

Integrating air quality and climate change policy

Environmental Protection UK



What is this leaflet about?

This leaflet looks at how local authorities tackle the issues of poor air quality and climate change, and the benefits of integrating policy and practice between the two areas. It has been produced by the charity Environmental Protection UK, together with a longer, more detailed guidance document which is available on the website www.environmental-protection.org.uk

Poor air quality and climate change

Poor air quality has a direct impact on the health and well-being of humans, on the natural environment and on the built environment. In the UK at least 35,000 (and quite possibly more than 50,000) premature deaths are thought to be attributable to air pollution in each year, with the problem largely concentrated in busy urban areas and especially those areas close to congested roads. No comparable figures are available for non-fatal health effects, but the consensus opinion is that that number will be much higher than for mortality. Climate change also threatens to pose significant environmental and health challenges in the years to come, including the possibilities of warmer summer temperatures, more frequent extreme weather events and rising sea levels. The direct health challenges are not completely clear but could include the increasing prevalence of diseases associated with warmer climates

Local authorities have a pivotal, although far from unique, role in managing both air quality and the causes and effects of climate change, and it is well recognised that the UK will not be able to address these issues without a significant input at the local level. Such actions are, of course, in addition to those actions taken by Central Government.

The Local authorities have clear duties for air quality under the Local Air Quality Management regime, as well as regulatory duties under the Clean Air Act, 1993, and (in England and Wales) the Local Authority Pollution Prevention and Control system. Many local authorities have set improvement targets for both community (public) and corporate emissions of carbon, whilst emissions reduction now forms a central aim of functions such as planning and transportation. An evolving overarching framework is now starting to develop, informed by pilots such as the "Local Carbon Frameworks" system established under a previous UK Government

How are the policy areas linked?

Air quality and climate change are in many ways interrelated. Many common air pollutants are "climate active" to a greater or lesser degree and reducing emissions, and hence concentrations, of these will lessen their warming effect on our climate.

A warming climate also threatens to make air quality worse, with an increased possibility of harmful "photochemical smogs" during longer, hotter summers. The processes of managing emissions of air pollutants and greenhouse gases are also interconnected. Both sets of emissions largely arise from the same combustion processes – vehicle engines, power generation, domestic combustion and industry. If the impacts of both sets of emissions are not considered together in policy making the results can be unintentional trade-offs, with one set of emissions falling at the expense of an increase in emissions of the other.

Why integrate air quality and climate change policy?

There are many benefits of integrating policy. Foremost amongst them is that integrated policy is usually less costly to implement as measures can be prioritised to ensure that they benefit both areas, rather than two sets of measures being implemented separately. Integrated measures can also help to spread benefits over a long timescale. The benefits of reducing greenhouse gas emissions will be felt several decades in the future, whilst air quality benefits are felt “here and now” in the form of improved public health and natural environmental quality. If policy is not integrated unintentional increases in emissions of air pollutants or greenhouse gases can occur, requiring costly remedial measures to mitigate the impacts.

How can you integrate the policy?

The foundation of an integrated approach is a close working relationship between staff, often in different departments, and elected members working on the issues. A common vision on the actions needed to reduce both sets of emissions can form a powerful argument for policy change; the alternative can sometimes be opposing views on policy that weaken the argument for action. Climate change and air quality strategies cannot on their own implement the full range of actions they may propose, to do this they need to influence the plans and strategies that guide a local authority’s services. Key functions include planning, transportation and housing. Ideally this should be done via a top down approach, with policy “hooks” in documents such as the Local Plan.

Recommended actions

The table overleaf provides simple guidance on the air quality and climate change impacts of measures and technologies that can be used to address both sets of emissions. A “traffic light” system is used to indicate the type of impact the measure/technology has on the two areas:

- Green – The measure generally has a positive impact.
- Amber – The measure may or may not have a negative impact, depending on where or how it is installed.
- Red – The measure generally has a negative impact, although there may be situations where it does not.
- Neutral – The measure will generally have no significant impact.

This system provides **a guide only**. The impact of some measures depends very much on the technology used, and where (geographically) the measure is installed. Our main guidance document gives a fuller consideration of these. For this leaflet it is sufficient to say that measures to address air pollution generally need to be targeted at specific areas whereas climate change measures are not particularly location specific.

A red or amber rating in one category does not mean that a measure should be ruled out. In an area where air quality is poor then a relatively small carbon disbenefit may be acceptable if a measure has a significant

positive impact on air quality. Conversely if a measure has very significant carbon savings a small air quality disbenefit may, but only may, be acceptable in an area where air quality is good. In these situations, however, the negative impacts should be identified and managed to minimise their size, and, in the case of air pollutants, their direct impacts on human health.

| Measure/technology. | Impact on air quality. | Impact on climate change. |
|---|-------------------------------|----------------------------------|
| Transport | | |
| Alternative fuels ¹ | Green | Green |
| Retrofit of exhaust abatement equipment | Green | Amber |
| Low emission zones | Green | Amber |
| Low emission strategies | Green | Green |
| Fleet management and driver training | Green | Green |
| Emissions related car parking charges | Amber | Green |
| Travel plans | Green | Green |
| Car clubs | Green | Green |
| The Built Environment | | |
| Domestic energy efficiency | Green | Green |
| Commercial energy efficiency | Neutral | Green |
| Combined heat and power | Amber | Green |
| Biomass heat ² | Red | Green |
| Micro wind turbines | Neutral | Green |
| Solar ³ | Green | Green |
| Heat pumps ⁴ | Green | Neutral |

¹ Biodiesel and bioethanol would have “amber” status for air quality, as they have little impact on air pollutant emissions.

² In locations where coal and oil are the realistic alternatives for heating fuels biomass would have “green” and “amber” status for air quality respectively.

³ Solar thermal (hot water) would have “green” status for air quality, solar photovoltaic would be “neutral” as this displaces power station emissions, rather than emissions from domestic hot water heating usually provided by gas, oil or solid fuel appliances.

⁴ Heat pumps used in areas where mains gas is not available would have “green” status for climate change.



Document published August 2020

Charity registered in England and Wales number 221026, Scotland SC040990

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