Written evidence submitted by CO Research Trust

Outdoor and Indoor Air Quality Targets Consultation

Dear Sir / Madam

As the CEO of the CO Research Trust, I am responding to the Environment Audit Committee's "*Outdoor and indoor air quality targets*" and providing our views on the adequacy of current measures to promote indoor and outdoor air quality.

The CO Research Trust is a registered charity, established in 2005. The objective of the charity is to reduce the incidents of death and serious injury from carbon monoxide (CO) exposure. We do this by funding evidence-based research relating to CO exposure, the outcomes of which we make freely available to policymakers, campaigning organisations, and those seeking to raise awareness amongst the public.

Our interests and expertise are in the prevention of CO exposure through the funding of research and data collection to build the evidence base to inform policy makers, industry, healthcare professionals and other key stakeholders. You can read more find out more about the research we support on our website:- www.coresearchtrust.org

CO is a colourless, tasteless, odourless, non-irritating gas produced as a by-product during incomplete combustion of fuels due to there being insufficient oxygen present. Complete combustion occurs when sufficient oxygen is present and leads to the production of carbon dioxide.

Given our interests and expertise, we have restricted our comments to carbon monoxide, in response to the following key question:-

What are the long-term health impacts of indoor air pollution?

It is accepted that the inhalation of carbon monoxide is damaging to health, with the effect upon cardiovascular (1-3), neurological (4-7) and mitochondrial function (8, 9) being well-documented.

Furthermore, pregnant women (10-11), children (12) and the unborn (13, 14) are especially vulnerable to its effects.

The threshold at which elevated carboxyhaemoglobin causes drowsiness has been placed as low as 3.4 per cent (15) with recent studies showing that lower levels have an effect on brain function (16). 3.4 per cent correlates to approximately 20ppm ambient CO (17).

Given this evidence which suggests that even low-level CO exposure may cause significant health and educational outcomes, we believe that a significant public health intervention is required.

This would fulfil Marmot Policy Objective 6: strengthening the role and impact of ill-health prevention (18), cited in the UK Government policy document, 'Health disparities and health inequalities: applying All Our Health" (19). This also concurs with the 2019 NHS Long Term Plan (20).

Thank you for the opportunity to respond to this consultation, if you require any further information, please do not hesitate to contact me by email.

With kind regards

Adrian McConnell
Chief Executive
CO Research Trust

May 2023

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