

**BIRMINGHAM CITY COUNCIL**

**REPORT OF THE ACTING DIRECTOR OF REGULATION AND ENFORCEMENT  
TO THE LICENSING AND PUBLIC PROTECTION COMMITTEE**

**20 JANUARY 2015**  
**LADYWOOD WARD**  
**NECHELLS WARD**

**LOCATION CHANGES OF AIR POLLUTION MONITORING EQUIPMENT**

1 Summary

- 1.1 The Local Authority has a duty to monitor the air within its district and assess the concentrations of certain pollutants against a legal limit.
- 1.2 Within Birmingham the only pollutant that exceeds the legal limit is nitrogen dioxide and the primary problem area is the city centre, mainly within the A4540 ring road.
- 1.3 In order to improve the monitoring network within the city centre it has been determined to relocate two stations from Tyburn Road into the centre.
- 1.4 The Government have submitted updated air quality plans to the EU and one aspect is the mandating of a Clean Air Zone within Birmingham, the details of which are yet to be determined. Relocating the stations will assist in monitoring the effectiveness of any measure introduced.

2 Recommendations

- 2.1 That Committee endorse the ongoing monitoring strategy employed by Environmental Health.
- 2.2 That a further report be brought to this Committee in February detailing the announcement by Government regarding the mandating of Clean Air Zones.

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### 3. Background

- 3.1 Under the Local Air Quality Management (LAQM) regime established under the Environment Act 1995 local authorities are required to monitor for various pollutants within their area.
- 3.2 Where monitoring determines that pollutant levels exceed or are likely to exceed legislative limits the authority is obligated to declare an Air Quality Management Area.
- 3.3. Within Birmingham the only pollutant which exceeds legislative limits is nitrogen dioxide (NO<sub>2</sub>) and as such the monitoring strategy employed by the local authority focuses on monitoring for NO<sub>2</sub>.
- 3.4 NO<sub>2</sub> is a product of combustion and the primary source of NO<sub>2</sub> within the city is from road vehicles, with diesel vehicles generating increased levels as opposed to petrol equivalents (where appropriate).

### 4 Monitoring Network

- 4.1 The Environmental Protection Team within Environmental Health manage the monitoring network and determine monitoring sites based on experience, known pollutant sources, and changes to the road network.
- 4.2 The monitoring network makes use of real time monitoring stations where the air is sampled and the pollution concentration recorded in real time, and nitrogen dioxide tubes which display an average pollutant concentration over a period e.g. 2 weeks or a month.
- 4.3 The advantages of real time monitoring is that it can better show diurnal variations and hence can be linked to traffic flows, individual episodes within a period e.g. congestion, rush hour, etc., but they are more costly to set up and maintain.
- 4.4 A further benefit of a real time monitoring station is that when correctly calibrated the confidence level of the output i.e. the pollutant concentration, can be very high, and this allows collocating of nitrogen dioxide tubes to provide a correction factor which can further enhance the confidence in tubes deployed widely across an area.
- 4.5 Combined, the use of real time and passive diffusion technologies can provide for a robust network across the city.
- 4.6 The attached appendix shows the approximate location of the network as of autumn 2015.

## 5 Relocation of Stations

- 5.1 Due to the impending closure of the Tyburn Road offices and relocation of the Environmental Protection Team to Manor House there is a need to relocate the two real time stations to alternate sites within the city.
- 5.2 An added factor in the relocation of the stations is the fact that the area most affected by NO<sub>2</sub> is the city centre and enhanced monitoring within this area would provide a greater benefit in assisting the targeting of interventions to control pollution. Consideration of locating more stations in the city centre area has been ongoing for some time, but the need to move from Tyburn Road has hastened this process.
- 5.3 Two sites are being proposed both within the city centre area.
- 5.4 The first site is on the grass verge to the rear of the Nelson Junior and Infants School (see plan below). This will allow measurement of urban background levels within the city centre area.



- 5.5 The second site proposed is on the eastern ring road on Watery Lane Middleway adjacent to Kingston Hill Local Park (see below). This will allow measurement of pollutant levels at a busy roadside.



- 5.6 The two sites are being discussed by Environmental Protection in partnership with colleagues within Defra who are fully funding the relocation of one of the stations.
- 5.7 Both sites satisfy the need for further inner city monitoring and are in alignment with City Council and Government strategy around air quality.
- 5.8 Air pollution levels on the Tyburn Road do not exceed the legislative limit which is considered at a property façade and as such relocating the monitoring sites will not adversely affect the local population.

## 6 Brief Comment on Wider Air Quality Matters

- 6.1 As stated above, the relocation of the stations aligns with wider strategic needs and the last 12 months has seen a significant interest in air quality matters.
- 6.1.1 The European Commission has commenced infraction proceedings against the UK Government for breaches of the NO<sub>2</sub> limit value and Defra were tasked with preparing an air quality plan to be submitted to Government by the end of 2015. Birmingham officers have had significant input into this plan and the finalized submission.
- 6.1.2 The “VW scandal” has highlighted the failure of laboratory testing of emission from new vehicles, heavily undermining the reputation of certain automotive manufacturers. This has brought into question the

accuracy of projections and cemented the need for more robust and accurate testing regimes that are based more on real life drive cycles rather than in-laboratory tests.

- 6.1.3 As part of Government's plan submitted to the EU, it has been announced in December that Government would be mandating the declaration of a Clean Air Zone (CAZ) in Birmingham, this to cover buses, coaches, HGV, LGV, hackney carriages, but not private cars. The CAZ in itself will not secure compliance but other measures will be needed and these will be scoped by Birmingham officers working in conjunction with Defra.
- 6.1.4 The LAQM regime is presently being revised, the intention being for it to be more streamlined, to focus more on action planning i.e. delivering pollution reductions rather than monitoring and assessing emissions, and to have clear high level support i.e. at Chief Executive Level, with a senior officer steering group.
- 6.2 Due to the level of detail involved and the high level strategic implications of the developments, many of which have arisen in the past two months, it has been determined by Senior Officers that a report be presented to Executive Management Team (EMT), covering these items. This report is being completed with a view to being presented at EMT in mid-January.
- 6.3 Assuming that the report is accepted and taken to EMT then a request will be made to EMT to permit the report to be brought before this Committee in February.

## 7 Implications for Resources

- 7.1 The resources employed in carrying out the work detailed in this report are partly delivered by Defra, whilst Officer time will be contained within this Committee's budget. Additional costs for the second monitoring station, for instance putting in a hard-standing, physical removal, electrical connection will be part funded from this Committee's budget.
- 7.2 Environmental Protection have secured grant funding for various air quality projects over the past 5 years, some of the funds arising remain unspent. A request will be made to the grant provider (Defra) to ascertain if funds can be realigned to assist in the moving costs.

## 8 Implications for Policy Priorities

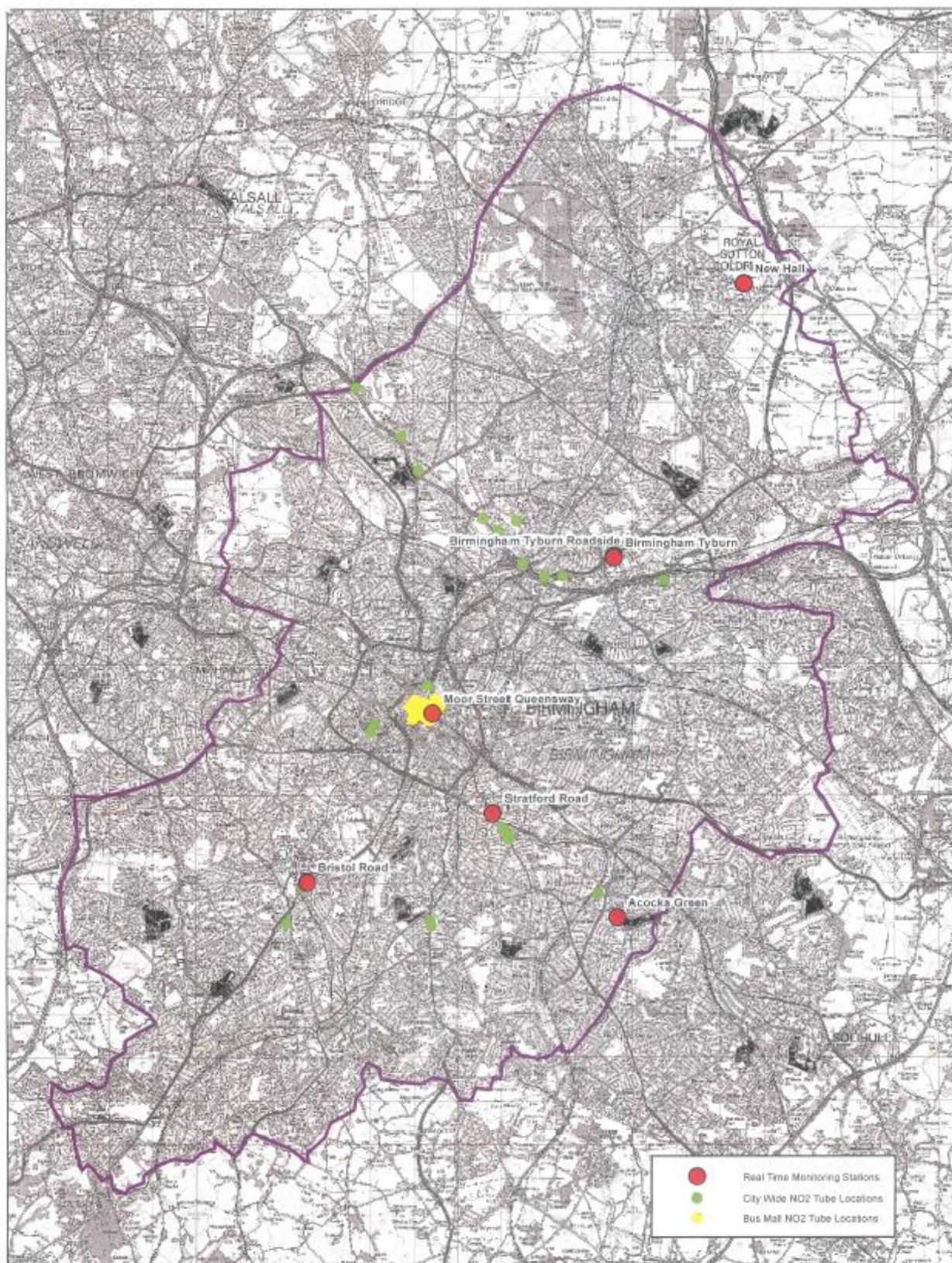
- 8.1 The management of air quality contributes to fulfilling the policies of Birmingham 2026: Our vision for the future and supports the strategic outcomes set out in the Council Business Plan for 2011+, specifically to 'stay safe in a clean, green city'.

- 8.2 The work undertaken by Environmental Health also supports the Regulation and Enforcement Division's mission statement to provide 'fair regulation for all - achieving a safe, clean, green and fair trading city for residents, business and visitors'.
- 8.3 A link between poor air quality and social deprivation has been established with the more inner city wards suffering the greatest amount of pollution. By reprioritizing monitoring to the more affected wards this can better assist in securing suitable interventions to reduce pollution and associated health inequalities.
- 8.4 Air pollution levels on the Tyburn Road do not exceed the legislative limit and as such relocating the monitoring sites will not adversely affect the local population.
- 9 Public Sector Equality Duty
- 9.1 Air pollution has the potential to affect all members of society but can have specific impacts on pregnant women and the unborn child. The concerns about such are widely known and health advice is issued accordingly by relevant medical professionals.
- 9.2 The approach taken to address air quality is such as to protect all members of society and does not discriminate against any group.

## **ACTING DIRECTOR OF REGULATION AND ENFORCEMENT**

Background Papers: Nil



Location of air quality monitoring sites within the city

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