WEB VERSION

Friends of the Earth Scotland

Parliamentary Briefing: Air Pollution in Scotland

Updated 26 September 2017

Scotland's air pollution crisis

Traffic-related air pollution is causing a public health crisis in Scotland. Scottish statutory standards and binding European legal limits continue to be broken across the country. Air pollution causes thousands of early deaths each year in Scotland and reduces the quality of life for many more, especially children, older people and people made vulnerable by chronic health conditions. It also has a damaging effect on ecosystems and wildlife.

Over the years, air pollution has changed from the visible industrial smogs of the 1950s to often invisible traffic-related pollution. The solutions to today's air pollution therefore depend on a shift in the balance of transport policy and investment away from the car towards public transport, cycling and walking. Taking action on air pollution will help to tackle emissions from the transport sector which is the single biggest source of emissions in Scotland, as well as also delivering health and wellbeing benefits.

Summary of recommendations

The Scottish Government made a number of welcome commitments in its recent Programme for Government, but these need to be developed and strengthened to ensure Scotland has clean air as quickly as possible, as follows:

- **Low Emission Zones:** The Scottish Government has committed to introducing Low Emission Zones in Scotland's four largest cities by 2020, with the first on the ground by 2018, and with more to follow by 2023. The Scottish Government must commit to funding the infrastructure required to set up LEZs, and increase the Green Bus Fund so that bus operators can upgrade or retrofit their fleets.

  Glasgow City Council's initial proposals are for an LEZ for buses only; in order to tackle air pollution quickly, Low Emission Zones should should apply Euro VI emissions standards to buses, lorries, and vans from the start, with the dirtiest taxis and cars included in a later phase[1]. Automatic Number Plate Recognition technology should be installed for enforcement.

  Following the Programme for Government, the Government has launched a new consultation on Low Emission Zones. In the draft plans for LEZs, the Scottish Government announced an Air Quality Fund to support local councils with Air Quality Management Areas, and pledged the introduction of an Engine Retrofitting Centre in Scotland. However, it stopped short of a firm commitment to help to jointly fund LEZ infrastructure with local councils.

  As well as contributing to cleaner air, Low Emission Zones will have a beneficial impact on local economies, and will speed up the transition to electric vehicles on our roads.

- **Petrol and diesel phase out:** The Scottish Government has committed to phasing out the sale of new petrol and diesel cars and vans by 2032. It must produce a strategy to demonstrate how this commitment will be met, which should include measures such as a requirement that public vehicle fleets lead the way, financial incentives like workplace parking levies, and preferential bus lane access for EVs.

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- **Funding for walking and cycling:** The majority of trips are under 5km in length and many more of these short trips could realistically be undertaken on foot or by bike. The Scottish Government's recent commitment to doubling its funding for active travel is welcome, but it should continue to increase the amount it is investing in walking and cycling until such funding reaches 10% of the transport budget, as called for by Transport Scotland's Cycling Action Plan for Scotland[2]. For the last decade, cycle rates have been stalled at about 1% of all trips, despite the Scottish Government's stated ambition for cycle rates to reach 10% of all trips by 2020. Transport Scotland statistics reveal that a key barrier to cycling is lack of safe infrastructure and people fearing cars[3]. In Seville, a widespread roll-out of cycling infrastructure, coupled with other demand management measures, has contributed to the city slashing its nitrogen dioxide levels in half.
- **Buses:** The bus sector is in crisis, with passenger numbers having fallen 17.4% over the last decade[4]. The Scottish Government must re-regulate the buses, with options for franchise and public ownership models, to give local authorities more control over bus services so that they operate in the public interest rather than at the whim of different private operators. Local councils should be enabled to regulate fares, plan routes, introduce integrated ticketing systems, and operate entire networks rather than attempting to join up piecemeal services in an incredibly challenging financial climate.
- **20mph zones:** 20mph zones have been proven to make streets safer and reduce traffic, thereby improving air quality and encouraging people to walk and cycle. The Scottish Government should support legislation to reduce the default speed limit in urban areas from 30mph to 20mph to support clean air, safe streets and help social cohesion. This would help it to deliver on its Programme for Government desire for Scotland to be a place where no one dies on the roads.

Health impacts of air pollution

Air pollution from fine particles alone ($PM_{2.5}$) is responsible for 2000 early deaths in Scotland each year according to 2014 research published by Public Health England[5]. Exposure to NO_2 also causes early death, and we estimate that taking into account both $PM_{2.5}$ and NO_2, air pollution causes 2,500 early deaths in Scotland each year[6] - more than ten times the number of people dying in road accidents.

In 2013 the World Health Organization's specialized cancer agency, the International Agency for Research in Cancer, classified the cocktail of outdoor air pollution as carcinogenic to humans and named it as a leading cause of cancer deaths, with these conclusions applying to all regions of the world[7].

Long-term exposure to particulate matter at levels present on many Scottish streets has been shown to increase the risk of coronary events including heart attacks and strokes[8].

Ambient air pollution, at levels seen on our streets in Scotland, has been linked with restricted foetal growth and premature birth[9].

It is estimated that air pollution costs the Scottish economy over £1.1 billion each year in days lost at work and costs to the NHS[10].

Everyone's health is affected by air pollution, but children are affected worse than others because their lungs are smaller and are still developing. People with breathing and heart conditions are affected more than others, as well as the elderly, and people living in poverty. It is not fair that the people who are least responsible for air pollution are the worst affected and some of the most vulnerable in our society.

Ongoing breaches of Scottish and European laws

Scottish standards: The most polluted areas in Scotland are in Glasgow, Dundee, Edinburgh and Aberdeen, but in total there are there are 38 Local Air Quality Management Areas (AQMAs) – up from 35 in 2015 – across 14 local authorities[11], where local authorities have had to declare that levels of pollution are either at risk of or are regularly breaking Scottish Regulatory Standards. These standards were due to be met in 2005 for Nitrogen Dioxide (NO_2) and 2010 for coarse particles (PM_{10})[12]. Some AQMAs, such as those in Dundee and Perth cover the entire city.

European law and current air quality consultation: Scotland is also breaking the European Ambient Air Quality Directive, which required a legal limit for NO_2 to be met by 2010, with a possible 5-year extension. For the purposes of EU law reporting Scotland is divided into six areas, and today it is breaking the limit in four out of six of those areas[13].

As a result of a legal action brought by ClientEarth against the UK Government, in April 2015 the UK Supreme Court required the UK Government to produce new Air Quality Plans to prove how it would reduce exposure to air pollution as well as delivering on its European legal obligations in as short a time as possible.

Following fresh legal action, the High Court deemed those plans inadequate in October 2016, and new plans were ordered again.

The recent Programme for Government commitments are a welcome step forward, but need to be strengthened and delivered on time if they are to work to improve air quality as quickly as possible.

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[1] FoES press release, 22 September 2017: *Glasgow City Council Sets out Low Emission Zone Plans: Reaction*. https://foe.scot/press-release/glasgow-city-council-sets-low-emission-zone-plans-reaction/

[2] Transport Scotland, January 2017: *Cycling Action Plan for Scotland 2017-2020*. http://www.cyclingscotland.org/wp-content/uploads/2013/10/Transport-Scotland-Policy-Cycling-Action-Plan-for-Scotland-January-2017.pdf

[3] Transport Scotland, 26 September 2017: *Transport and Travel in Scotland 2016*, Table 26. https://www.transport.gov.scot/publication/26-september-2017-transport-and-travel-in-scotland-2016/

[4] From 476 million passenger journeys in 2006 to 393 million in 2016. Transport Scotland, 26 September 2017: *Transport and Travel in Scotland 2016*, Table Sum2. https://www.transport.gov.scot/publication/26-september-2017-transport-and-travel-in-scotland-2016/

[5] Public Health England, 9 April 2014: *Estimating local mortality burdens associated with particulate air pollution*". https://www.gov.uk/government/publications/estimating-local-mortality-burdens-associated-with-particulate-air-pollution

[6] Based on a conservative estimate from the Royal College of Physicians that, across the UK, air pollution from NO_2 and $PM_{2.5}$ causes over 40,000 early deaths annually – Royal College of Physicians, 23 February 2016: *Every breath we take: the lifelong impact of air pollution.* See Royal College of Physicians. https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution

[7] IARC Press Release, 17 October 2013: *Outdoor air pollution a leading environmental cause of cancer deaths*. https://www.iarc.fr/en/media-centre/iarcnews/pdf/pr221_E.pdf

[8] Cesaroni et al, 21 January 2014: *Long term exposure to ambient air pollution and incidence of acute coronary events: prospective cohort study and meta-analysis in 11 European cohorts from the ESCAPE Project,* British Medical Journal 2014; 348:f7412. http://www.bmj.com/content/348/bmj.f7412

[9] Pedersen et al, 15 October 2013: *Ambient air pollution and low birthweight: a European cohort study (ESCAPE),* The Lancet Respiratory Medicine, Volume 1, Issue 9. http://www.thelancet.com/journals/lanres/article/PIIS2213-2600(13)70192-9/abstract

[10] Extrapolated from a Defra assessment that air pollution costs the UK economy as a whole £16bn per year, based on 29,000 UK- wide deaths from air pollution – Defra, 10 May 2013, *Impact pathway guidance for valuing changes in air quality.* https://www.gov.uk/government/publications/air-quality-impact-pathway-guidance

[11] An indicative list of air quality management areas can be found at http://www.scottishairquality.co.uk/laqm/aqma.

[12] The Scottish Standards are set out in the Air Quality (Scotland) Regulations 2000 and the Air Quality (Scotland) Amendment Regulations 2002. A standard for $PM_{2.5}$ was introduced in 2016 via the Air Quality (Scotland) Amendment Regulations 2016.

[13] The six "zones" are: Highlands, Borders, Central Scotland, Northeast Scotland, Edinburgh Urban Area, and Glasgow Urban Area. EU law is being broken in all zones except for the Highlands and the Borders.