

## P-05-839 Air quality and a Clean Air Act for Wales

Y Pwyllgor Deisebau | 13 Tachwedd 2018  
Petitions Committee | 13 November 2018

### Research Briefing:

**Petition number:** P-05-839

**Petition title:** Adopt WHO guidelines for air pollution into Welsh law and introduce a new Clean Air Act for Wales.

**Text of petition:** We call on the National Assembly for Wales to urge the Welsh Government to adopt WHO guidelines for air pollution into Welsh law, and to introduce a new Clean Air Act for Wales.

Current legal air quality limits for Wales do not protect health. The EU limits which are observed by UK and Welsh Governments are the same as the World Health Organisation's recommended upper guideline limits for nitrogen dioxide (NO<sub>2</sub>), but are less stringent than the WHO's threshold for other health-harmful pollutants such as fine particulate matter (PM<sub>2.5</sub>).

British Heart Foundation Cymru is calling on the Welsh Government to adopt WHO guidelines into Welsh law, introducing a new Clean Air Act for Wales which will tackle the major sources of air pollution and ensure that everyone from government and local government, to business and the general public are working together to tackle this urgent health crisis.

BHF funded research first proved that short and long-term exposure to poor air quality can aggravate and cause serious cardiovascular problems. Our research established a clear link between cardiovascular disease and exposure to PM<sub>2.5</sub> and ultrafine particles; and that inhalation of fine particles can increase the risk of a heart attack or stroke in vulnerable groups within 24 hours.

Public Health Wales estimated that, in 2017, air pollution contributed to 2,000 early deaths in Wales. Whilst the Welsh Government has been ordered to tackle illegal levels of nitrogen dioxide, there is still no plan to tackle particulate matter and very little detail on how the Government will improve monitoring of pollutants across Wales.

A new Clean Air Act for Wales will:

- Ensure that WHO guidelines on air pollution are observed by Welsh law;
- Introduce charging Clean Air Zones in areas which are in breach or close to the limits for nitrogen dioxide and particulate matter and ring-fence the funds for further improvements to air quality;
- Ensure that infrastructure and technology is in place to facilitate increased uptake of Ultra Low Emissions Vehicles and public transport;
- Invest in improved monitoring of pollution across Wales, and ensure that information on the risks to health is available to vulnerable groups;
- Increase public awareness of the impact of domestic woodburning and the steps which can be taken to minimise this.

## Background

Wales has some of the worst air quality in the UK. Cardiff and Port Talbot both have [higher particulate matter levels](#) than Birmingham or Manchester and a [road in Caerphilly](#) is the most polluted outside of London. It has been suggested that air pollution contributes to around [2,000 deaths per year in Wales](#). It has been described by Public Health Wales as an [urgent public health crisis](#), second only to smoking. Some areas in Wales have breached EU regulations for several years, culminating in the Welsh Government being [taken to court](#) for its lack of action.

Unlike Scotland, which has its own [Air Quality Strategy](#) and lower pollution limits, air quality strategy in Wales has mostly been determined by EU regulations, and delivered by Local Authorities.

The primary air pollutants that impact health are nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>) and other small, particulate matter (PM). There are two types of PM: PM<sub>10</sub> is matter up to 10 micrometre (µm) in size and PM<sub>2.5</sub> for matter up to 2.5 µm. These pollutants come from a range of sources, but the vast majority arise from the burning of fuels. This makes road transport the primary mobile source of emissions, and industrial combustion or production processes the main static sources.

NO<sub>2</sub> and PM pollution levels are worse in areas close to these sources. PM typically reaches high levels near industrial sites, and NO<sub>2</sub> is measured at dangerous levels near busy and congested roads. Most NO<sub>2</sub> is emitted directly, making it a primary pollutant. PM can be emitted directly as a primary pollutant, but also forms from the reaction of other pollutants in the atmosphere (secondary pollutant).

In comparison, ozone can travel long distances and reach high concentrations in areas far from sources. As a result, dealing with ozone levels requires a higher level approach, typically national or even international, compared to the Local Authority driven approach for reducing local spikes in NO<sub>2</sub> and PM. This is compounded by the fact that ozone is a secondary pollutant, making sources more difficult to identify.

Air quality management in Wales mainly takes place at a Local Authority level. Local Authorities are required to produce progress reports annually, and were previously required to carry out an Updating and Screening Assessment every three years. Local Authorities are required to identify areas where air pollution limits exceedance is likely and implement an [Air Quality Management Area \(AQMA\)](#). This system was changed with [updated guidance](#) on Local Air Quality Management in 2017.

All 22 Local Authorities in Wales also participate in the [Welsh Air Quality Forum \(WAQF\)](#). It comprises representatives from Local Authorities, the Welsh Government, Public Health Wales, Natural Resources Wales and several academic institutions. WAQF members direct the operation of the Welsh Air Quality Website and Database, the collection, quality assurance and 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 statutory requirements are met, and air quality in Wales is reported in an accurate, transparent and timely manner.

## Legislation and limits

There is extensive legislation regarding air quality in Wales. This includes a number of EU Directives, UK Acts and Welsh regulations which provide the framework for the [UK Air Quality Strategy](#) and Local Air Quality Management in Wales:

- [Directive 2008/50/EC](#): on ambient air quality and cleaner air for Europe (CAFE): replaces five previous acts including NO<sub>2</sub> and PM limits;
- [Directive 2004/107/EC](#): (the 4<sup>th</sup> Daughter Directive): creates targets for the concentration of arsenic, cadmium, nickel and benzo(a)pyrene in ambient air. The aim is to avoid, prevent or reduce harmful effects of these substances on human health and the environment;
- [The Environment Act 1995](#): establishes the framework for Air Quality Management Areas;
- [The Clean Air Act 1993](#): aims to protect public health from smoke emissions;
- [Air Quality Standards \(Wales\) Regulations 2010](#): brings into law in Wales the limits set out in the EU Directives on air quality (Table 71 below); and
- [The Air Quality \(Wales\) Regulations 2000](#), as amended by the [Air Quality \(Wales\) \(Amendment\) Regulations 2002](#): brings into law in Wales earlier EU directives.

The table below sets out EU (and by transposition, Welsh) and [World Health Organisation \(WHO\)](#) air quality limit values.

*Table 1: Air pollution limits from EU Directives and WHO Guidelines*

Pollutant	EU Limit	WHO Limit	Averaging Period	Permitted number of exceedances (EU)
<b>NO<sub>2</sub></b>	200 µg / m <sup>-3</sup>	200 µg / m <sup>-3</sup>	1 hour	18
	40 µg / m <sup>-3</sup>	40 µg / m <sup>-3</sup>	Annual	-
<b>PM<sub>10</sub></b>	50 µg / m <sup>-3</sup>	50 µg / m <sup>-3</sup>	24-hours	35
	40 µg / m <sup>-3</sup>	20 µg / m <sup>-3</sup>	Annual	-
<b>PM<sub>2.5</sub></b>	25 µg / m <sup>-3</sup>	10 µg / m <sup>-3</sup>	Annual	-
	(20 µg / m <sup>-3</sup> by 2020)	25 µg / m <sup>-3</sup>	24-hours	-
<b>Ozone</b>	120 µg / m <sup>-3</sup> (target)	100 µg / m <sup>-3</sup>	8 hour running or hourly	25 days averaged over three years

The [Well-being of Future Generations \(Wales\) Act 2015](#) lays out goals including those for a healthier and more-equal Wales. Levels of NO<sub>2</sub> pollution in the air was included as one of the [national indicators](#) accompanying the Act. The levels are taken as a national average, weighted by population.

## Welsh Government action

On 24 April, the Minister for Environment, Hannah Blythyn, made a [Plenary statement on air quality](#). She said that delivering clean air in Wales is one of her key priorities. She outlined a number of actions the Welsh Government is taking to improve air quality. The Minister said she will introduce the **Clean Air Wales Programme** to consider evidence, develop and implement actions required across Welsh Government departments and sectors to ensure clean air. The immediate aim of the programme will be to achieve compliance with existing air quality obligations. She said its wider purpose goes beyond legal compliance, and that it will aim to reduce the burden of poor air quality on human health and the environment. The Minister also said that **'If the programme identifies gaps in the necessary levers to make required air quality improvements, I will seek to develop new legislation to address this'**.

The **Clean Air Plan** will be a core component of the Clean Air Wales Programme. The Minister said the plan will be published for consultation by the end of 2018. She said it will:

- Set out in greater detail how Welsh Government will action improvements in air quality that will make a significant contribution to the well-being goals;

- Identify cross-Government and sectoral actions required to achieve clean air;
- Set out the communication, engagement and education measures needed to encourage behavioural change; and
- Include actions for strengthening the regulation of emissions from different sectors of industry.

Additionally, also on 24 April, the Minister introduced a [package of measures aiming to help improve air quality in Wales](#).

The Welsh Government has also recently [consulted on a Clean Air Zone Framework for Wales](#). The proposed Framework provides guidance to local authorities who are considering options to address local air quality issues. The Framework describes what a Clean Air Zone (CAZ) is, under what circumstances it may be applied, and the key considerations for Local Authorities that wish to establish one. The consultation asks a range of questions about the suitability of a CAZ approach in Wales, suggested acceptable emissions levels, and a potential charging structure.

## National Assembly for Wales action

In January 2018 the Climate Change, Environment and Rural Affairs (CCERA) Committee undertook a [short inquiry into Air Quality in Wales](#). The Committee heard evidence from the Chair of Wales Air Quality Forum, Natural Resources Wales, Ricardo Energy and Environment and the Joint Nature Conservation Committee about the issues affecting air quality in Wales. The Committee also heard evidence from the British Lung Foundation and Public Health Wales about the effects of air quality on public health in Wales. In February 2018, the Committee received a [private presentation on air quality](#) from the British Lung Foundation, Friends of the Earth Cymru and Professor Paul Lewis from Swansea University.

Every effort is made to ensure that the information contained in this briefing is correct at the time of publication. Readers should be aware that these briefings are not necessarily updated or otherwise amended to reflect subsequent changes.