

Air Pollution

Parliamentary Briefing ahead Labour debate on 12th March

11 March 2014

Summary

Air pollution remains Scotland's greatest environmental health threat. EU and Scottish legal standards on air quality are failing to be upheld and Friends of the Earth Scotland calls on the Scottish Government to:

1. Make sure the planned Low Emissions Strategy:
 - Quantifies the measures needed to deliver clean air, putting walking, cycling, public transport and ultra-low-emissions zones at its heart;
 - Commits to a deadline by when Scottish air quality standards will be met;
 - Ensures join up with national transport planning.
2. Include the following new features in the revised Local Air Quality Management system:
 - A legal requirement that local authorities act in the way best calculated to contribute to delivery of Scottish standards on air quality (akin to the public body obligation in Part 4 of the Scottish Climate Act);
 - Better guidance for local authorities on best practice to achieve real reductions in air pollution;
 - A Scottish standard on fine particles (PM_{2.5}) which mirrors WHO guidelines.
3. Ensure better join up between planning and air quality imperatives by strengthening the National Planning Framework and Scottish Planning Policy so they spell out how the planning system will ensure air quality standards are met.

Introduction

Scotland continues to experience dangerously high levels of air pollution in several urban centres despite legally binding European air quality limits and Scottish standards on air quality which were supposed to be met years ago. There are 35 Local Air Quality Management Areas (AQMAs) across Scotland. These pollution zones are areas where a local authority has declared that levels of pollution are exceeding Scottish air quality standards and therefore risking health. Some AQMAs, such as those in Dundee, Glasgow and Perth cover the entire city.¹ Since the start of 2013 we have seen new air quality management areas declared in Edinburgh, Musselburgh and Crieff.

In January, we revealed the most polluted streets, where air quality levels were dangerously high in 2013.² These streets include Glasgow's Hope Street, Edinburgh's St John's Road, Aberdeen's Union Street and Dundee Seagate.

¹ An indicative list of air quality management areas can be found at http://www.scottishairquality.co.uk/laqm.php?a=l&la_id=i.

² Our press release can be found at <http://www.foe-scotland.org.uk/node/1744>; story by the Sunday Herald is at <http://www.heraldscotland.com/news/home-news/revealed-scotlands-most-polluted-streets.23269076>

Industrial air pollution levels have fallen over the decades and the pea-souper fogs of the 1950s are no more, but urban air pollution is now invisible, rather than safe. Traffic is now the leading cause of urban air pollution in Scotland.³ The Government therefore needs to make provision for walking, cycling, better public transport and ultra-low emissions zones, making our cities more pleasant places to live and spend time in, bringing multiple benefits for health and for local businesses.

Health impacts

- Air pollution from fine particles (PM_{2.5}) is responsible for an equivalent of **over 1500 deaths each year in Scotland**, according to research by the Committee on the Medical Effects of Air Pollution.⁴
- In 2013 the WHO's specialized cancer agency, the IARC, classified the cocktail of 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.⁵
- In January 2014, research from a European study found that long-term exposure to small and fine particles (PM₁₀ and PM_{2.5}) increases the **risk of coronary events including heart attacks and unstable angina**, with the link being seen at levels of exposure below the current European and Scottish pollution standards.⁶
- Children, the elderly and the sick are disproportionately affected by the impacts of pollution.
- Ambient air pollution has also been linked with **restricted foetal growth** in European countries, which is linked with adverse respiratory health in childhood.⁷
- Air pollution across the UK as a whole costs the NHS between £8.5 billion and £20.2 billion a year.⁸

European legal limits and Scottish standards

The World Health Organisation has guidelines on maximum threshold concentration levels for key pollutants. It has recommended an annual mean threshold for Nitrogen Dioxide (NO₂) of 40µg/m³, for small particles (PM₁₀) of 20µg/m³, and for fine particles (PM_{2.5}) of 10µg/m³.

EU law sets limits weaker than the WHO guidelines for particles: for NO₂ the annual mean threshold is 40µg/m³, for PM₁₀ it is 40µg/m³, and for PM_{2.5} it is 25µg/m³. The deadline for the achievement of NO₂ levels was 1 Jan 2010, for PM₁₀ it was 1 Jan 2005 and for PM_{2.5} it will be 1 Jan 2015.⁹

Scotland has a separate but parallel local air quality management system. The Environment Act 1995 created an obligation on each local authority to monitor air quality,

³ Defra, "Air Quality Pollutant Inventories for England, Scotland, Wales and Northern Ireland: 1990 – 2011" (Sept 2013) http://uk-air.defra.gov.uk/reports/cat07/1309111039_DA_AQPI_1990-2011_MainBody_Issue1.0.pdf

⁴ The Committee on the Medical Aspect of Air Pollution concluded that very fine particles (PM_{2.5}s) were responsible for 29,000 deaths in the UK in 2008 (1560 in Scotland) and on average shortened everyone's life by 6 months. http://www.hpa.org.uk/webc/HPAwebFile/HPAweb_C/1317137012567;

⁵ International Agency for Research on Cancer, "IARC Scientific Publication No 161: Air Pollution and Cancer" (Oct 2013) <http://www.iarc.fr/en/publications/books/sp161/index.php>

⁶ Research published in the British Medical Journal, "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" (Jan 2014) BMJ 2014;348:f7412, <http://www.bmj.com/content/348/bmj.f7412>

⁷ "Ambient air pollution and low birthweight: a European cohort study (ESCAPE)" The Lancet Respiratory Medicine, Volume 1, Issue 9, Pages 695 - 704, (Nov 2013), [http://www.thelancet.com/journals/lanres/article/PIIS2213-2600\(13\)70192-9/abstract](http://www.thelancet.com/journals/lanres/article/PIIS2213-2600(13)70192-9/abstract)

⁸ Defra, The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (July 2007)

⁹ Directive 2008/50/EC. Until 2015, the obligation on PM_{2.5} is a "target" rather than a legal "limit", meaning Member States are have an obligation to ensure that all necessary measures not entailing disproportionate costs are taken to ensure levels do not exceed the value

to declare a local “Air Quality Management Area” (AQMA) where it finds that air pollution is higher than standards, and to come up with a local “Air Quality Action Plan” to reduce pollution levels to within the standards.

The Scottish air quality standards are an annual mean objective for NO₂ of 40µg/m³ and for PM₁₀ 18 µg/m³. There is a current provisional objective for PM_{2.5} of an annual mean less than 12µg/m³, but this is not binding on local authorities and PM_{2.5} is not extensively monitored in Scotland despite a growing body of evidence of health risks associated with exposure it.¹⁰ We welcome the Scottish Government’s stated intention to regulate this key pollutant at the earliest opportunity and would recommend that the Government set the level according to WHO guidelines.¹¹

After years of action plans which have failed to deliver, Scotland’s local air quality management system is currently under review. The reviewed version needs a stronger obligation on local authorities to deliver on air quality action plans, possibly through a legal obligation akin to that expressed in Part 4 of the Climate Change Act and/or for better support of local authorities on delivering good quality action planning.

When will we meet air quality standards?

Glasgow is named in a legal action that the European Commission took last month against the United Kingdom for failure to cut levels of NO₂ and for declaring that NO₂ levels are not expected to be met in Glasgow until at least 2020.¹²

Recent Parliamentary Answers have stated a commitment from the Scottish Government about when *European* air quality standards will be met (2015 in most urban areas and 2017/8 in Glasgow) but no commitment on when *Scottish* air quality standards will be met. The Scottish regime is much more indicative of the real health impacts of air pollution because pollution levels are based on a more extensive monitoring network and because the objective for PM₁₀ is more ambitious than the European limit.

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¹⁰ The Scottish Standards are set out in the Air Quality (Scotland) Regulations 2000 and the Air Quality (Scotland) Amendment Regulations 2002

¹¹ “Consultation On Review Of Local Air Quality Management In Scotland – Analysis Of Responses” (Dec 2013), <http://www.scotland.gov.uk/Resource/0044/00440953.pdf>

¹² See European Commission Press Release: “Environment: Commission takes action against UK for persistent air pollution problems” (20 Feb 2014), http://europa.eu/rapid/press-release_IP-14-154_en.htm