



<b>Subject:</b>	'Schools Streets' Air Quality Monitoring Update Report
<b>Date:</b>	4 <sup>th</sup> November 2025
<b>Reporting Officer:</b>	Siobhan Toland, Director of City Services.
<b>Contact Officer:</b>	Alastair Curran Environmental Protection Manager

### Restricted Reports

Is this report restricted?

Yes

☐

No

☒

Please indicate the description, as listed in Schedule 6, of the exempt information by virtue of which the council has deemed this report restricted.

Insert number

1. Information relating to any individual
2. Information likely to reveal the identity of an individual
3. Information relating to the financial or business affairs of any particular person (including the council holding that information)
4. Information in connection with any labour relations matter
5. Information in relation to which a claim to legal professional privilege could be maintained
6. Information showing that the council proposes to (a) to give a notice imposing restrictions on a person; or (b) to make an order or direction
7. Information on any action in relation to the prevention, investigation or prosecution of crime

If Yes, when will the report become unrestricted?

After Committee Decision

After Council Decision

Sometime in the future

Never


### Call-in

Is the decision eligible for Call-in?

Yes

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No

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1.0	Purpose of Report / Summary of Main Issues
1.1	<p>The Committee will recall that at its meeting of 9<sup>th</sup> January 2024, Members considered a paper at agenda item 6b concerning monitoring of ambient air quality in the vicinity of a number of primary schools across the city to help to inform Action 22 of the 2021-2026 Belfast City Air Quality Action Plan concerning a pilot scheme for the designation of 'school streets'. Action 22 was proposed by and is to be delivered by Sustrans and the Department for Infrastructure (DfI). Council air quality officers have however undertaken to provide air quality monitoring data for typical road transport related pollutants in order to help inform the consideration of 'school streets' under Action 22.</p> <p><a href="https://www.belfastcity.gov.uk/documents/belfast-city-air-quality-action-plan-2021-2026#Table5.1">https://www.belfastcity.gov.uk/documents/belfast-city-air-quality-action-plan-2021-2026#Table5.1</a></p>
1.2	<p>Council Air Quality Officers have subsequently liaised with Sustrans in order to identify a selection of primary schools situated across the city where transport related ambient air quality monitoring in their localities might be undertaken to help inform the designation of school streets. The Committee will recall that a 'school street' is a road outside of a school with a temporary restriction on motorised traffic at the start and end of the school day. School street schemes may cover part of a road, a whole road or even several roads near to a school but government guidance indicates that a 'school street' is unlikely to be feasible where the school is located on a major road or a bus route. Eight primary schools were initially suggested by Sustrans, which were then surveyed by council officers in order to identify suitable monitoring locations, resulting in the council agreeing to install Earthsense Zephyr ambient air quality monitors in the vicinity of the following four initial primary schools; (i) Rosetta Primary School, Knockbreda Rd; (ii) Belvoir Park Primary School, Belvoir Drive; (iii) Holy Rosary Primary School, Sunnyside Crescent and; (iv) Holy Evangelists' Primary School and Nursery Unit, Glasvey Drive, Dunmurry.</p>
1.3	<p>Air quality monitors were installed from March 2024 onwards and for the purposes of the project, monitoring data was initially considered until the end of July 2024, to obtain nitrogen dioxide (NO<sub>2</sub>) and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) air pollution measurements and trends whilst the schools were in operation and by way of comparator, during the July holiday period. A summary report concerning the outcome of the monitoring data was provided to the Committee at its meeting of 3<sup>rd</sup> December 2024. <a href="https://minutes.belfastcity.gov.uk/ieListDocuments.aspx?CId=166&amp;MId=11604">https://minutes.belfastcity.gov.uk/ieListDocuments.aspx?CId=166&amp;MId=11604</a></p>
1.4	<p>The monitoring data was additionally reviewed and discussed with Sustrans and DAERA and it was consequently agreed that the air quality monitors would be maintained at two primary schools (Rosetta Primary School and Holy Rosary Primary School) in order to obtain further data, and the remaining two monitors would be redeployed to two new sites at Nettlefield Primary School, Cherryville Street, and Strandtown Primary School, North Road. It was additionally agreed that a further monitor, located at Henry Place and Carlisle Road, adjacent to the A12 Westlink, would be relocated southerly along the A12 Westlink corridor to undertake air quality monitoring in the vicinity of St. Mary's Primary School, Barrack Street; located adjacent to the A12 Westlink at Divis Street and adjacent to the boundary of the M1 Motorway / A12 Westlink Air Quality Management Area. The relocation of the monitors was completed in December 2024.</p>
1.5	<p>This paper therefore serves to provide an update to the Committee concerning monitoring data for nitrogen dioxide (NO<sub>2</sub>) and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) for the above-mentioned five primary schools. The data has been provided in the form of hourly and monthly means, and weekday and weekend diurnal (24-hour profile) nitrogen dioxide (NO<sub>2</sub>) means. The paper also considers exceedances of relevant air quality objectives for nitrogen dioxide (NO<sub>2</sub>) and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>).</p>

<b>2.0</b>	<b>Recommendation</b>
2.1	<p>The Committee is asked to:</p> <ul style="list-style-type: none"> <li>• Note the contents of this ‘Schools Streets’ air quality monitoring update report.</li> <li>• Agree that next steps are for council air quality officers to engage with Sustrans, the Department for Infrastructure (DfI) and the Department of Agriculture, Environment and Rural Affairs (DAERA), to appraise them of the results of the school streets monitoring and to seek support for the retention of the existing ‘school streets’ air quality monitors, or relocation of the monitors to undertake monitoring in the vicinity of other schools across the city.</li> </ul>
<b>3.0</b>	<b>Main Report</b>
3.1	<p>The Committee is advised that council air quality officers have installed solar powered Earthsense Zephyr small sensor air quality monitors in the vicinity of the above-mentioned five primary schools to target road traffic emissions from immediately adjacent public roads and transport routes to and from the schools. The Committee is further advised that ‘low cost sensors’ like the Zephyr analyser, although initially calibrated against reference standard monitoring equipment, such as those used to monitor and analyse ambient air quality across Belfast within our permanent monitoring sites, are nevertheless regarded as being indicative grade air quality analysers. Data from Zephyr monitors may therefore be further refined through co-location intercomparison studies.</p>
3.2	<p>This paper provides a summary of monitoring data for nitrogen dioxide (NO<sub>2</sub>) and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) for the period August 2024 - August 2025 for the retained monitoring sites at Rosetta Primary School and Holy Rosary Primary School, and from December 2024 – August 2025 for the three new monitoring sites at Nettlefield Primary School, Strandtown Primary School and St. Mary’s Primary School. The various monitoring data presented within Section 4.0 Appendix 4.1-4.6 is a continuation of the monitoring data provided in the previous Committee report of 3<sup>rd</sup> December 2024.</p>
3.3	<p>Monitoring data has been resolved into hourly mean concentrations to enable comparison with the 200 µg/m<sup>3</sup> 1-hour mean objective for nitrogen dioxide (NO<sub>2</sub>) and the 50 µg/m<sup>3</sup> longer term 24-hour mean objective for particulate matter (PM<sub>10</sub>). The Committee will appreciate that the 1-hour mean objective is applied at locations where members of the public might reasonably be expected to spend one hour or more and is therefore typically applicable to kerbside locations such as pavements of busy roads or streets, such as in the vicinity of schools during morning ‘drop off’ and afternoon ‘pick up’ periods. The 24-hour mean particulate matter objective would not normally apply at a roadside or kerbside location, where public exposure is typically short term. A summary of relevant air quality objectives has been provided in Section 4.0, Appendix 4.1 of this report. Hourly and monthly means, and diurnal weekday and weekend NO<sub>2</sub> mean profile graphs for the five primary schools have been provided at Section 4.0 Appendices 4.2 – 4.6 to this report.</p>
3.4	<p>In consideration of the monitoring data, it is noted that the diurnal (24-hour profile) nitrogen dioxide (NO<sub>2</sub>) mean graphs (Section 4.0 Appendices 4.2 - 4.6) broadly exhibit higher nitrogen dioxide concentrations during the weekday peak morning travel period when compared to the equivalent weekend period during the school term periods, and to a lesser extent during the summer period. The diurnal graphs similarly demonstrate an increase in nitrogen dioxide concentrations during the weekday evening travel period, when compared to the corresponding weekend period, and again, to a lesser extent during the summer months. Moreover, at some of the primary schools, it is considered that due to their location, the morning and evening peak hour increases shown within the diurnal profile graphs are reflective of wider morning and evening peak hour commuter road</p>

	<p>traffic travelling in the locality. Seasonal variations are exhibited within the monitoring data, with higher nitrogen dioxide and particulate matter concentrations recorded during winter months.</p>
3.5	<p>The Committee is advised that no exceedances of the 200 <math>\mu\text{g}/\text{m}^3</math> 1-hour mean objective (not to be exceeded more than 18 times per annum) for nitrogen dioxide (<math>\text{NO}_2</math>) or of the longer term 50 <math>\mu\text{g}/\text{m}^3</math> 24-hour mean objective (not to be exceeded more than 35 times per annum) for particulate matter (<math>\text{PM}_{10}</math>) were recorded throughout the monitoring periods. Accordingly, it is considered that there are no requirements to amend the council's existing Air Quality Management Areas (AQMA) or to declare any new Air Quality Management Areas as a consequence of the school streets monitoring. Moreover, the outworkings of the school streets monitoring are in broad accordance with the conclusions of the council's 2023 Detailed Assessment for Ambient Air Quality, undertaken by Aecom and presented to the Committee at its meeting of 13<sup>th</sup> June 2023.</p>
3.6	<p>Fine particulate matter (<math>\text{PM}_{2.5}</math>) is not presently in regulation for the purposes of local air quality management by NI councils, although a 25 <math>\mu\text{g}/\text{m}^3</math> annual mean target has been established, together with a 15% cut in urban background exposure, also assessed as an annual mean. The Committee is advised that an annual mean target for <math>\text{PM}_{2.5}</math> would not apply at roadside or kerbside monitoring locations, where public exposure is transient. Monthly mean monitoring data for particulate matter (<math>\text{PM}_{10}</math> and <math>\text{PM}_{2.5}</math>) have nevertheless been presented for each of the five primary schools within Appendices 4.2 – 4.6 of this report for additional information. Monitored monthly mean <math>\text{PM}_{2.5}</math> concentrations were substantially below the 25 <math>\mu\text{g}/\text{m}^3</math> target level during the monitoring period.</p>
3.7	<p>The monitoring data presented within Section 4.0 Appendix of this report does, however, confirm that elevated particulate matter concentrations (both <math>\text{PM}_{10}</math> and <math>\text{PM}_{2.5}</math>) were recorded across the various 'school street' monitoring locations around Thursday 20<sup>th</sup> March 2025, indicating the presence of more widespread particulate matter pollution across the city at that time, and not localised to individual school street monitoring sites. Elevated particulate matter concentrations were also recorded at the Belfast Centre AURN monitoring site between 18<sup>th</sup> and 22<sup>nd</sup> March 2025. In this regard, it is noted that the Met Office issued an air quality episode notification, based on a forecast of elevated particulate matter pollution concentrations across the United Kingdom, for Thursday 20<sup>th</sup> and Friday 21<sup>st</sup> March 2025.</p>
3.8	<p>Moreover, referring to the nitrogen dioxide monitoring data obtained for St. Mary's Primary School, Barrack Street, located at a kerbside monitoring location adjacent to the A12 Westlink, Divis Street and to the M1 Motorway / A12 Westlink Air Quality management Area, declared for exceedances of the nitrogen dioxide 1-hour and annual mean objectives, it is noted that eight exceedances of the 200 <math>\mu\text{g}/\text{m}^3</math> 1-hour mean standard were recorded during the monitoring period (18 permitted per annum). In considering the time of day when the exceedances occurred, however, it is noted that the majority occurred during the evening rush hours, i.e. 17:00 – 19:00, and not within the typical primary school day. It is additionally noted that Divis Street serves to provide access to the city centre from west Belfast and from the A12 Westlink city and country bound off slips. Moreover, Divis Street also forms part of the Belfast Rapid Transit G1 West route, and this locality is not therefore typical of the other school street monitoring locations that tend to be located in less trafficked residential areas of the city.</p>
3.9	<p>Further to consideration of this paper by the Committee, council air quality officers will share and discuss the monitoring data presented with Sustrans, the Department for Infrastructure (DfI) and</p>

	the Department of Agriculture, Environment and Rural Affairs (DAERA) Air and Environmental Quality Unit.
3.10	It will then be for Sustrans and the Department for Infrastructure in conjunction with DAERA to consider how they may wish to utilise the monitoring data generated during this project to help inform the designation of 'school streets' in accordance with Action 22 of the 2021-2026 Belfast City Air Quality Action Plan, and whether further monitoring in the vicinity of primary schools or at other schools across the city is required.
3.11	<p><b><u>Financial and Resource Implications</u></b></p> <p>There are no immediate financial or resource implications associated with this report. The operation of the Zephyr air quality monitors is supported via the DAERA 2025-2026 Local Air Quality Management grant process. The 'Schools Streets' monitoring project is being undertaken from within existing Scientific Unit air quality staff resources.</p>
3.12	<p><b><u>Equality or Good Relations Implications/Rural Needs Assessment</u></b></p> <p>None.</p>
<b>4.0</b>	<b>Appendix</b>
<b>4.1</b>	Appendix 1 – Air Quality School Reports