

Section 5.11 Levels of Air & Environmental Pollution

Environmental pollution can affect the health of people through exposure to chemicals found in air or water, or in or on the land. The Council have a duty to limit the amount of harmful pollution through legislation and environmental protection measures and control of emissions.

Land may be contaminated as a result of previous use. Barking and Dagenham has a long industrial history which results in the potential for land to be contaminated. Exposure to contaminants is potentially a serious source of environmental exposure. Control is provided through Part IIA of the Environmental Protection Act 1990 and in the case of proposed development through the requirement of the National Planning Policy Framework and accompanying Planning Practice Guidance.

The process is detailed in the Council's contaminated land strategy with planning being the primary mechanism for dealing with contaminated land.

Water pollution is controlled by the Environment Agency and the Drinking Water Inspectorate who regulate the levels of contaminants in drinking water so that it is safe to drink.

Three of the four borough boundaries are watercourses, the Beam River, the River Roding and the Thames. Other key waterways within the borough are the Mayesbrook, the Goresbrook and Loxford Water.

Air pollution is known to cause respiratory and cardiovascular effects.

Episodes of poor air quality can aggravate asthma and lung disease, lead to irritation of the eyes, nose and throat, cause lung cancers, heart attacks and even lead to death. London often has poor levels of air quality as there are many sources of air pollution, such as vehicles and industry that emit gaseous and particulate pollution. Smog can occur in the summer or winter, when the pollutants build up and are not dispersed in the atmosphere.

The Council is required to review and assess levels of air quality in the borough formerly through the UK's National Air Quality Strategy (2007) and from May 2016 the Mayor's London Local Air Quality Management (LLAQM) framework. This new statutory framework was designed to specifically meet London's needs and includes:

- bespoke technical tools and guidance to help boroughs with action planning and monitoring.
- explicit integration of planning into the LLAQM framework
- a Cleaner Air Borough accreditation scheme for boroughs that effectively monitor and reduce air pollution. Barking and Dagenham is a Cleaner Air Borough

- a reporting framework which shows air quality action and achievements at the borough level.

Due to elevated levels of nitrogen dioxide and particulate matter the borough was designated as an Air Quality Management Area under the policies and procedures of the National Air Quality Strategy and this remains the case under LLAQM.

Road vehicles, public transport and domestic heating, industry and emissions from non-road mobile machinery employed on construction sites (NRMM) are the main sources of nitrogen dioxide.

The most significant local source of fine particulates (PM₁₀ and PM_{2.5})¹ is road transport but other, sources include most notably NRMM as well as atmospheric chemistry, sea salt and trans-boundary sources from Europe.

5.11.1 Overview of Services

The Council has a duty to deal with air pollution in four different ways:

- *Regularly review and assess air quality.*
Air quality is assessed against national health based criteria. If levels are likely to exceed those criteria the Council has to make an Air Quality Management Order defining an Air Quality Management Area (AQMA). Barking and Dagenham are likely to exceed criteria along major roads and as a result an AQMA has been declared covering the whole borough.
- *Issue permits to certain specified industrial processes.*
Permits are issued to businesses that operate one or more specified processes.
- *Investigate complaints of nuisance from smoke, dust and smell.*
Investigate incidents of industrial burning producing dark or black smoke.

In 2015/16, 262 requests for service were received relating to the above nuisance activities

5.11.2 Health Effects of Environmental Pollution, in Particular air Pollution

Elevated levels of air pollution can lead to increased hospital admissions for respiratory and cardiovascular conditions, as well as GP consultations. The scientific evidence suggests that exposure to air pollution also has a long-term effect on health, though the effects will vary depending upon exposure level and the type of pollutant.

According to a study² carried out by researchers at King's College London, there were approximately 9500 premature deaths in London due to two key pollutants, fine particulates known as PM_{2.5}s and the toxic gas nitrogen dioxide (NO₂) in 2010. The

¹ Particulate matter with a size less than 10 or 2.5 micrometres in diameter.

² https://www.london.gov.uk/sites/default/files/hia_in_london_kingsreport_14072015_final.pdf

report indicates that most of the deaths caused by NO₂ were linked to road transport and other sources from within the city, while health issues caused by PM_{2.5} were predominantly from particles created outside of London, including emissions transported from Europe.

5.11.3 Attributable Deaths

The Public Health Outcomes Framework³ includes a benchmark tool which enables the comparison of the fraction (%) of mortality attributable to long term exposure to PM_{2.5} in each local authority in the UK.

This can be compared to the UK average which is 5.3% of mortality attributable to long term exposure to PM_{2.5}. The statistics for each of the London boroughs are included in Table 1 below with London Borough (LB) Barking & Dagenham ranked 15th best in London.

Area	Fraction (%) of mortality attributable to long term exposure to PM _{2.5}
England	5.3
London region	6.7
City of London	8.4
Westminster	7.9
Kensington and Chelsea	7.8
Islington	7.5
Tower Hamlets	7.5
Camden	7.4
Hackney	7.3
Hammersmith and Fulham	7.3
Southwark	7.2
Lambeth	7.1
Newham	7.0
Ealing	7.0
Brent	6.9
Waltham Forest	6.9
Haringey	6.8
Wandsworth	6.8

³ <http://www.phoutcomes.info/public-health-outcomes-framework#page/3/gid/1000043/pat/6/par/E12000007/ati/102/are/E09000002/iid/30101/age/230/sex/4>

Area	Fraction (%) of mortality attributable to long term exposure to PM2.5
Redbridge	6.7
Hounslow	6.7
Barking and Dagenham	6.6
Lewisham	6.6
Greenwich	6.6
Barnet	6.5
Merton	6.4
Enfield	6.4
Hillingdon	6.3
Richmond upon Thames	6.3
Kingston upon Thames	6.2
Bexley	6.1
Harrow	6.1
Croydon	6.1
Havering	6.0
Sutton	6.0
Bromley	5.8

Table 1 Fraction (%) of mortality attributable to long term exposure to PM2.5

5.11.4 Current Delivery

Air quality monitoring data is collected and displayed on the London Air Quality Network website⁴.

The website displays both real time and historical data. The Council website has information and links to other air quality websites including AirText, which is a service that sends up to the minute air quality forecasts by text message to the public. This is of particular value to people vulnerable to the effects of air pollution.

Responsive services are available and generally publicised through the council's website and other publicity materials.

5.11.5 Service Provision and Responsiveness

Review and assessment is carried out to statutory timescales as is the processing and inspection of permitted processes. The service contributes to health wellbeing

⁴ <http://www.londonair.org.uk/london/asp/default.asp>

by seeking to improve air quality and therefore improve the health of the most vulnerable residents and the quality of life of the remainder.

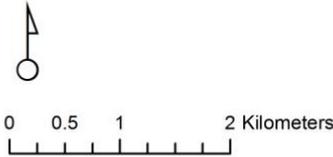
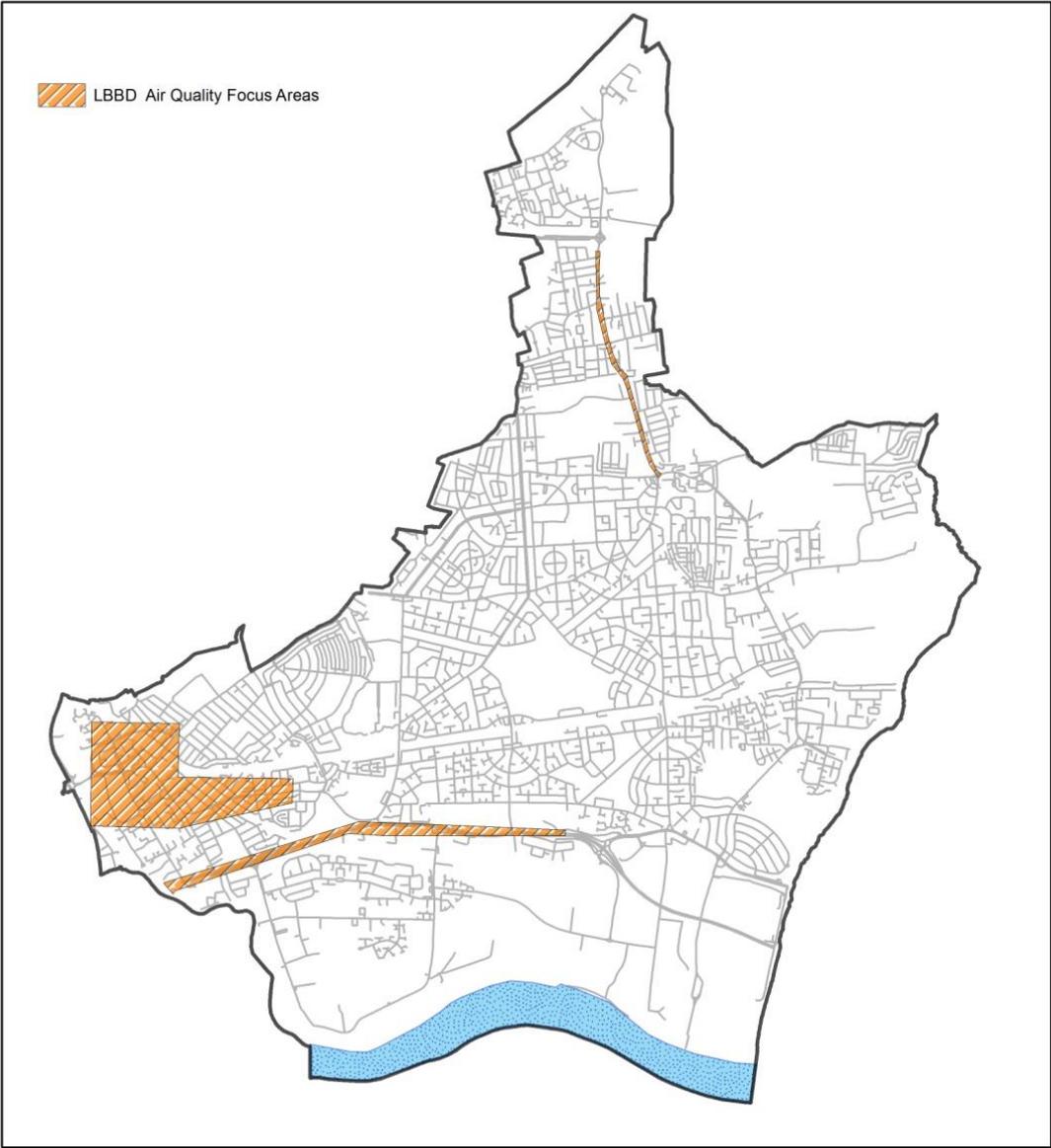
Where opportunities arise to apply for funding to improve Air Quality, bids are put forward for consideration. Evidence of this can be demonstrated when LB Barking and Dagenham were successful in obtaining funding through the Mayors Air Quality Fund. Details of the project can be found the Councils website.⁵

In 2011 the Greater London Authority (GLA) identified three Air Quality Focus Areas within LB Barking & Dagenham, outlined in Figure 2.

The implementation of London Local Air Quality Management Framework on 4th May 2016 presented the opportunity to review and reassess the current focus areas to determine whether they should be retained, amended, or deleted and whether any new areas should be created. Barking and Dagenham have created additional enhanced focus areas in addition to those created previously with the GLA. A combination of vehicle parking strategies, school and residential awareness campaigns and speed control measures will aim to reduce air pollution.

⁵ <https://www.lbbd.gov.uk/residents/pests-pollution-and-food-hygiene/pollution-and-noise/air-pollution/projects/>

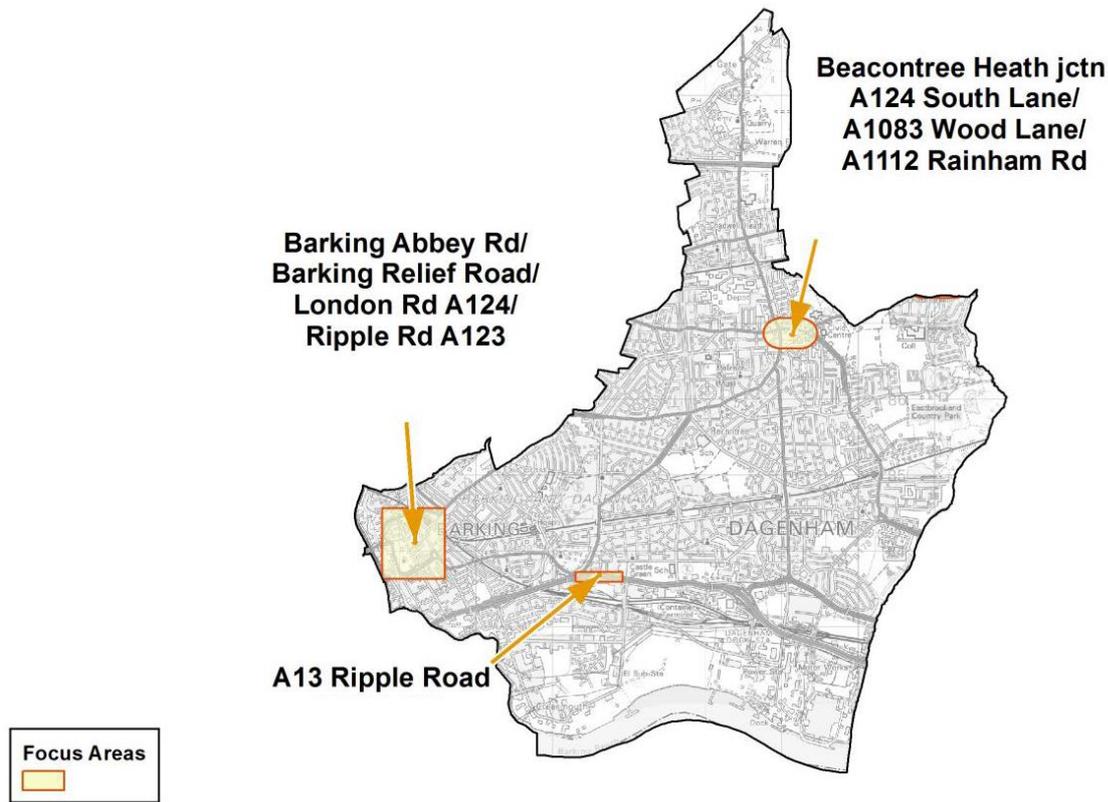
London Borough of Barking and Dagenham Air Quality Focus Areas



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Figure 1 LB Barking and Dagenham Air Quality enhanced Focus Areas 2016



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Figure 2 LB Barking and Dagenham Air Quality Focus Areas 2010

From 1 September 2015, Non Road Mobile Machinery (NRMM) of net power between 37kW and 560kW used on the site of any “major development” within Greater London has been expected to meet Stage IIIA engine emissions standards set in EU Directive 97/68/EC. Barking and Dagenham are finalising an implementation framework to meet this demand.

5.11.6 Vulnerable Populations

Studies show that the greatest burden of air pollution usually falls on the most vulnerable in the population, particularly the young and elderly. The link between health inequalities and pollution is complex.⁶

5.11.7 Gaps in Knowledge

Little customer feedback is sought. There is no clear picture of the demographic analysis of those accessing the air monitoring service compared to those who could

⁶ https://www.london.gov.uk/sites/default/files/air_quality_for_public_health_professionals_-_lb_barking_and_dagenham.pdf

access. Air quality monitoring stations have been sited according to specific issues rather than a comprehensive monitoring strategy. Capital and running costs of air quality monitoring equipment is relatively high.

Air quality is driven by a combination of source and atmospheric conditions. The dominant source of poor air quality is road transport, and the most significant interventions are both regional and national. Local impacts such as encouraging alternative transport, particularly walking and cycling are part of the borough's Air Quality Action Plan (AQAP)⁷.

Environmental monitoring of air quality is a statutory service that is delivered as part of the wider environmental health service. Additional grants have been secured in the past from the Department for Environment Food and Rural Affairs (DEFRA) and GLA/TfL for air quality initiatives and these will need to be pursued in the future. The Council is implementing various actions locally to improve air quality and these can be viewed within the AQAP.

People with asthma, emphysema, bronchitis, heart disease and angina are more at risk from high levels of air pollution. AirTEXT will enable those with such conditions, or who are carers for those with such conditions, to take simple steps at the appropriate times to reduce the likelihood of any negative impacts. These include taking your inhaler or angina spray with you, taking extra doses if symptoms worsen, and avoiding strenuous outdoor activity on polluted days.

The AirTEXT information service will send anyone who wishes a text, email or telephone message to inform them when air pollution is of a concern and to take appropriate action. The service is free of charge. To sign up simply text AIRTEXT to 78070, or register at www.airtext.info

Recommendations for Commissioners

- Take full advantage of grants available from Defra for improving air quality.
- Include air quality issues in future bids through the transport local Implementation Plan (LIP).
- Identify funding for future air quality review and assessment and action planning.

⁷ <https://www.lbbd.gov.uk/residents/pests-pollution-and-food-hygiene/pollution-and-noise/air-pollution/overview/>