



Subject:	'School Streets' Air Quality Monitoring Report.
Date:	9 th January 2024
Reporting Officer:	Siobhan Toland, Director of City Services.
Contact Officer:	Alastair Curran Environmental Protection Manager Vivienne Donnelly, City Protection Manager

Restricted Reports	
Is this report restricted?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	
<ol style="list-style-type: none">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	<input type="checkbox"/>
After Council Decision	
Sometime in the future	
Never	

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

1.0	Purpose of Report/Summary of Main Issues
1.1	The Committee will be aware that the Belfast City Air Quality Action Plan 2021-2026 contains an action proposed by Sustrans and the Department for Infrastructure (DfI) in respect of 'School Streets'. A 'School Street' is a road or street outside of a school where a temporary restriction on motorised traffic is applied at am 'drop-off' and pm 'pick-up' times during the school day.
1.2	Ambient air quality monitoring in the vicinity of schools for typical road transport related pollutants such as nitrogen dioxide (NO ₂) and particulate matter (PM _{2.5} and PM ₁₀) may provide health-based evidence and numerical data to help inform the identification and designation of School Streets by the Department for Infrastructure and Sustrans. Sustrans have indicated that gathering data from air quality monitors could help make the case stronger for where we need to tackle air pollution and target schools for interventions such as a School Streets pilot.
1.3	Accordingly, this report serves to provide a monitoring proposal for a range of Belfast primary schools in order to characterise local transport related ambient air pollution affecting school users. The monitoring data will be provided to DfI, Sustrans and where requested to the respective schools to help inform the identification and designation of School Streets.
2.0	Recommendation
2.1	The Committee is invited to note the contents of this School's Streets' Air Quality Monitoring Report and to agree that the council's ambient monitoring contribution to the Belfast City Air Quality Action Plan 2021-2026 School Streets project be implemented in the manner proposed.
3.0	Main Report
3.1	The Committee will be aware that the Belfast City Air Quality Action Plan 2021-2026 contains an action at measure 22, traffic management, proposed by Sustrans and the Department for Infrastructure (DfI) in respect of 'School Streets'. A School Street is a road or street outside of a school where a temporary restriction on motorised traffic is applied at am 'drop-off' and pm 'pick-up' times during the school day, resulting in a safer and environmentally improved local environment. The restriction is typically applied to both school and through traffic.
3.2	By way of example, it is noted that DfI, at the Ravenhill Road, in addition to having designated the Ravenhill Road as an urban clearway from 08:00 – 09:30 and 16:30 – 18:00 (Monday to Friday), have imposed a 20 mph signalised speed limit around a school entrance and have posted signs restricting stopping on the school's entrance markings from 08:30 – 09:15 and from 14:30 – 15:30 (Monday to Friday) in order to improve safety and the local environment.
3.3	Moreover, the Committee is advised that a 'Notice of Motion' in respect of School Streets was considered at the Strategic Policy and Resources Committee meeting of 20 th January 2023, whereupon the Committee agreed, <i>'in the first instance, that the Council would write to the Department for Infrastructure requesting it to bring forward a School Streets pilot project in Belfast, with the response to be presented to the Committee for consideration and a decision to be taken on the way forward'</i> .

3.4	<p>Furthermore, upon consideration of the minutes of the People and Communities Committee meeting of 13th June 2023 concerning the Air Quality Detailed Assessment report, at the full Council meeting of 3rd July 2023, Council agreed that a letter would be forwarded to the Department for Agriculture, Environment, and Rural Affairs (DAERA) seeking air quality monitoring stations to be erected around primary schools. A letter was sent to the DAERA Air and Environmental Quality Unit on 9th August 2023 by the Director of City and Neighbourhood Services, and a response was received from DAERA, dated 30th August 2023, indicating the Department's intention to support the purchase of two small sensor air quality monitoring units via the 2023-2024 local air quality management process, to be used in a School Streets monitoring project.</p>
3.5	<p>The Committee will be aware that the four Air Quality Management Areas (AQMAs) presently designated across the city have been declared for exceedances of the 40 μgm^{-3} nitrogen dioxide annual mean air quality objective, associated principally with road transport emissions. It should be noted however that in accordance with the provisions of the Department for Environment Food & Rural Affairs (Defra) local air quality management guidance (LAQM.TG(22)), annual mean objectives apply only at the building façades of residential properties, schools, hospitals, care homes etc., where members of the public are regularly exposed over a substantial period of the objective. They do not apply at kerbside or other locations where public exposure is short-term. The 200 μgm^{-3} 1-hour mean objective for nitrogen dioxide is therefore more correctly applied at kerbside locations and so it is considered that any ambient monitoring for nitrogen dioxide in the vicinity of schools should be on this basis. The Committee will be additionally aware that there is a 'drop off' in nitrogen dioxide concentrations with distance from the kerbside of a road and so the highest nitrogen dioxide concentrations are likely to be experienced by school users at kerbside locations along the most heavily trafficked nearby roads. Particulate matter (PM₁₀ and PM_{2.5}) concentrations are assessed against annual mean objectives, with PM₁₀ also assessed against a 24-hour mean objective.</p>
3.6	<p>The Committee is advised that council Air Quality Officers have liaised with Sustrans in order to identify a selection of primary schools situated throughout the city where transport related ambient air quality monitoring in their localities might be undertaken. Selection criteria applied include; • Is there much traffic congestion at the school gates? • Does the infrastructure / road layout around the school seem suitable for a future intervention such as School Streets? • Is the school keen to increase active travel among pupils? • Is the school in the Active School Travel programme? Some of the primary schools identified are already engaged with Sustrans through their Active School Travel programme.</p>
3.7	<p>Schools under consideration for ambient air quality monitoring in their locality include' St. Joseph's Primary, Holland Drive, Ballyhackamore; Rosetta Primary School, Knockbreda Road; Belvoir Park Primary School, Belvoir Drive; Holy Rosary Primary School, Sunnyside Crescent; Holy Family Primary School, Newington Avenue; Cavehill Primary School, Upper Castle Park; Holy Evangelists' Primary School and Nursery Unit, Glasvey Drive, Dunmurry and; Holy Trinity Primary School, Monagh Drive.</p>
3.8	<p>Sustrans have subsequently indicated that as a consequence of their ongoing engagement with some of the abovementioned schools, they would inform them about the Council's plans to potentially locate air quality monitors in their localities. Sustrans have advised that the responses have been positive for those schools that they have been in contact with to date.</p>

	<p>Council officers will however have full regard for any school concerns expressed regarding the proposed monitoring activities.</p>
3.9	<p>There will be no impact on school operations or pupils as a consequence of the proposed ambient air quality monitoring and officers will not need to enter any school grounds, as all ambient monitoring will be planned and undertaken to target adjacent public roads and transport routes, to and from the schools.</p>
3.10	<p>It is therefore proposed to purchase two new solar powered small sensor indicative grade ambient air quality monitors for nitrogen dioxide and particulate matter and to deploy them, alongside two of the council's existing Zephyr small sensor air quality monitors, originally located to contribute additional background data for the detailed assessment project, to the School Streets project. An example of an existing Zephyr monitor installation is included in the Appendix (Section 4.0) of this report. It is further proposed that the monitors will be deployed from mid to late January 2024, subject to suitable lamppost / street furniture mounting locations in appropriate monitoring locations being identified and agreed with DfI, which owns the lampposts and street furniture. In addition, the lampposts or street furniture chosen must be able to safely support the small sensor monitors and solar panels throughout all weather conditions and so this will need to be confirmed by DfI. The monitors and solar panels will be marked as council air quality monitoring equipment and be located on lampposts or street furniture at an approximate 3m height. The monitors are virtually silent in operation and data collection and communication is via inbuilt 4G wireless data modem. It is proposed that the monitors will be installed for an approximate period of 3 months until around Easter 2024 in the locality of an initial four schools, subject to school engagement and agreement, whereupon they may be relocated to the remaining school areas. This approach will mean that ambient monitoring may continue until the conclusion of the Northern Ireland 2023-2024 school academic year on 1st July 2024.</p>
3.11	<p>The small sensor air quality monitors can generate indicative ambient monitoring data over typical 1-minute intervals and so provide suitable temporal data resolution for assessing compliance with annual, daily and hourly mean air quality objectives, as well as identifying and characterising daily diurnal trends such as any am or pm pollution peaks associated with school or road traffic. It is considered that a three-month monitoring duration will provide sufficient data to correctly characterise am or pm pollution peaks. Monitoring will be able to take account of school holidays, etc.</p>
3.12	<p>The transport related ambient monitoring data will be shared with Sustrans and DfI and be made available to the respective schools, upon their request. Where additionally requested, Council Air Quality Officers will engage with Sustrans, DfI and schools in order to assist in interpreting the air quality monitoring data generated, and in support of any subsequent engagement concerning the designation of School Streets.</p>
3.13	<p><u>Financial and Resource Implications</u></p> <p>The purchase cost of the two small sensor air quality monitors is being provided at a 100% funding rate by DAERA through the 2023-2024 local air quality management grant process. Any additional funds required for delivery of this monitoring project will be provided from within existing Scientific Unit budget resources. The monitoring project will be delivered by council Air Quality Officers as an addition to their statutory local air quality management obligations.</p>

Equality or Good Relations Implications/Rural Needs Assessment.

3.14

None.

4.0

Appendices - Documents Attached

4.1

Zephyr small sensor air quality monitor and solar panel installed on a lamppost at the A2 Sydenham Bypass.

