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2 May 2019

Janet Finch-Saunders – AM/AC
National Assembly for Wales
Cardiff Bay
Cardiff
CF99 1NA

Dear Janet,

Petition P-05-825 Protect children's lungs from harmful pollution whilst at school

Thank you for your letter of 18 April 2019 seeking Public Health Wales advice in relation to this petition. This is an important issue and we are committed to working with others to reduce air pollution, risks and inequalities.

To provide context, outdoor air pollution is the largest environmental risk to public health. Pollutants such as particulate matter (PM), nitrogen dioxide (NO₂) and ozone (O₃) can adversely affect health. Sources of air pollution include road vehicles and other forms of transport, industry, agriculture, domestic sources (such as heating systems and wood-burners), and naturally occurring sources (such as sand and sea salt). In the UK, man-made air pollution is said to account for the equivalent of around [28,000 to 36,000](#) deaths each year; in Wales, the equivalent of around [1,600](#) early annual deaths are attributed to exposure to fine particulate air pollution. It is important to interpret these estimates with caution since figures do not refer to 'actual' numbers of deaths but reflect the sum of the small contributions air pollution exposure make to reduce life-expectancy across all individuals in the population.

The health effects of air pollution are well-documented. Long-term exposure over several years to pollutants such as fine particulate matter, for example, reduces life expectancy, mainly due to cardiovascular and respiratory diseases but also from increased risks from lung cancer. These impacts result from invisible dust particles

being small enough to be breathed deep into lungs, causing inflammation of the lining of lungs and placing pressure on body systems and organs. Recent research suggests that other health consequences may be linked too, including low birth weight and dementia. Shorter-term exposure over hours or days is associated with eye, nose and throat irritations, as well as higher risks from reduced lung function and worsening of asthma. Of relevance to this petition is that different people and population groups will be affected in different ways by air pollution exposure; vulnerable groups include children and young people, older people, and those with chronic health conditions. [Research](#) carried out in Wales shows that people living in the most deprived parts of Wales may also be more susceptible to air pollution than those living elsewhere.

In Wales, under the Environment Act 1995, local authorities have responsibility to deliver the [Local Air Quality Management](#) (LAQM) regime. This requires regular review of local air quality, by assessing data collected through established monitoring networks as well as through modelling techniques against health-based Air Quality Objectives. In locations where these objectives are actually or likely breached, the local authority must declare a formal Air Quality Management Area. An accompanying action plan should then set out measures which partners implement together to address local identified problems. This process is set out in Wales LAQM guidance which ensures that the sustainable ways of working required by the Wellbeing of Future Generations Act are applied fully to air quality management activities. Importantly, in the context of this petition, the guidance specifies that local authorities must give special consideration to risks posed to children, at home and school/nursery settings as well as travel in-between. Schools and linked active travel routes are designated as sensitive receptor location in the guidance too.

Public Health Wales appreciates that it is not practicable to monitor and measure air pollution concentrations everywhere and that local authorities must adopt a pragmatic needs-based approach to this [with outputs from sophisticated air quality modelling techniques used to fill in gaps in coverage and/or intelligence]. However, given that monitoring networks are regularly reviewed, Public Health Wales hopes that the focus placed on children vulnerability and schools in the Wales LAQM guidance can facilitate the collection of more information on local air quality in future. Such new data would be extremely useful in informing our ongoing work to understand air quality exposure potential amongst children and also help target mitigation action accordingly. In the interim, we are aware of and continue to support the good work ongoing across local authorities to raise awareness of air pollution amongst school pupils and staff. The Welsh Government has developed educational resources (through the "Young Dragons" initiative) for use in both primary and secondary school settings, with linked opportunities for pupils to undertake their own indicative air pollution measurements in and around school buildings.

Finally, we are working with Welsh Government to develop a Clean Air Plan for Wales. We understand that this will be drafted for consultation later this year. The plan will likely describe key pollutants and health risks, along with short, medium and long term actions that can help improve air quality across a range of different sectors. The plan will explore what more can be done to improve air quality around sensitive receptor locations, including schools and nurseries and also NHS sites. We will

continue to support this work to increase opportunities to integrate air quality management with public health policy and practice.

We trust this information will be useful to members of the Petitions Committee. Should you require any further information, please do not hesitate to contact me.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Tracey Cooper', written in a cursive style.

Dr Tracey Cooper

Chief Executive, Public Health Wales