

Fine particulate matter air quality targets

New Proposals for Consultation Questions – [information redacted]

Question 1a: To what extent do you agree with the level of ambition proposed for the Annual Mean Concentration Target (AMCT)?

☒ Neither agree nor disagree

Response: HCC's Sustainability and Policy Development Lead, broadly supports the ambition to improve PM2.5 concentrations, **subject to proportionality, robust source apportionment and fair cross-sector implementation.**

Question 1b: Please explain your answer.

The HCC 'Sustainability and Policy Development Lead' recognises the public health evidence supporting reductions in long-term exposure to fine particulate matter. However, achieving the Annual Mean Concentration Target (AMCT) requires careful consideration of the sources and chemistry of PM2.5.

PM2.5 consists of both:

- Primary particulates (directly emitted from combustion sources such as transport, domestic burning and industry); and
- Secondary particulates, formed in the atmosphere through chemical reactions between precursor gases.

Agriculture is primarily associated with emissions of ammonia (NH₃), which can react with nitrogen oxides (NO_x) and sulphur dioxide (SO₂) to form secondary inorganic aerosols such as ammonium nitrate and ammonium sulphate. These compounds contribute to secondary PM2.5.

However:

- Secondary particulate formation depends on the presence of co-pollutants (particularly NO_x and SO₂), which are largely associated with transport, industry and energy generation.
- Welsh Beef and Sheep production predominantly occurs in rural and upland areas with lower concentrations of combustion-related precursor gases.
- PM2.5 concentrations in urban areas are often influenced by a combination of local emissions and long-range or transboundary transport.

HCC's Sustainability and Policy Development Lead, therefore supports ambitious targets in principle, but stresses that delivery mechanisms must:

- Be based on robust Wales-specific source apportionment data;
- Recognise the multi-sectoral nature of secondary PM2.5 formation;
- Avoid placing disproportionate mitigation expectations on extensive beef and sheep livestock systems.

A cross-sector, multi-pollutant strategy will be essential if AMCT reductions are to be achieved effectively and fairly.

Question 2a: To what extent do you agree with the level of ambition proposed for the Population Exposure Reduction Target (PERT)?

☒ Neither agree nor disagree

Response: The Sustainability and Policy Development Lead at HCC, supports the principle of reducing population exposure to PM2.5, **provided that** measures are targeted where exposure is highest and where interventions will be most effective.

Question 2b: Please explain your answer.

The Population Exposure Reduction Target (PERT) appropriately recognises that health outcomes are closely linked to exposure in densely populated areas.

HCC's Sustainability and Policy Development Lead emphasises that:

- Welsh beef and sheep farming is predominantly rural and extensive in nature;
- Population exposure to PM2.5 is typically highest in urban and peri-urban environments;
- The principal drivers of urban exposure are often transport emissions, domestic solid fuel combustion, and industrial sources.

While ammonia from agriculture can contribute to secondary PM2.5 formation, reductions in population exposure are unlikely to be achieved through agricultural measures alone. Effective delivery of PERT will require coordinated reductions in:

- NO_x from road transport;
- Primary particulates from domestic burning;
- Industrial and energy-related emissions.

HCC's Sustainability and Policy Development Lead would caution against policy approaches that seek to achieve urban population exposure reductions through measures that disproportionately affect rural food production systems, particularly where marginal gains in exposure reduction may be limited.

Question 3a: To what extent do you agree with the proposed arrangements for assessing PM2.5 levels and achievement of the targets?

☒ Neither agree nor disagree

Response: HCC's Sustainability and Policy Development Lead supports robust monitoring and transparent reporting arrangements, **subject to** clarity on methodology, source attribution and proportionality.

Question 3b: Please explain your answer.

Given the complexity of PM2.5 formation, accurate assessment requires:

- Clear differentiation between primary and secondary particulates;
- Robust atmospheric modelling and source apportionment;
- Consideration of transboundary pollution and long-range transport;
- Transparency regarding assumptions used in attributing sectoral contributions.

The Sustainability and Policy Development Lead at HCC, considers it essential that:

- Wales-specific emissions inventories and modelling are used;
- Sectoral contributions are regularly reviewed and updated;
- Policy responses are linked to evidence of actual contribution to measured concentrations.

Monitoring arrangements should avoid creating a presumption of Beef and Sheep apportionment over and above other agricultural along with other sector responsibility for exceedances where secondary formation depends significantly on non-agricultural precursor emissions.

Question 4a: To what extent do you agree with the provision in the draft regulations to allow the subtraction of the 'natural contribution' to particulate matter where exceedances of a target are due in whole or in part to these natural contributions?

☒ Agree

Response: HCC's Sustainability and Policy Development Lead supports the inclusion of provisions allowing subtraction of natural contributions, **subject to** clear and transparent methodology

Question 4b: Please explain your answer.

Natural contributions — including sea salt, wind-blown dust, and other natural sources — can influence PM2.5 concentrations in Wales, particularly given its coastal geography and rural land use.

In addition, atmospheric conditions and long-range transport of pollutants from outside Wales can materially affect monitored concentrations.

HCC's Sustainability and Policy Development Lead considers it essential that:

- Exceedances not attributable to controllable domestic sources are appropriately accounted for;
- The methodology for identifying and subtracting natural contributions is scientifically robust and transparent;
- Welsh sectors, including agriculture, are not penalised for factors beyond their control.

This provision strengthens fairness and proportionality within the regulatory framework.

Question 5: We have asked some specific questions. If you have any other relevant thoughts or comments on our proposals, please provide them here.

Response: Hybu Cig Cymru's Sustainability and Policy Development Lead welcomes the opportunity to respond to this consultation. We recognise the importance of improving air quality to protect public health and support environmental sustainability.

However, any PM2.5 targets must be implemented in a way that is proportionate, evidence-based and does not impose unintended or disproportionate burdens on Welsh beef and sheep farmers, nor undermine sustainable food production in Wales.

Our Sustainability and Policy Development Lead wishes to emphasise the following additional considerations:

1. Proportionality and Food Security

Welsh Government has recognised the importance of domestic food production and rural economic resilience. Welsh beef and sheep farming:

- Operates predominantly in grass-based, extensive systems;
- Supports rural communities and supply chains;
- Delivers environmental co-benefits including permanent pasture management and biodiversity support.

PM2.5 policy should not inadvertently:

- Reduce domestic production capacity;
- Increase reliance on imports from systems with potentially higher environmental footprints;

2. Alignment with the Sustainable Farming Scheme (SFS)

Where agricultural ammonia mitigation is pursued, it should:

- Be aligned with the SLM and Sustainable Farming Scheme;
- Be supported through capital grants and advisory services;
- Recognise differences between intensive and extensive systems;
- Allow realistic transition periods.

A supportive, incentive-based approach will be more effective than punitive regulation.

3. Cross-Sector Fairness

Secondary PM2.5 formation is inherently multi-sectoral. Effective reduction will require coordinated action across:

- Transport;
- Energy generation;
- Industry;
- Domestic combustion;
- Agriculture.

HCC's Sustainability and Policy Development Lead urges Welsh Government to ensure that livestock farming is not expected to shoulder a disproportionate share of responsibility relative to its role in atmospheric chemistry and measured concentrations.

Conclusion:

HCC supports the ambition to improve air quality and protect public health in Wales. However, the science of PM_{2.5} — particularly secondary particulate formation involving ammonia, demonstrates that effective solutions must be integrated, proportionate and evidence-based.

Welsh beef and sheep farming operates largely in extensive, pasture-based systems that deliver high-quality food alongside environmental and social benefits. The regulatory framework for PM_{2.5} must safeguard these systems, protect rural livelihoods, and avoid unintended consequences for food security and competitiveness.

HCC stands ready to work constructively with Welsh Government to deliver practical, science-based improvements in air quality while sustaining a thriving Welsh red meat sector.

Responses to the consultation may be published. Your response will be anonymous.

However, if you would like your name to be published alongside your response, please tick the box.

☐ I agree to my name being published alongside my response to this consultation.

Please provide a part post code, eg. CF10 [information redacted]

