

## AQS 08 Chartered Institute of Environmental Health (CIEH)

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Senedd Cymru | Welsh Parliament

**Pwyllgor Newid Hinsawdd, yr Amgylchedd a Seilwaith | Climate Change, Environment, and Infrastructure Committee**

**Bil yr Amgylchedd (Ansawdd Aer a Seinweddau) (Cymru) | The Environment (Air Quality and Soundscapes) (Wales) Bill**

Ymateb gan Sefydliad Siartredig Iechyd yr Amgylchedd | Evidence from Chartered Institute of Environmental Health (CIEH)

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# Environment (Air Quality and Soundscapes) (Wales) Bill Inquiry

CIEH submission to inquiry to Environment, Climate Change, and Infrastructure Senedd Committee

25<sup>th</sup> April 2023

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## About the Chartered Institute of Environmental Health (CIEH)


CIEH is the professional voice for environmental health representing over 7,000 members working in the public, private and third sectors, in 52 countries around the world. It ensures the highest standards of professional competence in its members, in the belief that through environmental health action people's health can be improved.

Environmental health has an important and unique contribution to make to improving public health and reducing health inequalities. CIEH campaigns to ensure that government policy addresses the needs of communities and business in achieving and maintaining improvements to health and health protection.

For more information visit [www.cieh.org](http://www.cieh.org) and follow CIEH on Twitter @The\_CIEH.

Any enquiries about this response should be directed to:

Ciaran Donaghy  
Senior Policy and Public Affairs Executive  
Chartered Institute of Environmental Health



## Key points:

- CIEH are concerned that the Bill does not expressly commit to adhering to World Health Organisation's Air Quality Guidelines.
- It is essential that the Welsh Senedd take account of all the available evidence and set ambitious PM<sub>2.5</sub> targets, while adopting holistic, systems-wide regulations to ensure such targets are met.
- CIEH recommend that the Welsh Government urgently introduce ambitious air quality targets by committing to reducing the concentration of PM<sub>2.5</sub> of 10µg/m<sup>3</sup> by 2030.
- CIEH are disappointed that the Bill does not introduce greater powers to regulate domestic wood burning.
- CIEH favour the introduction of regulations on domestic wood burning in urban areas where there are on-grid heating alternatives.
- Agricultural ammonia has the potential to mix with industrial and transport emissions, which further increases the levels of PM<sub>2.5</sub> in the air.
- CIEH are disappointed to see little to no reference to the need to introduce regulation on agricultural sources of emissions as part of a holistic strategy to tackle air pollution.
- CIEH feel the Welsh Senedd should introduce a Nitrogen Reduction Strategy for Wales to ensure levels of nitrogen pollution are significantly reduced.
- CIEH welcome the decision by the Welsh Senedd to put a national soundscapes strategy on a statutory footing.
- CIEH also feel that including soundscapes on the face of the Bill will do much to advance the discourse with respect to the role that soundscapes has to play in air pollution, air quality, and public health.

## Introduction:

The Chartered Institute of Environmental Health (CIEH) is the professional voice for environmental health representing over 7,000 members working in the public, private and third sectors, in 52 countries around the world. Our members are often at the front line with respect to delivering regulatory services, particularly within local authorities. Environmental Health Practitioners (EHPs) work in such varied specialisms including monitoring and enforcing clean air regulations, as well as providing expert acoustics and soundscapes guidance therefore CIEH and our members are uniquely positioned to provide expert input into the recently tabled Environment (Air Quality and Soundscapes) (Wales) Bill, hereafter referred to as ‘the Bill’.

CIEH welcome the introduction of the Bill and wish to constructively engage with the Welsh Government in providing feedback. We want to ensure the Bill is both robust and fit-for-purpose with regards to improving air quality and facilitating good acoustic design that supports better public health outcomes.

CIEH hope that our evidence hereafter will be received constructively, and we welcome any and all opportunities to engage further with the Welsh Government in the process of delivering upon the intentions laid out within the Bill.

## Robust and ambitious air quality targets:

Part 1, Chapter 1 (ss.1-7) of the Bill makes provision for a specific framework for setting, reviewing, and reporting on national air quality targets for Wales. However, what the Bill does not do is to expressly commit to adhering to World Health Organisation’s Air Quality Guidelines<sup>1</sup>, choosing to ambiguously state in the explanatory memorandum to state that “Pursuant to subsection (1), before making regulations under sections 1 or 2 Welsh Ministers must: (a) seek advice from persons they consider to be independent and have relevant expertise; and (b) have regard to scientific knowledge on air pollution. This could include, for example, international evidence on the health and environmental effects of air pollution, including the World Health Organisation guidelines for air quality, and the economic, technical, and social analyses, and the feasibility of meeting targets.”

Good air quality is a basic requirement and determinant of human health. As of 2018, approximately 4.5 million children in the UK (one in three) are growing up in a town or city with unsafe levels of particulate pollution.<sup>2</sup> A legal requirement, laid out in the Environment Bill 2021, mandates the government to bring forward at least two new air quality targets in secondary legislation by 31<sup>st</sup> October 2022. While the UK Government missed this target, they did set out various environmental targets in their 25 Year Environmental Improvement Plan. Within which, the UK government introduced air quality targets for a maximum concentration of PM<sub>2.5</sub> of 10µg/m<sup>3</sup> to be met across England by 2040 and a 35% reduction in population exposure by 2040 (compared to a base year of 2018). These targets fall short of the World Health Organisation’s Air Quality Guidelines and appear

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<sup>1</sup> [WHO global air quality guidelines: particulate matter \(PM2.5 and PM10\), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide](#)

<sup>2</sup> [Unicef UK Research Briefing - The toxic school run - September 2018.docx \(unicef.org.uk\)](#)

to ignore recent evidence that suggests such targets could be met in the UK by 2030.<sup>3</sup> It is essential that the Welsh Senedd take account of all the available evidence and set ambitious PM<sub>2.5</sub> targets, while adopting holistic, systems-wide regulations to ensure such targets are met.

**Therefore, CIEH recommend that the Welsh Government urgently introduce ambitious air quality targets by committing to reducing the concentration of PM<sub>2.5</sub> of 10µg/m<sup>3</sup> by 2030, in order to protect public health.**

According to UK government evidence, domestic wood burners and open fires are the second biggest source of small particle air pollution in the UK.<sup>4</sup> Despite improvements in their design, academic research has found that even homes with “eco” wood burners are three times more polluted than those without.<sup>5</sup> In fact, wood burners and open fires produce more harmful PM<sub>2.5</sub> than road transport in the UK. The government’s own data has suggested that emissions of PM<sub>2.5</sub> from domestic heating has increased by 125% in 10-years, implying a significant increase in the use of domestic wood burners.<sup>6</sup>

Therefore, it is very disappointing to see that the Bill does not introduce greater powers to regulate domestic wood burning. It is even more disappointing that it appears that the Welsh Government is echoing the sentiments of the Stove Industry Alliance – a lobby group with a vested interest in preventing regulation in this space - in their explanatory memorandum. In which the Welsh Government is quoted as saying “We anticipate an increase in domestic wood burning as a result of the current energy crisis. The Stove Industry Alliance has reported a UK-wide 40% increase on sales of wood burning stoves in the second quarter of 2022 (April to June) compared to the same period last year. Strengthening smoke control legislation and supporting this with advice to ensure new and current users are burning in the most efficient way will help to reduce the impact of this increase.”

The average cost to install a wood burner is £2,000.<sup>7</sup> This fact dispels the Stove Industry Alliance’s contention that an increase in sales of wood burners is a direct response to the energy crisis. On the contrary, CIEH contend that domestic wood burners are middle-class status symbols that are harmful to both indoor and outdoor air quality. This includes Defra exempt, ‘ECO’-stoves, as illustrated by the Chief Medical Officer’s 2022 annual report which focused on air quality.<sup>8</sup>

CIEH are cognisant of the Welsh Government’s desire not to introduce policy that may have the unintended consequence of negatively impacting vulnerable households who rely on domestic wood burning stoves as their single source of heat. While greater research must be done on the specifics, the true number of households likely to be impacted in such a way are likely to be rather low in number. That is why CIEH are in favour of the introduction of regulations on domestic wood burning in urban areas where there are on-grid heating alternatives.

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<sup>3</sup> [The Pathway to Healthy Air in the UK - Clean Air Fund](#)

<sup>4</sup> [Emissions of air pollutants in the UK - Summary - GOV.UK \(www.gov.uk\)](#)

<sup>5</sup> [Atmosphere | Free Full-Text | Indoor Air Pollution from Residential Stoves: Examining the Flooding of Particulate Matter into Homes during Real-World Use \(mdpi.com\)](#)

<sup>6</sup> [Emissions of air pollutants in the UK - Summary - GOV.UK \(www.gov.uk\)](#)

<sup>7</sup> [How much does a log burner cost to install? \(Checkatrade.com\)](#)

<sup>8</sup> [Chief Medical Officer’s Annual Report 2022 - Air Pollution \(www.gov.uk\)](#)

**CIEH feel that the Welsh Government should introduce regulations on domestic solid fuel burning in urban areas with on-grid heating alternatives.**

## Impact of agricultural sources of air pollution:

While priority is often afforded to more widely understood forms of air pollution, such as from transport and domestic heating, reducing nitrogen pollution, such as ammonia and nitrous oxide, will play a big part in improving air quality and public health.

According to data from the government, emissions from agriculture accounted for 87% of total ammonia emissions in 2021 and this was the main contributor to the increase in emissions between 2013 and 2017. Furthermore, it found that the spreading of organic and inorganic fertilisers is a significant source of ammonia emissions from agriculture and is showing an upward trend (emissions from this source increased from 109 thousand tonnes in 2011 to 117 thousand tonnes in 2021).<sup>9</sup>

A recent study also found that agricultural emissions are responsible for more than a quarter of particle pollution in UK cities.<sup>10</sup> Although low emission and clean air zones can be effective for local pollutants such as nitrogen dioxide, particle pollution lingers in our air for a week or more. This allows particles to travel large distances from where they are produced. The study found that particle pollution from the rest of Europe also affected the UK, especially the south and east of England, but less so than the impact from UK farming.

UK agriculture was responsible for 38% of particle pollution in Leicester, 32% in Birmingham and 25% in London in 2019, according to the study. In each case, the contribution from rural agriculture was greater than all the sources within the cities themselves.

Nitrogen pollution is not only damaging to biodiversity, but also to public health. Agricultural ammonia has the potential to mix with industrial and transport emissions, which further increases the levels of PM<sub>2.5</sub> in the air.<sup>11</sup>

Following legally mandated emission reporting owing to the National Emissions Ceilings Regulations, the UK is projected to miss its 2030 emission reduction commitments for Nitrous Oxide in 2030 and for ammonia in 2030 and 2040 without further action.<sup>12</sup>

Suffice to say, overwhelming evidence exists that agricultural activity plays a significant role with respect to the quality of the air we breathe in myriad ways. Therefore, it is disappointing that there is little to no reference made to this fact and the need to introduce regulations within this sector as part of a holistic strategy to tackle air pollution. It is unsurprising that much greater focus is placed on the role domestic heating and transport plays in this area of policymaking. However, CIEH feel that by failing to more explicitly address the role of agriculture in air pollution, the Welsh

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<sup>9</sup> [Emissions of air pollutants in the UK - Summary - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/emissions-of-air-pollutants-in-the-uk)

<sup>10</sup> [Diagnosing domestic and transboundary sources of fine particulate matter \(PM2.5\) in UK cities using GEOS-Chem - ScienceDirect](https://www.sciencedirect.com/science/article/pii/S1548964720300000)

<sup>11</sup> [Nitrogen pollution \(soilassociation.org\)](https://www.soilassociation.org/~/media/2019/04/Nitrogen-pollution-report-2019.pdf)

<sup>12</sup> [UK IIR 2023 Submission \(defra.gov.uk\)](https://www.defra.gov.uk/air-quality/uk-ir-2023-submission)

Government are passing up a golden opportunity to achieve positive outcomes in tackling air pollution and promoting better public health.

**The Welsh Senedd should introduce a Nitrogen Reduction Strategy for Wales to ensure levels of nitrogen pollution are significantly reduced.**

## Soundscapes Strategy

Overall, the CIEH wish to state that the commitment to produce and publish a Soundscapes Strategy is to be very much welcomed. Furthermore, CIEH also feel that by including the issue of Soundscapes on the face of the Environment (Air Quality and Soundscapes) (Wales) Bill will do much to advance the discourse with respect to the role that soundscapes has to play in air pollution, air quality, and public health. This is an encouraging step from the Welsh government as it shows not only an interest but a desire and commitment to take tangible action to both improve the environment and public health.

CIEH welcome the commitment within the Bill that states that local authorities can use existing soundscape strategies, as considerable time and resource would have been spent on producing them to date.

Finally, CIEH believe that it is important we are considered a key stakeholder in the process of preparing and reviewing the National Soundscapes Strategy. Since this is a public health matter, that will require the expertise, enforcement and monitoring of local authority environmental health officers, CIEH members will be intimately involved in reviewing and updating local authority strategic noise maps, which in turn will support reviewal and drafting strategies for the National Soundscape Strategy. As such, under s.22(6)(b), CIEH wish to be acknowledged on the face of the Bill as a key stakeholder to be consulted by the Welsh government when preparing and reviewing the soundscape strategy.