

REPORT TO: OSC**DATE: 8 November 2017****REPORT TITLE: Air Quality****REPORT AUTHOR:****Ned Johnson****Ned.johnson@enfield.gov.uk****020 8379 3701****PURPOSE OF REPORT:**

Air pollution is both a national and local issue which has a detrimental impact upon the health of all of those exposed to it. The report has been requested by the Oversight & Scrutiny Committee to provide information on the issues faced in the London Borough of Enfield and how the problems are being addressed.

SUMMARY:

The report covers the current situation in the London Borough of Enfield, what the Council is doing to reduce air pollution concentrations and what residents and businesses can do.

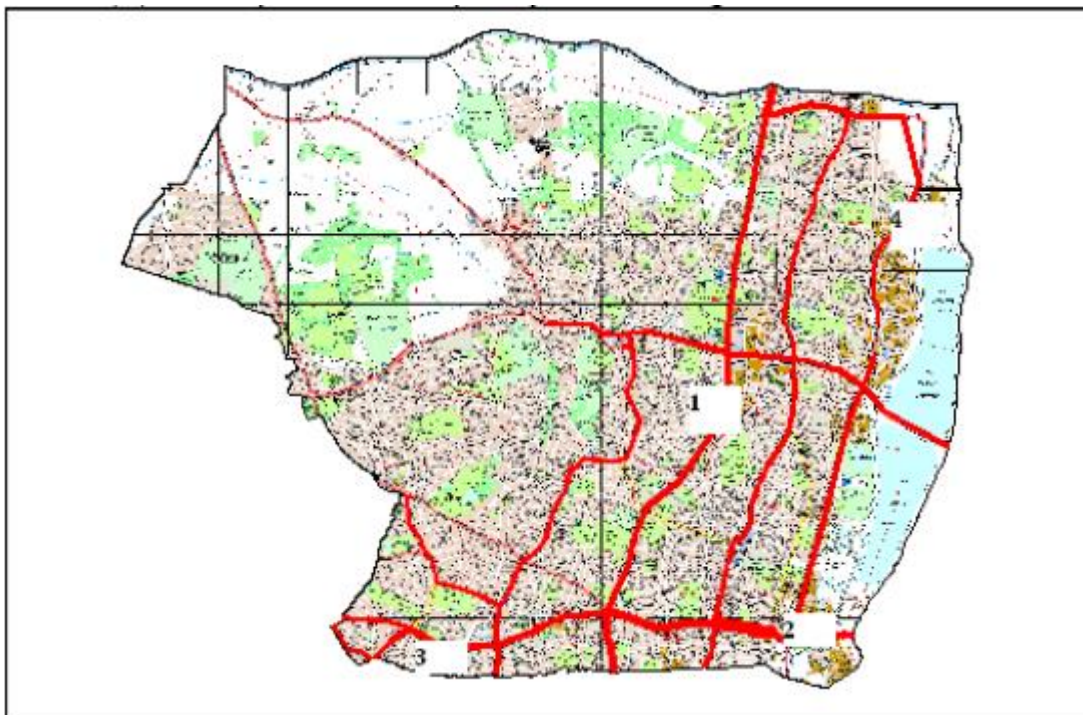
1. BACKGROUND

1.1 The Environment Act 1995 introduced the system of local air quality management and consequently all local authorities in the United Kingdom have a legal responsibility to review and assess the air quality within their areas for seven key pollutants:

- Nitrogen dioxide
- Particulates (PM₁₀)
- Sulphur dioxide
- Carbon Monoxide
- Lead
- Benzene
- 1,3-butadiene

1.2 The pollutants above arise from a variety of sources; the main source for nitrogen dioxide, PM₁₀, benzene, 1,3-butadiene and carbon monoxide in Enfield is road traffic. Sulphur dioxide is emitted predominantly from power stations burning fossil fuels. Lead is emitted from industry, in particular, non-ferrous metal smelters. There are no major sources of lead or sulphur dioxide in the borough.

- 1.3 The Council has four permanent real-time monitoring sites in the borough, all of which monitor nitrogen dioxide. Two of the sites monitor PM₁₀ and one also monitors sulphur dioxide. The monitoring sites are located at John Jackson Library (1), Derby Road (2) (N18) Bowes Primary (3), and Prince of Wales School (4). A map of the air quality monitoring station locations is below.



- 1.4 All the data generated is ratified by Environmental Research Group and put on the London Air Quality Network website. The data generated allows us to assess if we are complying with the pollutant objectives set-out in the Air Quality Regulations 2000 and (Amendment) Regulations 2002.
- 1.5 The data for Enfield (and London) is publically available at: <http://www.londonair.org.uk/LondonAir/Default.aspx>
- 1.6 The Air Quality Standards Regulations 2010 set out objectives levels for each of the abovementioned pollutants and a target date by which the objectives have to be met. The objective levels are set, using expert medical advice, at a level at which even the most sensitive individuals would not feel any adverse health effects.
- 1.7 The introduction of air quality management was as a result of European Union Directives which were transposed into British law. The situation being that if the country does not meet the objective dates the Government is liable for prosecution and heavy fines.
- 1.8 The process of local air quality management is progressed through rounds of review and assessment. The first round was completed in 2001 and demonstrated that the objective levels for nitrogen dioxide

annual average and PM₁₀ 24-hourly average would be exceeded along the major routes and a number of heavily trafficked roads. For this reason the whole borough was declared an air quality management area (AQMA). Subsequent rounds of review and assessment confirmed that the AQMA declaration was correct.

- 1.9 Following the declaration of the AQMA we produced an air quality action plan which had a detailed set of actions setting out how the Council would work towards meeting the air quality objectives being breached across the borough.
- 1.10 We send annual air quality progress reports to the Greater London Authority, which detail the results of the Council's monitoring data. To date the data show that the nitrogen dioxide annual mean objective is still being exceeded at roadside locations on busy roads, such as the A406. The data for PM₁₀ shows that concentrations have reduced with time and that we have not exceeded the objectives for this pollutant since 2008.
- 1.11 Although monitoring data shows no issues with PM₁₀ we had the whole borough computer dispersion modelled for PM₁₀ and nitrogen dioxide in 2015. The results of the modelling showed that there are potentially exceedances of the PM₁₀ 24-hour objective along major roads and for this reason we have maintained the AQMA for PM₁₀.

2. ISSUES AND CHALLENGES

- 2.1 The main source of air pollution in the London Borough of Enfield, as well as the whole of Greater London, is road traffic. The sheer number of vehicles on our roads means that air pollution issues are not confined to just the trunk roads, such as the A406, the A10 or the M25, but also on heavily congested roads such as Bullsmoor Lane.
- 2.2 As nearly all vehicles burn fuel, they are all individual sources of air pollution emissions. However it is not only fuel consumption that causes a problem, tyre and brake wear give rise to emissions of PM₁₀ as fine dust is created when driving and braking.
- 2.3 Although pollution concentrations diminish with distance from the side of the road, there are large numbers of residents living in close proximity to busy roads whom will be exposed to concentrations of nitrogen dioxide, which exceed the objective limit set out in the Air Quality Standards Regulations.
- 2.4 As the population has increased in the borough so has the number of cars on our roads and a rising population will continue to bring more cars into the borough as well as see more travelling through it to neighbouring boroughs. This growth is likely to negate any improvements in vehicle technology.

- 2.5 The main methods of reducing emissions from our roads is either reducing the number of vehicles or replacing current petrol and diesel vehicles with zero-emissions vehicles, such as electric or hydrogen fuel cell vehicles. The problem is that people are reluctant to give-up their cars as they make life easier and zero emissions technology is very new and cannot yet provide the refuelling and distance options of a petrol or diesel vehicle.
- 2.6 The ability to effect road traffic levels on the main roads through the borough is extremely limited as the A406 and A10 are controlled by TfL and the M25 is controlled by Highways England.
- 2.7 The Council has an Air Quality Action Plan (AQAP), which was published in 2015. The AQAP details all the actions being taken by Enfield Council to reduce air pollution concentrations. The current plan sets out 40 actions we are taking and are spread across a wide variety of sectors within the Council. The main areas that have an effect on air quality are Transportation Planning, Highways Services, Development Management, Carbon Management and Environmental Health.
- 2.8 The majority of the actions in the AQAP are related to transport measures with a particular focus on options for increasing walking and cycling as well as increasing the use of public transport. These types of measures are critical in reducing car use as well as improving public health through taking more exercise. Many of the action points are long-term, but annual reporting ensures progress we have made with implementing the action plan has been submitted to the GLA.
- 2.9 The implementation of Cycle Enfield is an example of a transport measure that has the potential to reduce car use by providing safe cycle routes that will give residents the confidence to use bicycles without feeling at risk of being hit by close-passing cars.
- 2.10 We have recently concluded a green screen trial at Bowes Primary and are awaiting the results to see if using planting, such as ivy, can reduce air pollution concentrations. If there is evidence of a positive impact planting could be used as an option to improve air quality.
- 2.11 The implementation of school travel plans is very important as this will help children to understand that there are other methods of travelling to and from school other than the car. This will hopefully create a culture change where the school time trip is undertaken by bus, bike or on foot. Education is one of the most important aspects of improving air quality.
- 2.12 The Ultra Low Emission Zone (ULEZ) is an opportunity for the Mayor of London to impose emission limits on all vehicles travelling in the whole of Greater London. Unfortunately the Mayor is currently proposing to use the North Circular Road as boundary for the ULEZ, which means the majority of our borough would be outside the ULEZ and we would gain little, if any benefit from it. The ULEZ is of great importance as it

would apply to all vehicles, rather than certain classes of vehicle, which is the case with the current London Low Emission Zone.

- 2.13 A ULEZ covering the whole of Greater London would mean that the whole of London would benefit from reduced vehicle emissions and the modelling undertaken by the Mayor of London predicts a reduction in nitrogen dioxide of up to 23% in Enfield if the ULEZ were expanded to cover our borough. This could mean that there is sufficient reduction in nitrogen dioxide concentrations to meet the objective levels in the Air Quality Standards Regulations 2010. In reality reductions may not be as high as 23% due to the difference in vehicle emissions in real-world driving conditions compared to test conditions. However, there would still likely be a substantial reduction in concentrations of nitrogen dioxide. We will continue to lobby the Mayor to expand the ULEZ to cover Greater London rather than just 'Inner London'.
- 2.14 As part of a joint project with the London Boroughs of Barnet, Haringey and Waltham Forest we have a shared officer, paid for through the Mayor of London's air quality fund. The officer is responsible for visiting construction sites to deal with dust issues and ensure that the plant and machinery on site comply with the Non-Road Mobile Machinery Low Emission Zone. The officer works 2.5 days every fortnight and began work in January this year; he has visited a large number of sites and ensured compliance to reduce the impact of dust from construction and demolition.
- 2.15 Enfield has also been part of the London-wide anti idling campaign, which saw officers from Pollution Control & Planning Enforcement, along with colleagues from Traffic & Transportation, undertake 6 anti-idling days in 2016/17. The campaign days were mainly outside schools and officers engaged with drivers who were parked with their engines idling and explained the impact of vehicle emissions on the environment and human health. In terms of responses all the drivers parked outside the schools we visited complied with our requests to turn their engines off; town centre drivers were not so obliging.
- 2.16 The main message to borough residents and businesses is that we are all responsible for air quality, although it is often perceived as the responsibility of the Council, Mayor of London or the British Government. Borough residents could make a real difference by changing some of their car trips for public transport, walking or cycling. Walking and cycling being the best as health is improved at the same time as reducing air pollution.
- 2.17 Businesses can reduce their impacts by trying to reduce the number of deliveries to their premises. This could be achieved by using a freight consolidation centre, such as the one in Edmonton. Items are delivered into the consolidation centre and then a delivery can take place to all businesses using the centre. The more businesses that use the centre in one location means less deliveries take place. This reduces the volume

of road traffic and as larger vehicles, such as vans and lorries have higher emissions the effect is higher than if a car was removed from the road.

3. RECOMMENDATIONS

Note the report for information.

4. NEXT STEPS

- 4.1 We will continue to implement the AQAP to improve air quality and the health of the borough's residents. The AQAP will be reviewed at regular intervals to ensure it is relevant and states all the actions available to the Council to improve air quality.