topics of special interest – this year it looks at 'Eco-Schools and Young Dragons'. Chapter 8 Considers reducing health risks associated with road traffic air pollution in Wales.

Finally, for readers wanting to find out more, additional web-based and published sources of information are summarised in Chapter 9.





# The WAQF and its activities in 2017



The Welsh Air Quality Forum (WAQF) represents the 22 Unitary Councils of Wales and is made up of representatives from local authorities, the Welsh Government, Public Health Wales, Natural Resources Wales and, special internal groups several academic institutions. WAQF members direct the operation of the Air Quality in Wales website and database; the collection, quality assurance, quality control and dissemination of all data; and the provision of support and training to local authorities. The WAQF provides expertise and guidance to ensure that local air quality management (LAQM) statutory requirements are met and air quality in Wales is reported in an accurate, transparent and timely manner.

## WAQF highlights from 2017

- The Air Quality in Wales website continued to improve and provided real-time updates and information. Visitor numbers to the site were 75% higher than those in 2016.
- The website was under review through 2017 with various additional features planned, including an updated educational section.
- Local Authority Single Revenue Grant was made available again this year to assist local authorities with implementing interventions to improve air quality.
- Invited speakers continued to provide relevant additional dialogue and training for officers. The WAQF provides a useful platform for dialogue to enable a more consistent approach to implementing LAQM requirements across Wales.
- Use of the website's discussion forum continues to enable debate and promote best practice.

## WAQF meetings 2017

6 April: The monitoring network remains at 39 sites. There were particulate matter data spikes on the 27 and 28 March that were identified as coming from Eastern Europe during a period of low wind speeds. An update on the website development was provided and information on the new education section was discussed. Clare Severn presented on the Local Government Reform and Martin McVay provided an update on LAQM.

7 July: The monitoring network remains at 39 sites. Discussions took place in relation to the WAQF Business Plan needing to be reviewed. Arrangements for the 2017 Annual Seminar were also discussed.

23 November: The WAQF received a presentation from Joseph Carter of the British Lung Foundation. It was reported that an additional monitoring station at Swansea Morfa Road had been added to the network. The network total was now 40 sites. Visitor numbers to the website were around the 3,500 unique visitors per month. This is about a 52% increase on the same period in 2016.

The Annual Welsh Air Quality Forum Seminar took place on 12 October at the Caerphilly Council Chamber at Penallta House. In total 63 WAQF members and delegates attending the event, at which the 2016 Annual Report was circulated. The topics presented were;

- Local authority action planning: an experience from Caerphilly.
- Implementing Clean Air Zones.
- Remote sensing of vehicle emissions.
- Making a difference, cost effectiveness of interventions.
- Does vegetation reduce air pollution?
- Living Streets – walking schools.
- Measured roadside air quality improvements after the introduction of low emission buses.

# Welsh Government policy update

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Since the last Air Quality in Wales report the Welsh Government has made significant progress towards tackling air pollution in Wales.

This section looks at Welsh Government policy development and implementation in 2017 and 2018, and provides information on the future direction of reducing air pollution in Wales.

In December 2017, the Minister for Environment announced a package of measures to tackle air pollution in Wales to help improve public health and the natural environment. The measures also support legal compliance with air quality limits. These measures, of which a number have already been delivered, are described below.

## A Clean Air Wales Programme

The Programme was established in August 2018 to consider evidence, and develop and implement actions required across all Government Departments to ensure clean air for Wales. The aim of the Programme is to reduce the burden of poor air quality on human health and the natural environment and, in the nearer term, the requirement to comply with European and domestic legislative air quality obligations.

## A Clean Air Plan for Wales

This Plan will set out key pollutants and their impacts on public health and the natural environment in Wales. It will include measures to achieve compliance with the European and domestic legislative requirements. The Plan will also identify cross-Government and sectoral actions required to achieve clean air in Wales. This includes communication, engagement and education measures needed to encourage behaviour change, so supporting reductions in air pollution and improving health outcomes for our citizens. The intention is to consult on the plan in 2019.

## Welsh Government supplemental plan to the UK plan for tackling roadside nitrogen dioxide concentrations 2017

On 25 April 2018, the Welsh Government launched a consultation on its plans to reduce, as quickly as possible, concentrations of nitrogen dioxide around roads in Wales

where levels are above legal limits. The consultation closed on 19 June 2018. The interim supplemental plan was published in July 2018 and a final plan will be published by the end of November 2018.

In the meantime, the Welsh Government has already taken early action by introducing a series of soft measures such as reduced speed limits along the most polluting roads.

## Clean Air Zone framework for Wales

The Welsh Government's consultation on a Clean Air Zone Framework for Wales ran between 25 April 2018 and 19 June 2018. The Framework sets out how the Welsh Government will ensure the effective implementation of Clean Air Zones, where evidence demonstrates they will bring about compliance before other measures and in the shortest possible time.

A Clean Air Zone Framework for Wales will also provide an enduring impetus for actions to improve air quality over and above compliance thresholds.

The Welsh Government is finalising the Framework having considered the comprehensive feedback received in response to the consultation. The Framework will be published during autumn 2018.

## Improvement to the local air quality management regime

The Welsh Government issued new policy guidance to local authorities in 2017. This helps to make the system of local air quality management in Wales more effective and brings it into step with the ways of working in the Well-being of Future Generations (Wales) Act 2015.

Since issuing the guidance, The Welsh Government has worked with local authorities to develop and update the Annual Progress Report, which is an integral part of the local air quality management regime, to reflect the policy change and to make it a more accessible public-facing document.

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## Guidance to NHS staff

In April 2018, the Welsh Government published guidance on air quality for health professionals in the NHS. This highlights the role they can play in preventing the adverse health impacts of air pollution.

## Planning policy

The Welsh Government's national planning policy document 'Planning Policy Wales' has been completely rewritten and restructured around the principles of the Well-being of Future Generations (Wales) Act 2015. The new edition of this document, a public consultation on which recently closed, contains a dedicated section on air quality and soundscape.

## Communications and behaviour change

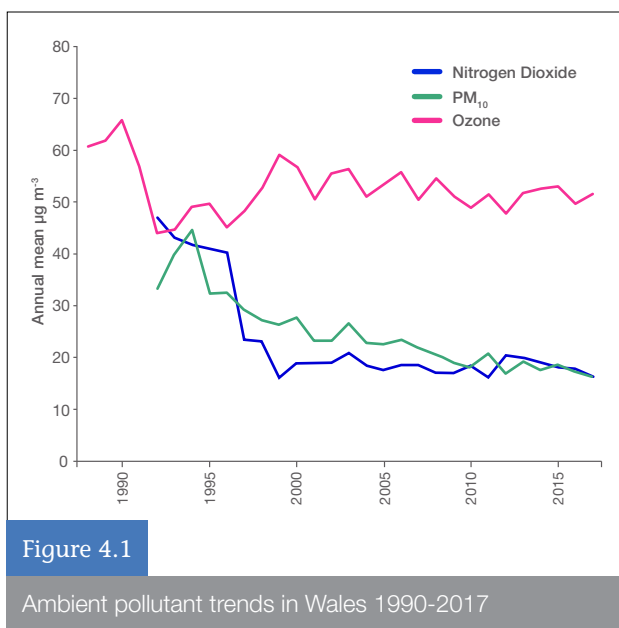
The Welsh Government believes that changing travel behaviour and raising awareness of the issues surrounding poor air quality are key to delivering long-term and sustainable improvements.

Work is already underway to develop a comprehensive and robust communication and behaviour-change plan, supported by the What Works Centre for Wellbeing. The Young Dragons initiative, which introduces young children to the causes and impacts of air pollution, is a good example of the ongoing work.



# Monitoring networks and data highlights

The Welsh Government and the Welsh Air Quality Forum (WAQF) work closely with air quality experts and the Department for Environment, Food and Rural Affairs (Defra) to monitor and reduce air pollution in Wales. Figure 4.1 illustrates the long-term trends for nitrogen dioxide (NO<sub>2</sub>), particulate matter up to 10 µm in size (PM<sub>10</sub>) and ozone concentrations in Wales. Apart from ozone, this shows a steady improvement in pollutant concentrations since the 1990s. As ozone is a regional pollutant that is transboundary in nature, it is outside the direct control of the Welsh Government and local authorities.



## Local authority monitoring

Air quality monitoring in Wales is undertaken by local authorities and through national networks managed by the Welsh Government. There are two main types of air pollution monitoring – automatic monitoring and passive sampling. Automatic monitoring uses continuous analysis techniques to measure and record ambient concentrations of a range of air pollutants. Passive samplers (such as diffusion tubes) contain a chemical reagent that adsorbs the pollutant from the air. Samplers are exposed for a period of time and analysed in a laboratory. At the start of 2017, there were a total of 39 automatic monitoring sites distributed across Wales that were operated by local authorities, by

the end of 2017 this risen to 40 sites. These sites contain equipment that automatically measures carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), ozone (O<sub>3</sub>), PM<sub>10</sub> and particulate matter up to 2.5 µm in size (PM<sub>2.5</sub>). In addition to these, there were several hundred diffusion tubes measuring monthly mean NO<sub>2</sub> levels. Overall, data capture for the automatic instruments operated by local authorities during the year was 86%, this reflects the fact that two new sites were added part way through the year so have lowered the overall average data capture. If these two site are removed from the average, the data capture is 93%.

In 2017, ambient concentrations of PM<sub>10</sub> were 'moderate' on 44 days, 'high' on 9 days and 'very high' on 4 days (as defined by the Daily Air Quality Index bandings). For NO<sub>2</sub>, there were 66 days with 'moderate' concentrations, 1 day with 'high' levels and no days recorded as 'very high'. For SO<sub>2</sub>, there were no 'moderate', 'high' or 'very high' levels recorded. For O<sub>3</sub>, there were 35 days with 'moderate' levels and no days recorded as 'high' or 'very high' – as measured by the monitoring sites operated by local authorities. Overall, pollution levels in Wales were low for 230 days, moderate for 121 days, high for 10 days and very high for 4 days. So, for 63% of the time, pollution levels were low across the whole of Wales. Details of the Daily Air Quality Index banding system used to describe pollution levels for the public during 2017 can be found at <https://airquality.gov.wales/about-air-quality/daily-air-quality-index>

## Summary of exceedances

Exceedance statistics generated from the Air Quality in Wales website show that no monitoring sites in Wales exceeded any Air Quality Strategy (AQS) Objectives (or corresponding EU limit values) for CO, SO<sub>2</sub>, benzene (C<sub>6</sub>H<sub>6</sub>) or lead (Pb) during 2017.

Four Welsh monitoring sites (Rhondda Mountain Ash, Caerphilly Hafodyrynys, Newport M4 Junction 25 and Swansea Station Court High Street) exceeded the annual mean objective of 40µg m<sup>-3</sup> for NO<sub>2</sub>. Caerphilly Hafodyrynys also exceeded the AQS Objective for hourly mean NO<sub>2</sub> concentration on more than the permitted 18 occasions in 2017.



Two sites in Wales exceeded the AQS Objective for  $O_3$  ( $100\mu\text{g m}^{-3}$  as a maximum daily 8-hour mean) on more than the permitted 10 occasions. These were Marchlyn Mawr and Swansea St Thomas DOAS.

### The national air quality monitoring networks operating in Wales

There are several national air quality monitoring networks operating across Wales. These report air pollution levels in Wales that can be assessed against regulatory requirements and to provide information for air quality researchers, the medical community and members of the public.

#### Automatic Urban and Rural Network

There are 11 air quality monitoring sites in Wales that are part of the UK Automatic Urban and Rural Network (AURN). The techniques used for monitoring the gaseous pollutants in the AURN are the reference methods of measurement defined in the relevant EU directives. For particulate matter, the AURN uses methods that have demonstrated equivalence to the reference method, but which (unlike the reference method) allow continuous monitoring and provision of this information in 'real time'.

#### Heavy Metals Network

There are six monitoring sites in Wales for heavy metals and they belong to the UK Heavy Metals Network. Airborne particulate matter is sampled and analysed for metal concentrations in  $PM_{10}$ . The metal concentration data are then combined with the local meteorological data (such as rainfall) to calculate values for wet deposition (from precipitation), dry deposition (such as dust settling) and cloud deposition (condensation of cloud droplets).

#### PAH Network

Wales has four polycyclic aromatic hydrocarbon (PAH) network sites. These monitor compliance with Directive 2005/107/EC (the 4<sup>th</sup> daughter directive), which includes a target value of  $1\text{ng m}^{-3}$  for the annual mean concentration of benzo[a]pyrene ( $C_{20}H_{12}$ ) as a representative PAH, not to be exceeded after 31 December 2012. This network uses the  $PM_{10}$  'Digital™' sampler. Ambient air is sampled through glass fibre filters and polyurethane foam pads, which capture the PAH compounds for later analysis in a laboratory.



#### Black Carbon Network

Black carbon is fine, dark carbonaceous particulate matter produced from the incomplete combustion of materials containing carbon (for example coal, oil and biomass (such as wood)). It is of concern due to possible health impacts and as a suspected contributor to climate change. There is one monitoring site in Wales that measures this parameter. The site, in Cardiff, is part of the Black Carbon Network. This uses an automatic instrument called an aethalometer that measures black carbon directly using a real-time optical transmission technique.

#### UK Eutrophying and Acidifying Pollutants Network

The UK Eutrophying and Acidifying Atmospheric Pollutants (UKEAP) network provides information on the deposition of eutrophying and acidifying compounds in the UK and assesses their potential impacts on ecosystems. There are 14 network sites across Wales. Other measurements – including acid gases and particulate composition – have also been made within the programme, to provide a more complete understanding of atmospheric chemistry in the UK.

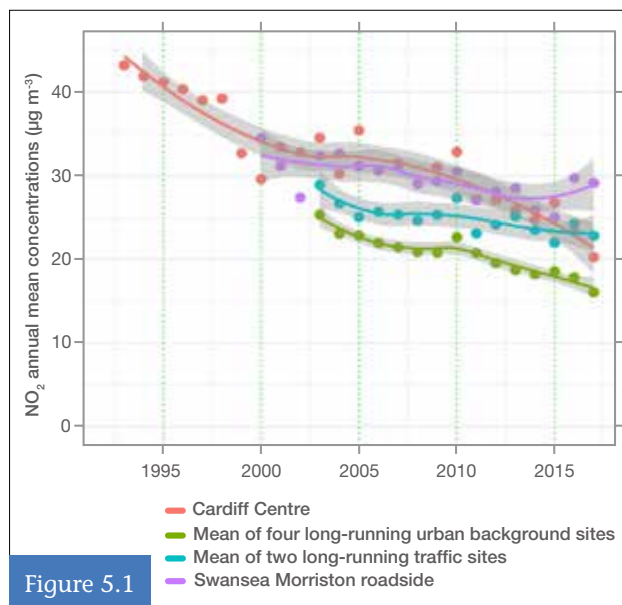


# Air quality trends

The number of automatic monitoring sites in Wales has increased greatly in recent years. While this helps to improve our understanding of air quality across the country, it potentially complicates the investigation of how air quality has changed over time. If such investigations are based on all available data, discontinuities and false trends may be introduced because of changes in the composition of the monitoring network. Therefore, in this report, investigation of changes has been based on subsets of long-running sites rather than on every site in the monitoring network. This should lead to a more robust assessment.

## Nitrogen dioxide

In Wales (and the rest of the UK), the most widely exceeded limit value is the annual mean nitrogen dioxide (NO<sub>2</sub>) concentration (40µg m<sup>-3</sup>). Figure 5.1 shows how annual mean NO<sub>2</sub> concentrations have varied with time.



Annual mean nitrogen dioxide concentration at long-running sites in Wales

Urban background sites are represented by the longest running site of this type (Cardiff Centre (since 1992)), and a subset of four long-running sites that have all been in operation since 2003, with annual data capture of at least

50% – Cardiff Centre, Cwmbran, Newport St Julians and Port Talbot (replaced by the nearby Port Talbot Margam site in 2007 – the two Port Talbot sites are treated as one for the purpose of the graph). Cardiff Centre shows a clear decrease from 1992 to around 2000, after which the downward trend appears to level off. The mean for the long-running sites shows a slight decrease through the 2000s, although 2010 was a higher year.

Urban traffic sites (those within 10m of a major road) are represented by the longest-running roadside site (Swansea Morrision (since from 2001)), and a subset of two long-running sites that have been in operation since 2002 – Swansea Morfa Road and Wrexham. Neither Swansea Morrision nor the mean of the two long-running sites shows any clear pattern of increase or decrease in NO<sub>2</sub> concentration in recent years.

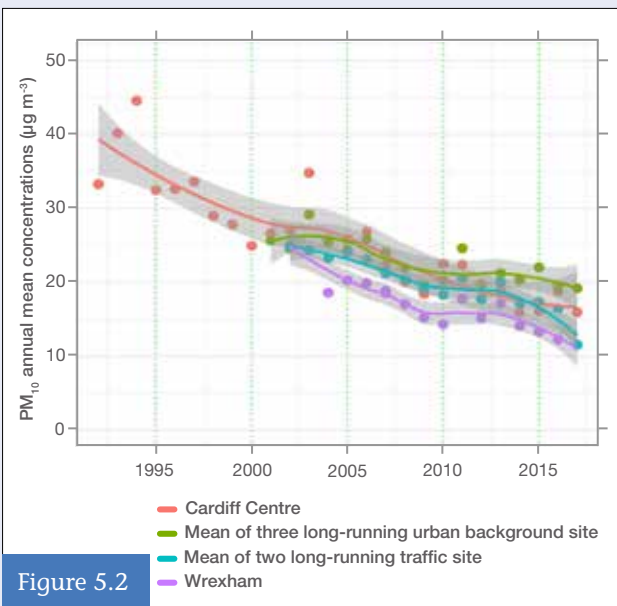
## Particulate matter

Figure 5.2 shows how annual mean concentrations of particulate matter up to 10µm in size (PM<sub>10</sub>) have generally decreased in recent years at urban background and urban traffic sites.

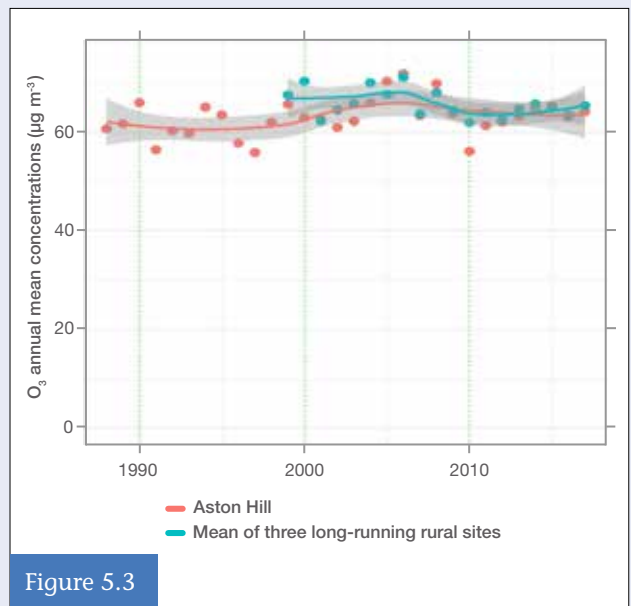
Urban non-roadsite sites are represented by the mean of three long-running sites from 2001 (Cardiff Centre, Cwmbran and Port Talbot/Port Talbot Margam – again, the latter two are treated as one site for this purpose). Please note that Port Talbot/Port Talbot Margam is classified as urban industrial rather than urban background as it is located in the vicinity of a large steelworks. It has been included because there are few long-running urban non-roadsite sites.

Cardiff Centre (which has operated for longer than any other site) is also shown individually. All sites have at least 70% annual data capture except for Cardiff Centre in 2010.

Urban traffic sites are represented by the mean of two long-running sites from 2002 – Rhondda-Cynon-Taf Nantgarw and Wrexham. Wrexham (the longest-running traffic site) is also shown individually.



**Figure 5.2**  
Annual mean  $PM_{10}$  concentrations at long-running sites in Wales



**Figure 5.3**  
Annual mean ozone concentrations at long-running sites in Wales

## Ozone

Ozone ( $O_3$ ) concentrations tend to be highest at rural locations. Figure 5.3 shows how annual mean rural  $O_3$  concentration has changed over time. This is based on the mean concentration measured by three long-running sites in Wales (shown by the grey line) – Aston Hill, Marchlyn Mawr and Narbeth.

All have been in operation since 2003 with data capture of at least 70%. Also shown is Aston Hill alone – this site has been monitoring  $O_3$  since the late 1980s. There are no clear trends, concentrations vary considerably from year to year primarily because of the variation in meteorological factors.

6

# Maps of air quality

The maps in Figure 6.1 present 2017 background concentrations for nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), and particulate matter up to 10µm in size (PM<sub>10</sub>) and smaller than 2.5µm (PM<sub>2.5</sub>). These modelled maps of ambient concentrations were calculated from National Atmospheric Emissions Inventory (NAEI) data using a dispersion modelling approach. The model output was calibrated using monitored data from the national monitoring networks. These modelled maps were then verified against the local authority monitoring data. A more detailed report comparing the Welsh air quality monitoring data to modelled concentrations will be published in due course. In these maps, the modelled ambient concentrations are compared with EU limit values.

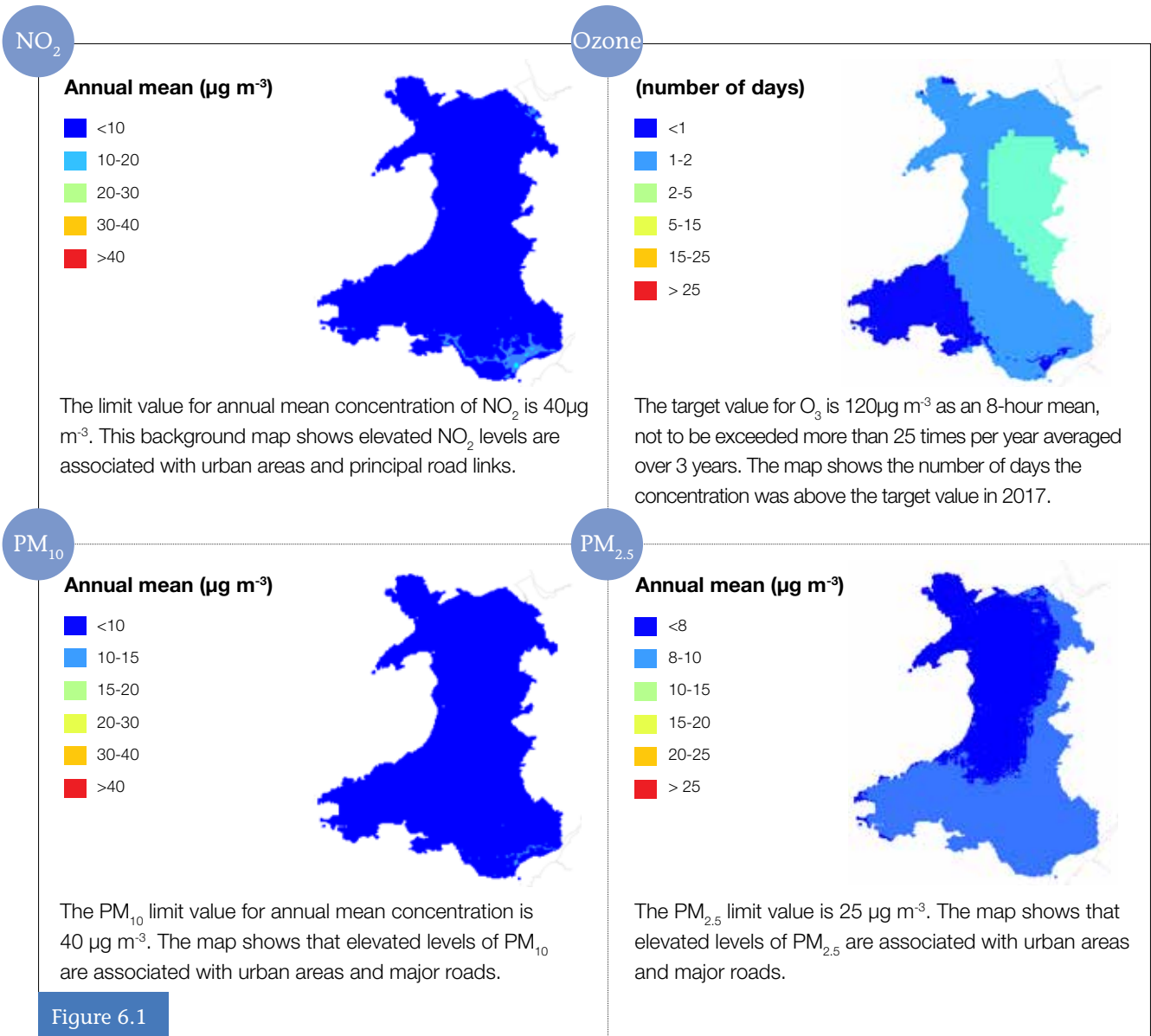


Figure 6.1

Maps showing background concentrations of nitrogen dioxide, ozone, PM<sub>10</sub> and PM<sub>2.5</sub>.



## Eco-Schools - Young Dragons air quality programme



The Welsh Government understands that children are an important vulnerable group and that harm suffered at a young age can have impacts lasting far into the future. This clearly puts them at greater risk of suffering ill health as a result of exposure to air pollution. The Welsh Government is taking action on a number of fronts to mitigate that risk.

A key step has been to issue new statutory guidance to local authorities highlighting that children are sensitive receptors, and requiring them to take a risk-based approach to siting monitors and urging them to engage with schools to educate children and parents about air pollution.

To support this, the Welsh Government is funding the Young Dragons Initiative. Delivered via the Eco-Schools programme, Young Dragons introduces pupils to the causes and impacts of air pollution, and encourages them to explore how changes in behaviour can make a difference in reducing pollution levels. This approach brings huge benefits as engaging directly with the children (and through them, their parents) not only helps to protect them, but also has the potential to reduce the scale of future intervention measures.

Achieving long-term, sustainable improvements to air quality means changing travel behaviour and raising awareness of the issues. Programmes such as the Young Dragons start this change on a number of levels. It is the beginning of the Welsh Government's long-term campaign to raise awareness about air pollution, and change attitudes and behaviours set out in the Clean Air Plan for Wales.

### Eco-Schools and Young Dragons

The Eco-Schools programme is the main platform the Welsh Government has to engage directly with children and young people to develop sustainable behaviours, and deliver climate change and natural resource priorities. It is a global programme engaging millions of children across some 70 countries, making it the largest environmental educational programme in the world. The programme is operated globally by the Foundation for Environmental Education (FEE), based in Copenhagen, which also promotes the Blue Flag Beach, Green Parks, Green Key (eco-tourism) and Young Reporters for the Environment schemes, all of which are run by Keep Wales Tidy.

The Young Dragons initiative involves sending 10 diffusion tubes and a teachers' pack to participating Eco-Schools for them to measure nitrogen dioxide (NO<sub>2</sub>) levels in different locations around their school premises. Each school's eco committee will then draw up an action plan to reduce air pollution. Monitoring results are intended to be indicative only, illustrating where levels of NO<sub>2</sub> are higher or lower within a school's grounds. The highest levels are expected around the school gates and drop-off points, but the readings themselves may not accurately represent actual levels of NO<sub>2</sub>. To draw robust conclusions, a programme of comprehensive air quality monitoring is required.

In Wales, over 95% of schools representing over 430,000 pupils voluntarily take part in the Eco-Schools programme, one of the highest participation rates in the world. This highly successful programme has been run by Keep Wales Tidy since 1998 and has been supported by the Welsh Government and its predecessor bodies since then. Some 830 Welsh schools have now attained the International Green Flag award, the highest level under the programme. Of these, some 320 schools have become 'platinum' schools with four Green Flags.

The programme is closely aligned to the goals and ways of working in the Well-being of Future Generations (Wales) Act 2015. It is pupil-led, and involves children and young people learning about climate change, sustainable behaviours and eight environmental topics (energy, water, waste minimisation, litter, biodiversity, global citizenship, transport and healthy living) via



a simple seven-step approach. This includes forming an eco committee; exploring environmental issues, challenges and opportunities; involving pupils and their wider communities; developing an action plan, and undertaking monitoring and evaluation.

Several of the main themes of the programme – energy, transport and healthy living – have a direct link to tackling air pollution. By carrying out ‘hands-on’ projects in these areas, young people will develop sustainable behaviours, learning and skills that they can pass on to teachers, parents and the wider community.

The Welsh Government originally expected to supply testing kits to 125 schools, but due to a great deal of interest in the project, 139 schools across Wales are now taking part in the programme. Hannah Blythyn AM, Minister for Environment, visited Pen-y-Bryn Primary School in Cardiff on 20 June 2018 to meet members of the Eco committee and hear their views on how they decided on where to site the tubes and how they intended to take action to reduce air pollution at their school.

The free teachers’ pack:

- Explains what air pollution is and how it can affect our health.
- Describes how transport, power generation and industry produce air pollution and greenhouse gas emissions, which can have impacts on health, the environment and climate.

- Provides suggestions for projects that schools can do to improve air quality.

This could involve cutting down on the ‘school run’ through more walking, cycling or scooting, more ‘walking buses’, introducing car-sharing schemes for parents and teachers, and running anti-idling campaigns. It will be for each eco committee to decide how best to take action.

There are multiple potential benefits from taking action to reduce air pollution such as better air quality, healthier pupils, improved safety outside school gates, reduced fuel costs for parents and teachers, a cut in harmful emissions and a reduced carbon footprint.

At the time of writing [August 2018], the Eco-Schools have sent their diffusion tubes to Ricardo Energy & Environment for analysis and the results should be available to schools for their return in September. Eco committees will draw up action plans over the autumn with a view to implementing behaviour change interventions in the spring of 2019.

The Young Dragons Air Quality project was developed by officials from the Welsh Government’s Environment and Communities Division and its Strategic Evidence Branch, Keep Wales Tidy and consultants Ricardo Energy & Environment.

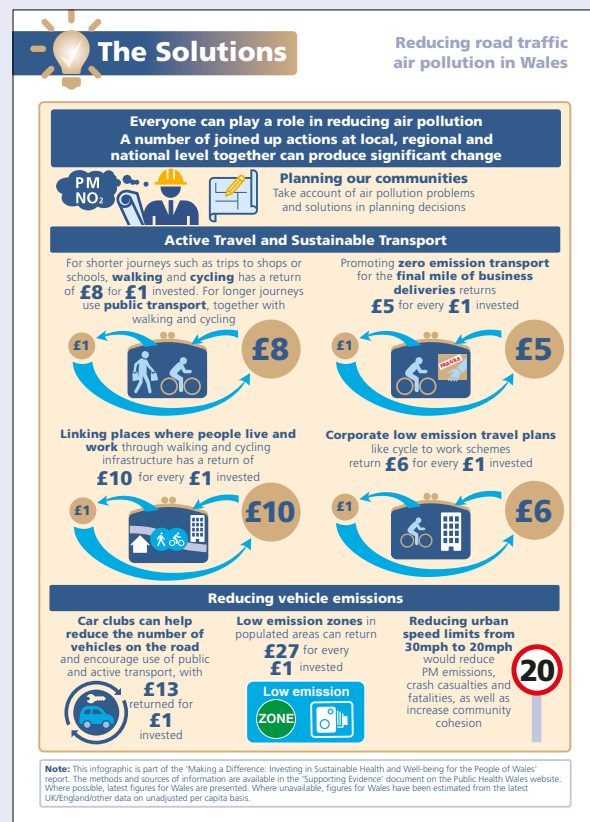
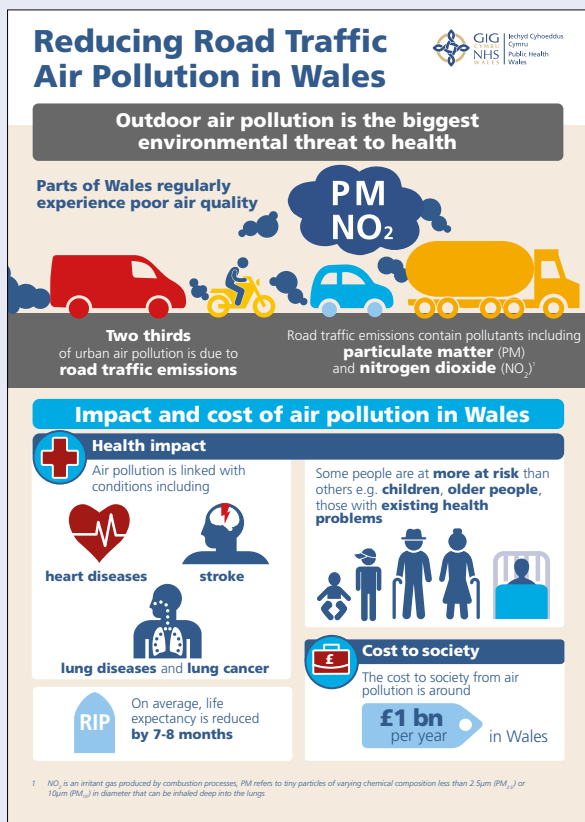
# Reducing health risks associated with road traffic air pollution in Wales

In 2018, Public Health Wales extended its Making a Difference programme by issuing a new chapter on the effectiveness of interventions to reduce air pollution from road transport sources. Like other Making a Difference chapters, the report draws on research evidence and expert opinion to guide, support and facilitate collaborative action to protect health and reduce inequalities.

The chapter acknowledges that outdoor air pollution is the most significant environmental threat to health and that, from a road traffic perspective, the pollutants of greatest public health concern are particulate matter (PM) and nitrogen dioxide (NO<sub>2</sub>). It concludes that the solution that is likely to have the greatest positive impact on traffic-related air pollution problems is a package of emission reduction interventions that take a multi-sectoral approach with action at local, national, and international levels.

Solutions to reduce our reliance on motorised road transport, and promote the use of cleaner vehicles and transport can be sub-divided into adaptation and mitigation measures. Adaptation actions might include reducing pollution through policy drivers for change in practice, whereas mitigation may be achieved through informed planning processes and decisions, improved health communications, and environmental and health behaviour change. Some interventions are proven to be cost-effective; the return on investment is potentially significant.

In summary, the report suggests that adopting a collaborative, integrated and sustainable approach to implementing a 'package' of measures tailored to local need and circumstances will have the greatest impact on improving the health and well being of current and future generations. Further information can be found at [www.wales.nhs.uk/sitesplus/documents/888/PHW%20Air%20pollution%20report%20%28final%20English%29.pdf](http://www.wales.nhs.uk/sitesplus/documents/888/PHW%20Air%20pollution%20report%20%28final%20English%29.pdf)





# More information

## The Air Quality in Wales website

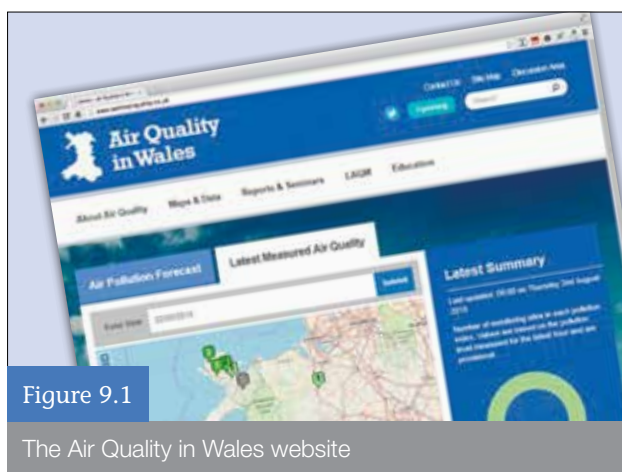


Figure 9.1

The Air Quality in Wales website

The Air Quality in Wales website (<https://airquality.gov.wales/>) is available in English and Welsh. It provides information on all aspects of air pollution in Wales. The site is one of a family of air quality websites produced by Ricardo Energy & Environment, for the UK, Northern Ireland, Scotland and England.

The website has been designed to be a user-friendly and interactive resource containing comprehensive information on all aspects of air pollution:

- A colour-coded OpenStreetMap™ showing the overall pollution situation at sites across Wales.
- Latest data from all automatic monitoring sites in Wales, accessible from this map.
- 5-day air pollution forecasts for the whole of Wales.
- Information on the latest developments and publications.
- Detailed information on automatic monitoring sites.
- A wide range of background information on air pollution sources, health impacts, monitoring techniques, standards and policy issues.
- Access to air quality data and statistics – for automatic and sampler sites – going back to 1986.
- Provision to submit data via innovative web forms to the archive.

- Headline air quality indicators, trends and modelled future scenarios.
- Links to national and global information resources on air quality.
- A password-protected area for members of the Welsh Air Quality Forum (WAQF).
- Overview of the data ratification and verification procedures.

To access data used in this Annual Report, follow these simple steps:

- From the home page, select 'Maps & Data' from the main menu.
- Click on 'Measurements'.
- Click 'Download/Submit Data'.
- Click 'Download Data'.
- Select 'Parameter Group' (type of data required).
- Select 'Pollutant Species'.
- Select 'Local Authority Region'.
- Select 'Statistic Type' (for example, daily mean).
- Select 'Date Range'.
- Select 'Specific Monitoring Site(s)'.

Then, provide your email address and the data will be emailed to you in a few seconds.

## Current and forecast air quality (national and local)

In addition to the Air Quality in Wales website, current and forecast air quality is rapidly available in a user-friendly form from:

- The Air Pollution Information Service on freephone 0800 556677.
- The UK Air Information Resource (<http://uk-air.defra.gov.uk/>).

## Health effects of air pollution

Information on the health effects of air pollution and the UK pollution banding system can be found on the Department for Environment, Food and Rural Affairs (Defra) website (<https://airquality.gov.wales/about-air-quality/daily-air-quality-index>).

## General information on air quality

- The Welsh Government Environment and Countryside links (<https://wales.gov.uk/topics/environmentcountryside/?lang=en>).
- The UK Air Information Resource (<http://uk-air.defra.gov.uk>).
- The National Atmospheric Emissions Inventory (<http://naei.beis.gov.uk/>).
- The Northern Ireland Air Quality website ([www.airqualityni.co.uk](http://www.airqualityni.co.uk)).
- The Scottish Air Quality website ([www.scottishairquality.co.uk](http://www.scottishairquality.co.uk)).
- The Air Quality England website at ([www.airqualityengland.co.uk](http://www.airqualityengland.co.uk)).
- The Pollutant Release and Transfer Register ([www.gov.uk/guidance/uk-pollutant-release-and-transfer-register-prtr-data-sets](http://www.gov.uk/guidance/uk-pollutant-release-and-transfer-register-prtr-data-sets)).
- The Environment Agency ([www.gov.uk/government/organisations/environment-agency](http://www.gov.uk/government/organisations/environment-agency)).
- Natural Resources Wales ([www.naturalresourceswales.gov.uk](http://www.naturalresourceswales.gov.uk)).

## Local air quality issues

For further information on air quality issues in your area, please contact the environmental health department at your local district council office. Further information on local air quality management may also be found on:

- The Defra website at (<http://aqma.defra.gov.uk>).
- The local authority support site (<http://laqm.defra.gov.uk>).

