



Subject:	Member Update on Local Air Quality Management Matters
Date:	3 rd March 2020
Reporting Officer:	Nigel Grimshaw, Strategic Director of City and Neighbourhood Services Siobhan Toland, Director of Neighbourhood Services
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Restricted Reports	
Is this report restricted?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
If Yes, when will the report become unrestricted?	
After Committee Decision	<input type="checkbox"/>
After Council Decision	<input type="checkbox"/>
Sometime in the future	<input type="checkbox"/>
Never	<input type="checkbox"/>

Call-in	
Is the decision eligible for Call-in?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

1.0	Purpose of Report or Summary of main Issues
1.1	Members will recall that at the People and communities Committee meeting of 14 th January 2020, a number of ambient air quality issues were raised in advance by Councillor O'Hara concerning research being undertaken by Cork County Council, Cork University and Environment Protection Agency, Cork in relation to its ambient air quality. The study involves the installation of laser particle counters to provide real time measurement of PM _{1.0} , PM _{2.5} and PM ₁₀ particle fractions.
1.2	By way of conclusion, the Committee agreed that a report would be submitted to a future meeting of the Committee addressing the following ambient air quality matters: <ul style="list-style-type: none">• An update on the Air Quality Workshop for all Members, held on 20th January 2020.

	<ul style="list-style-type: none"> • Provide an update on the process to develop a review of the Air Quality Action Plan. • Examine the potential to engage with Cork County Council, Cork University and Environment Protection Agency, Cork, in relation to its Air Quality Pilot Scheme findings.
2.0	Recommendations
2.1	<p>The Committee is asked to</p> <ul style="list-style-type: none"> • Note contents of the report.
3.0	Main report
	<u>Key Issues</u>
3.1	<ul style="list-style-type: none"> • Update on the Air Quality Workshop for all Members. <p>Members were invited to attend a seminar on ambient air quality entitled, <i>Healthier Air, Healthy Belfast</i>, held in the Reception Hall, City Hall on 20th January 2020. Invitations to attend were also extended to representatives of the DAERA Air and Environmental Quality Unit as well as to the Department for Infrastructure (DfI) Roads.</p>
3.2	<p>Mrs. Siobhan Toland, Director of City Services, opened the technical presentations at the seminar by providing an overview of ‘<i>Current air quality challenges for Belfast and the approach to developing future Air Quality Action Plans for the city</i>’. The presentation summarised the improvements in Belfast’s ambient air quality since the 1960s, in terms of addressing smoke and sulphur dioxide across the city through the council’s smoke control programme. Mrs. Toland also highlighted the more recent challenge of addressing nitrogen dioxide concentrations associated with road transport and the challenge of addressing emerging pollutants of concern, including fine particulate matter (PM_{2.5}). Mrs Toland reminded members that four Air Quality Management Areas remain across the city, designated for exceedences of hourly and annual mean objectives for nitrogen dioxide, along arterial transport routes and that we will be commencing the development of a new Air Quality Action Plan for the city with our relevant authority partners, including DfI Roads, later this year.</p>
3.3	<p>Dr. Richard Maggs then spoke about why ambient air quality is important, the different air quality legislative assessment regimes, an overview of the UK’s approach to Clean Air Zones, and about ambient air quality challenges for Belfast City Council. Dr. Maggs highlighted the current focus on road transport emissions and the implications of differences between real world driving emissions and European emission standards for road vehicles. He also highlighted the health effects associated with poor air quality, and the differences in approach between EU, national and local air quality management regimes. Dr. Maggs provided an overview of the Defra, ‘<i>Clean Air Zone Framework</i></p>

Principles for setting up Clean Air Zones in England guidance. In terms of challenges for Belfast City Council in developing a new Air Quality Action Plan, Dr. Maggs highlighted that the city's nitrogen dioxide issues are principally road traffic related and associated with key strategic transport routes. He therefore highlighted the need to consider; pinch-points on key strategic routes, the volume and make-up of traffic on key routes, the origin and destination of vehicles, the impact of regionally generated traffic versus locally generated traffic, and emissions from specific vehicle types, e.g. buses, HGVs and LGVs. Dr. Maggs also commented on the role of vegetation and trees in improving ambient air quality, the impact of wood burning stoves and the effectiveness of photo catalytic paints in mitigating ambient NOx concentrations, concluding that an integrated approach is key to the development of a new Air Quality Action Plan for the city.

3.4

Councillor Anna Richardson, City Convenor for Sustainability and Carbon Reduction, Glasgow City Council spoke about processes and challenges of introducing Scotland's first Low Emission Zone. It is noted that the Transport (Scotland) Act 2019 provides the powers for the Scottish Ministers to specify LEZ emission standards for vehicles in Regulations. Councillor Richardson advised that the LEZ had come into effect in Glasgow city centre on 31st December 2018, that it is being phased in and that it initially only applied to local service buses. The Councillor advised however, that by the 31st December 2022, when the LEZ is fully implemented, all vehicles entering the zone will have to meet specified exhaust emission standards; i.e. Euro 4 for petrol cars, vans, minibuses and other specialist vehicles, Euro 6 for diesel cars, vans and minibuses and other specialist vehicles and Euro 6 for lorries, buses and coaches and other specialist heavy diesel engine vehicles.

3.5

Finally, Dr. Jackie Hyland, Consultant Locum Health Protection Consultant, Public Health Agency advised the seminar of the '*Impacts of Ambient Air Quality on Public Health*', highlighting the short and long term health impacts of air quality and that the March 2019 PHE review of air quality advised that, '*Air pollution is the biggest environmental threat to health in the UK, with between 28,000 and 36,000 deaths a year attributed to long-term exposure*'. Dr. Hyland advised the seminar about the health impacts of nitrogen dioxide and fine particulate matter (PM_{2.5}) and regarding responses and solutions, including a range of initiatives to encourage public behavioural change towards more sustainable modes of transport.

3.6

The Committee is advised that the examples of road transport mitigation measures, presented during the Seminar, that have already been successfully deployed in other UK

cities, together with other insights, including the role of vegetation improving air quality and encouraging behavioural change, will be of particular relevance and learning value to the council in beginning the process of developing a new Air Quality Action Plan for the city.

3.7

• **Update on the process to develop a review of the Air Quality Action Plan.**

The Committee is advised that a tendering exercise is presently proceeding to enable the council to undertake a detailed assessment for fine particulate matter (PM_{2.5}) and nitrogen dioxide (NO₂) within the city boundary. The Committee is also advised that the process to develop a new Air Quality Action Plan for the city will be commenced from April 2020, alongside appraisal by DAERA of our final Action Plan Progress Report for the council's current Air Quality Action Plan, which is scheduled to conclude in December 2020. The new Air Quality Action Plan will take account of the outcomes and recommendations of the detailed assessment for PM_{2.5} and NO₂ for the city as they become available.

3.8

The government's local air quality management guidance LAQM.TG(16) advises that the next Action Plan Progress Report is due to be submitted to DAERA for appraisal by 30th June 2020 and that the report is to be completed using the government's progress report template. <https://laqm.defra.gov.uk/review-and-assessment/report-templates.html>. The review of the Action Plan will be undertaken by the council but we will seek information on progress from the various partner organisations that have contributed actions, i.e. the former Department for Regional Development; now Department for Infrastructure Roads, Translink etc.,. We will also provide an update on those actions that the council proposed, including the Belfast Bikes initiative and managing the council's fleet emissions.

3.9

With regard to the review and update of Air Quality Action Plans, government guidance states that district councils have a duty to keep their Action Plans up to date but that whenever an Action Plan is revised, the district council must consult DAERA and each relevant authority. Relevant authorities typically include government Departments including DfI Roads and the Northern Ireland Housing Executive, etc. Where a relevant authority is consulted on an Air Quality Action Plan, it must provide by return proposals for air quality improvement measures that the Department intends to undertake in pursuit of the air quality standards and objectives. These actions then become part of the final Air Quality Action Plan. We have previously facilitated this consultation and development process via the Belfast Air Quality Action Plan Steering Group and would anticipate doing so again for development of the new Action Plan. As advised previously, engagement will start from April 2020 to enable the Council to meet the June 2020 Action Plan Progress Report

	<p>submission deadline. Also invited onto a wider Action Planning Steering Group will be additional Groups that council has approved, i.e. representatives of sustainable transport, public health and environmental groups. We will also take the opportunity to link this preparation for a new Air Quality Action Plan for Belfast to the council's community planning process via the Living Here Board.</p>
3.10	<p>It is considered therefore that completion of the June 2020 Action Plan Progress Report will provide a good basis for a final assessment of the impact of the council's 2015-2020 Air Quality Action Plan, as well as the basis for engagement with our relevant authority partners around the development of a new Action Plan, which will take account of the learning and ambitions flowing from the January 2020 air quality seminar event with Members. A schedule of meetings will follow from April 2020 onwards to facilitate completion of the new Action Plan but it is likely that the final timescale for development of a draft version of the Action Plan will be dictated by the nature and scope of the proposed mitigation measures.</p>
3.11	<ul style="list-style-type: none"> • The potential to engage with Cork County Council, Cork University and Environment Protection Agency, Cork, in relation to its Air Quality Pilot Scheme findings. <p>It is noted from the Cork City Council website that the council has procured a number of particle counter type air quality sensors and installed them at locations across the metropolitan area of Cork City to provide real time measurement of PM_{1.0}, PM_{2.5} and PM₁₀. Cork City Council has however advised that the air quality monitors are not designed for direct assessment of compliance with Directive 2008/50/EC on ambient air quality and cleaner air for Europe but serve to provide indicative data on air quality relating to particulate matter. The council has further advised that the monitoring results can be affected by localised events that can cause occasional peaks (e.g. pollutants from a car idling in the vicinity of a monitor). Cork City Council has therefore advised that the air quality monitors will allow the council and the public to review long-term trends to establish any improvement or deterioration of air quality in the metropolitan area of Cork City. The Committee is advised that we will keep a watching brief on this air quality monitoring initiative.</p>
3.12	<p>It should be noted though that Belfast City Council has previously operated a different type of particle counter at the Belfast Centre Lombard Street site between 2000 and 2006 as part of the Defra UK Particulate Monitoring Research Programme. Data from this particle</p>

counter is available from the Defra website via the follow weblink: <https://uk-air.defra.gov.uk/data/particle-data>

- 3.13. It should be additionally noted that an optical light-scattering particulate monitor has been recently installed at the Lombard Street site, which has the capacity to simultaneously measure total suspended particles, PM₁₀, PM₄, PM_{2.5} and PM₁ mass fractions. PM₁₀ and PM_{2.5} data from this instrument, which meets both EU and UK legislative monitoring requirements, is available to download via the DAERA Northern Ireland Air website <https://www.airqualityni.co.uk/>.
- 3.14 Furthermore, and as part of the proposed detailed assessment of fine particulate matter (PM_{2.5}) for Belfast, project options under consideration include the procurement and installation of a number of AQ Mesh, Zephyr or equivalent small sensor air quality monitoring systems for measuring PM_{2.5} and NO₂ across the city, to supplement existing particulate matter and nitrogen dioxide monitoring locations and monitoring data.
- 3.15 It is noted that Breathe London has successfully employed over 100 AQ Mesh systems as part of its air quality monitoring network <https://www.breathelondon.org/> and that Coventry City Council has deployed Zephyr monitors to assist in diverting road traffic from pollution hotspots. <https://www.earthsense.co.uk/post/zephyr-sensors-send-alerts-to-divert-traffic-from-pollution-hotspots-in-coventry>
- 3.16 Irrespective of the monitoring equipment finally deployed however, the Committee is advised that data from any additional monitors will have to be of type that can be scaled and ratified through the application of rigorous quality control and quality assurance procedures. The equipment will also have to be supported by an appropriate maintenance contract to ensure that monitoring data capture rates are maximised.
- 3.17 It is considered therefore that the proposed additional PM_{2.5} and NO₂ small sensor air quality monitors, in addition to monitoring data from our existing air quality passive and active analysers, together with modelling and emissions data published by government for Northern Ireland, will provide appropriate air quality data across the city to enable localised air quality concentrations and trends to be determined as part of the Detailed Assessment.

3.18	<p><u>Financial & Resource Implications</u></p> <p>An estimate of the cost of completing a detailed assessment for PM_{2.5} and NO₂ for the city was provided to Committee at its meeting of 5th November 2019. The costs were estimated to be up to £215,000, depending upon the final scope and complexity of the works undertaken.</p> <p><u>Equality or Good Relations Implications /Rural Needs Assessments</u></p>
3.19	None.
4.0	Appendices – Documents Attached
	None