jAppendix 1

Draft London Borough of Havering Air Quality Action Plan 2018- 2023

EXECUTIVE SUMMARY

Poor air quality has a direct impact on the health and wellbeing of our residents, workers, commuters and visitors, therefore improving Havering's air quality is high priority. Poor air quality is not just an issue in Havering, but London wide.

This document contains the Air Quality Action Plan (AQAP) for Havering for the years 2018 – 2023 and outlines the actions Havering Council will take to improve local air quality. Our priority is to reduce key pollutants, Nitrogen Dioxide (NO_2) and Particulate Matter (PM_{10} and $PM_{2.5}$). In Havering these pollutants are primarily produced by road traffic but there are other contributors such as construction, domestic gas use and industry.

Since September 2006 the entire London Borough of Havering has been designated an Air Quality Management Area (AQMA) for NO_2 and PM_{10}. Whilst we are meeting long and short term objectives for PM_{10} and $PM_{2.5}$, Havering, like many other London Boroughs is failing to meet the national long term objective for NO_2.

This AQAP will be subject to review, appraisal of progress and reporting to the Greater London Authority (GLA) and the Department of Environment, Food and Rural Affairs (Defra). Progress each year will be reported in the Annual Status Reports reproduced by Havering Council, as part of our statutory London Local Air Quality Management duties.

Signed

…… Cllr. Osman Dervish

…… Director of Public Health

…… Director of Neighbourhoods

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1.0 About Havering

The London Borough of Havering is the 3rd largest borough in London and encompasses some 43 miles, divided over 18 electoral wards. Havering is mainly characterised by its suburban development and large areas of protected open space (almost 50% of the borough is green belt), especially towards the east of the borough. Havering is currently one of the top London borough's for clean air; however in some locations we are still breaching the NO_2 limit.

The estimated population of Havering is 252,783[1] however, it has the highest percentage of residents aged 65+ (18.4%) out of all the London boroughs (11.5%) and a greater percentage than the England average (17.7%)[2]. Havering also has a growing population which has experienced a year on year increase since 2002 – an overall increase of 12.3%. Growth is particularly high in the 0-4 year old age group, which comprises 6.7% of the population compared to 7.2% in London and 6.2% in England[3].

The borough includes Romford, an important Metropolitan Town Centre for North-East London, known for its major retail development, successful night time economy and densely populated residential areas. In addition to this there are significant smaller District Centres at Collier Row, Elm Park, Harold Hill, Hornchurch, Rainham and Upminster.

The south side of Havering is located within the London Riverside section of the Thames Gateway redevelopment and will be key area of increasing development and population change over the next few years.

Havering is a relatively affluent local authority; however there are zones of deprivation to the north (Gooshays and Heaton wards) and south (South Hornchurch) of the borough[1].

The key transport routes of the M25, A12, A13 and A127 are major sources of motor vehicle tailpipe emissions which contribute to air pollution concentrations within the Borough. In addition to these routes there are others sources such as industrial/commercial point sources, the industrial estates in Hornchurch, Rainham and Romford and Havering Crematorium in Upminster.

2.0 Purpose of this document

This AQAP has been produced to comply with Part IV of the Environment Act 1995. The Plan has regard to guidance on air quality issued by the Greater London Authority (GLA). This Plan outlines the action we will take to improve air quality in Havering between 2018 and 2023.

The new vision 'Havering - Making a Greater London' is about embracing the best of what Havering has to offer and how the borough can play an active role in the success of the whole of London. The new vision is focused around four cross-cutting priorities: Communities, Places, Opportunities and Connections and the Plan links to these priorities as follows:

- **Communities** - We want to help our residents to make positive lifestyle choices and ensure a good start for every child to reach their full potential and support our most vulnerable residents. The actions included in the Action Policy 2: Public Health and Awareness Raising to encourage Smarter Travel aim to keep the residents active and healthier and reduce local pollution levels, in and around schools in particular.
- **Places** - We will work to achieve a clean, safe environment for all and continue to invest in our town centres and work with residents to improve our award-winning parks. This AQAP includes a wide range of actions in order to contribute to a clean, safe environment for all, by improving local air quality and enhancing the borough's public spaces.
- **Opportunities** - We will provide first-class business opportunities by supporting the commercial development of companies within the borough, while ensuring environmental sustainability of the new developments. The actions included in the Action Policy 3: Reducing Emissions from Buildings and Developments aim to incorporate air quality into planning considerations, in order to ensure that any impacts of new developments on air quality are appropriately addressed.
- **Connections** - We want to capitalise on our location with fast and accessible transport links both to central London and within the borough. This AQAP includes actions aiming to promote better, cleaner transport infrastructure connections and sustainable transport options.

For more information on Havering's Vision please visit www.havering.gov.uk where you will find the latest version of Havering's Corporate Plan.

To assist with delivering its "Vision" the Council has several strategic transport aspirations for improving connectivity across the borough. These include:

- Improvement of public transport North/South connections to enable residents to travel between the two emerging Housing Zones in Romford and Rainham and Beam Park;
- reconfiguration of Gallows Corner to improve safety and reduce congestion at this key junction for the borough;
- reconfiguration of the Romford ring road to improve pedestrian accessibility into Romford town centre and to support growth.

Havering is working with relevant stakeholders, including senior officers at Transport for London, the Greater London Authority and the Mayor of London, to develop these aspirations.

2.1 London Air Quality Policy Context

2.1.1 The Draft London Environment Strategy

The AQAP has taken into account the objectives, policies and proposals set out in Chapter 3: Air Quality of the Draft London Environment Strategy. The Mayor of London aims for London to have the best air quality of any major world city by 2050. Shorter-term efforts focus on protecting public health and empowering people, particularly the most vulnerable to reduce their exposure to poor air quality. Longer-term efforts to tackle the sources of air pollution include, among others, mode shift to sustainable forms of transport, such as walking, cycling and public transport, switching to cleaner fuels, reducing emissions from non-transport sources, such as those from construction. The mayor also has a long term target of the whole of London being a zero emission road transport city by 2050, with shorter term aims for zero emission taxis electric single deck buses and bus charging infrastructure.

This AQAP includes a number of actions to improve the understanding of air quality impacts, so that the residents, particularly the most vulnerable such as schoolchildren, can reduce their exposure to poor air quality. A wide range of longer-term actions are also included to reduce the emissions from transport as well as from non-transport sources, with a particular focus on actions to reduce emissions from new buildings and developments.

2.1.2 Draft Mayor's Transport Strategy

On June 21 2017 Mayor of London, Sadiq Khan, published a draft of the Mayor's Transport Strategy. The document sets out the Mayor's policies and proposals to reshape transport in London over the next 25 years.

By using the Healthy Streets Approach to prioritise human health and experience in planning the city, the Mayor wants to change London's transport mix so the city works better for everyone.

Three key themes are at the heart of the strategy.

1. Healthy Streets and healthy people

Creating streets and street networks that encourage walking, cycling and public transport use will reduce car dependency and the health problems it creates.

2. A good public transport experience

Public transport is the most efficient way for people to travel over distances that are too long to walk or cycle, and a shift from private car to public transport could dramatically reduce the number of vehicles on London's streets.

3. New homes and jobs

More people than ever want to live and work in London. Planning the city around walking, cycling and public transport use will unlock growth in new areas and ensure that London grows in a way that benefits everyone.

3.0 Air Quality in Havering

3.1 Why is air quality important for Havering?

Although Havering is an "outer London" borough, known for its large areas of green space and close proximity to Essex, air quality is still a significant issue. Though welcome and beneficial for the borough, continued development and growth will inevitably have a detrimental impact on air quality unless action is taken to mitigate these impacts in order to protect those who live, work and visit Havering.

Havering was formally declared an Air Quality Management Area (AQMA) under the powers conferred upon it by Sections 82(1) and 83(1) of the Environment Act 1995, in September 2006 for both Nitrogen Dioxide (NO_2) and Particulate Matter (PM_{10}).

Havering is now meeting the current legal objectives for Particulate Matter (PM_{10} and $PM_{2.5}$). However research has shown that this pollutant is damaging to health at any level and as such remains a pollutant of concern.

NO_2 levels are exceeding the UK National Air Quality Objectives and European Directive Limit[4] and Target Values for the protection of Human Health of 40 micrograms per cubic metre.

On a positive note there are areas of Havering that are not exceeding the National Objective for NO_2 and there are some wonderful green spaces and parks where everyone can enjoy good air quality. There are however a significant number of "hotspots" of poor air quality in Havering which need to be addressed.

3.2 What is Nitrogen Dioxide (NO_2) and Particulate Matter (PM)?

Nitrogen Dioxide: NO_2

All combustion processes produce oxides of nitrogen (NO_x). In Havering, road transport and heating systems are the main sources of these emissions. NO_x is primarily made up of two pollutants - Nitric Oxide (NO) and Nitrogen Dioxide (NO_2). NO_2 is of most concern due to its impact on health. However NO_x easily converts to NO_2 in the air - so to reduce concentrations of NO_2 it is essential to control emissions of NO_x[5].

Particulate Matter: PM_{10} and $PM_{2.5}$

Particulate matter (PM_{10} and $PM_{2.5}$) is a complex mixture of non-gaseous particles of varied physical and chemical composition. It is categorised by the size of the particle (for example PM_{10} are particles with a diameter of less than 10 microns). Most PM emissions in Havering are caused by road traffic, in Central London this is as much as 80%, with exhaust emission and wear, tyre and brake wear and dust from road surfaces being the main sources. Construction sites, with high volumes of dust and emissions from machinery are also major sources of local PM pollution, along with accidental fires and burning of waste[5].

3.3 What does Air Quality look like in Havering?

Figures 1 - 3 depict the annual mean concentrations of NO_2, PM_{10} and $PM_{2.5}$ for Havering in 2013. The maps have been produced by the Greater London Authority using the latest London Atmospheric Emissions Inventory data and can be downloaded from: https://data.london.gov.uk/dataset/london-atmospheric-emissions-inventory-2013.

Figure 1: LAEI 2013 Havering Annual Mean NO_2

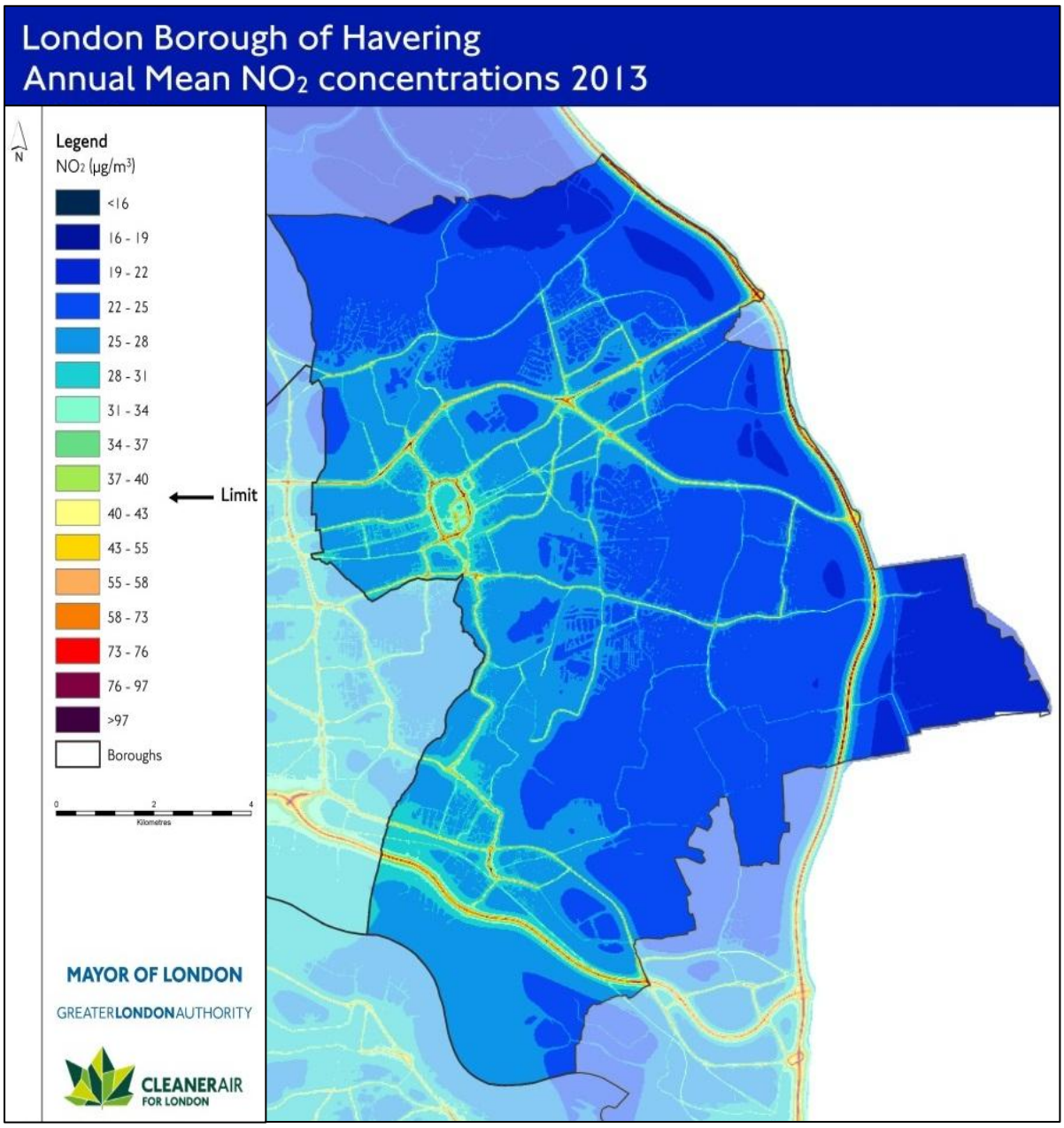


Figure 1 indicates that the majority of Havering in 2013 met the National Air Quality Objective of 40µg/m^3 for Nitrogen Dioxide. There were exceedances of this objective at locations along key transport routes (A13, A12, M25, Romford Ring Road and the A1306), which have been linked to emissions from motor vehicles (bus, HGV's and cars).

Figure 2: LAEI 2013 Havering Annual Mean PM_{10}

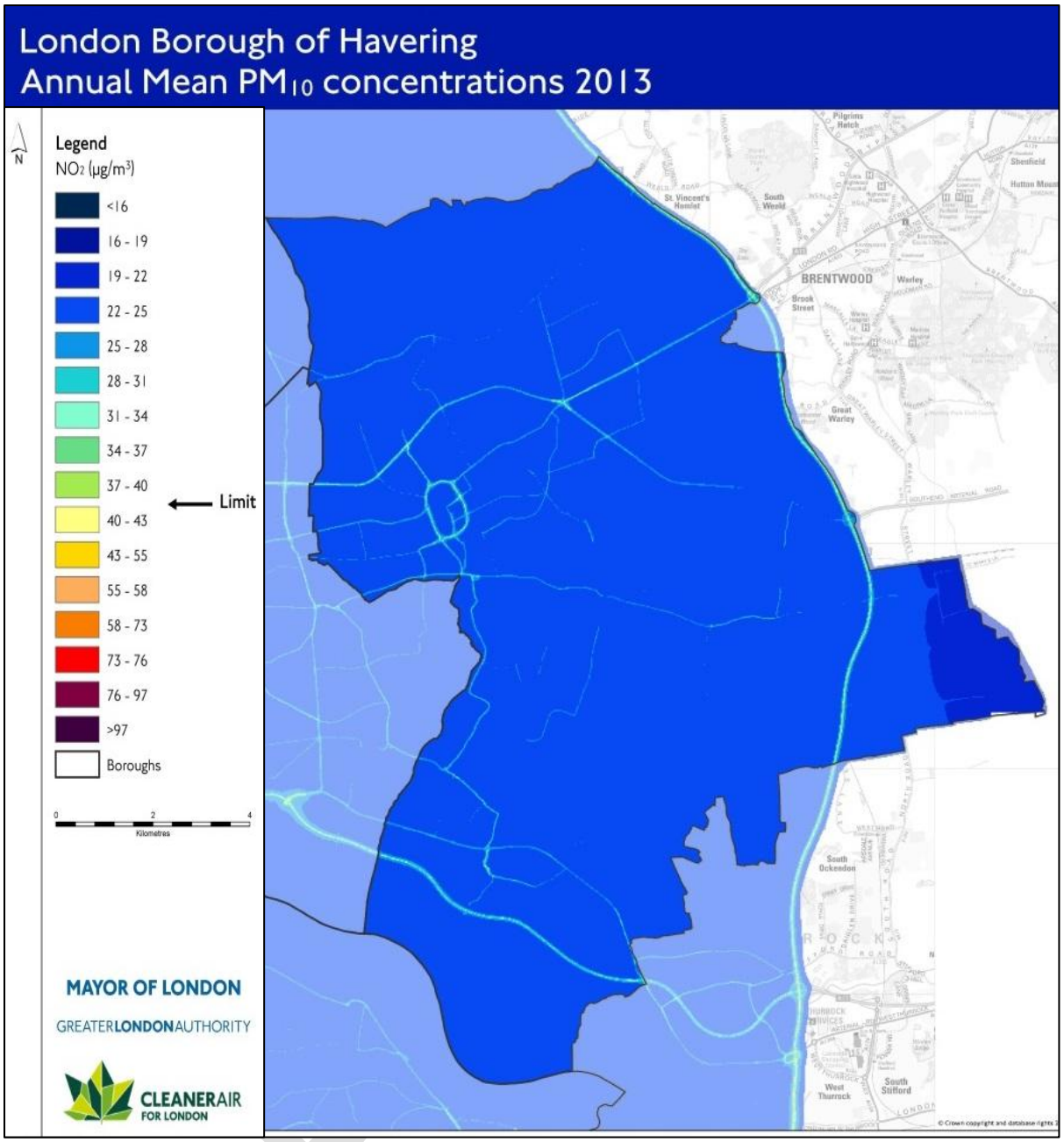
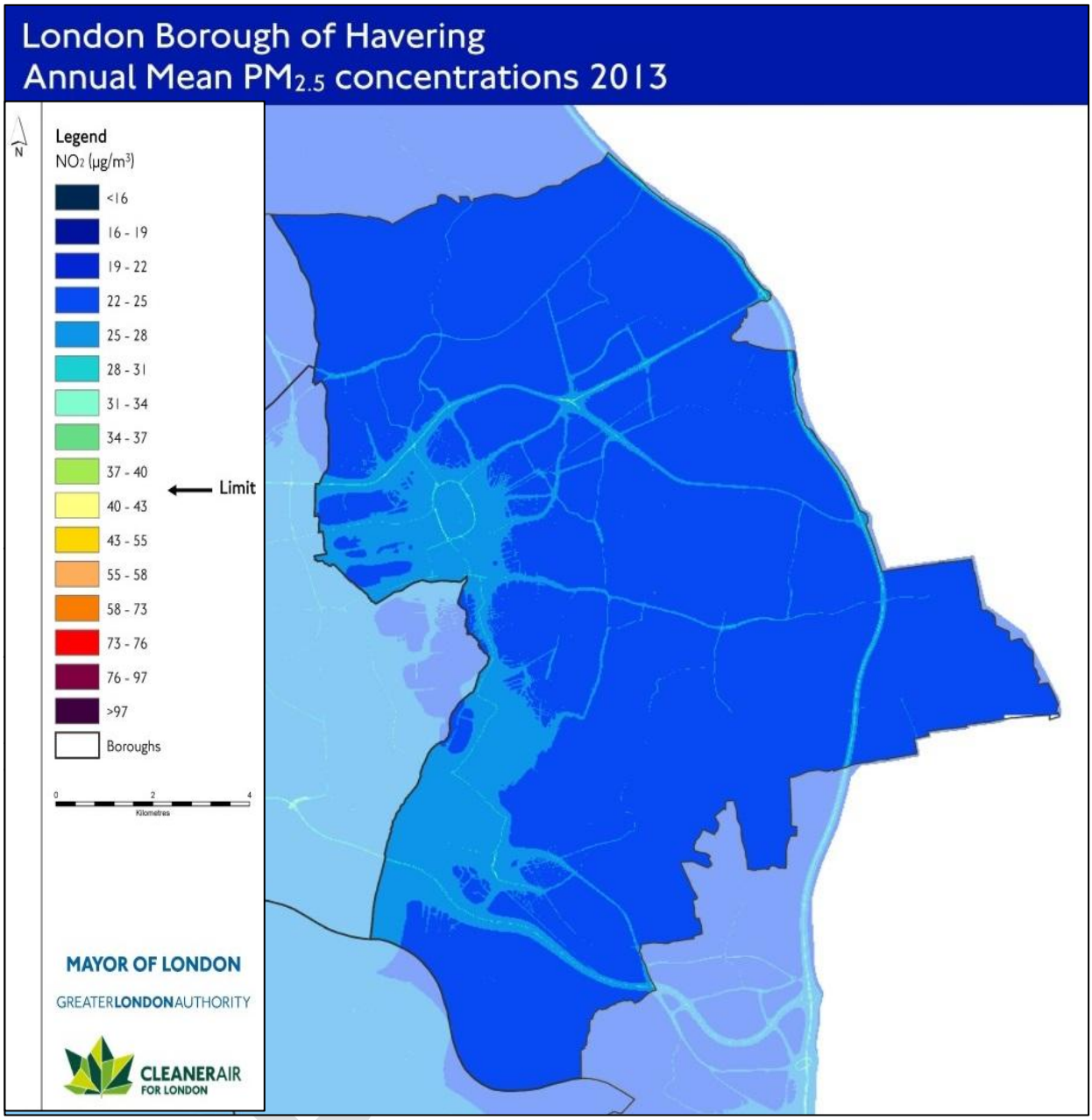


Figure 2 indicates that the majority of Havering in 2013 met the National Air Quality Objective of 40µg/m^{-3} for PM_{10}. There were exceedances of this objective at locations along key transport routes (A13, A12, M25, Romford Ring Road and the A1306), which been linked to emissions from motor vehicles (bus, HGV's and cars).

Figure 3: LAEI 2013 Havering Annual Mean $PM_{2.5}$



There is currently no National Air Quality Objective for Particulate Matter ($PM_{2.5}$). London Boroughs are not required to carry out any additional local review and assessment (which includes monitoring) but are expected to work towards reducing emissions and concentrations of $PM_{2.5}$ in their areas. The above map indicates that the majority of Havering has low concentrations of Particulate Matter ($PM_{2.5}$), but there are higher concentrations located along key transport routes, such as the M25, A12, A13 and A127. These higher concentrations are linked to transport emissions from motor vehicles.

As part of its statutory duty under the London Local Air Quality Management (LLAQM) Havering is required to monitor the local air quality within its boundaries. Currently Havering has an extensive monitoring network of 61 diffusion tubes, two continuous monitoring stations and two AQ Mesh Pods providing monthly, daily and real time air quality data. Figure 4 below shows Havering's 2016 diffusion tube data against the EU limit value for comparison.

Figure 4: LBH Monitoring Locations vs. EU Limit Value

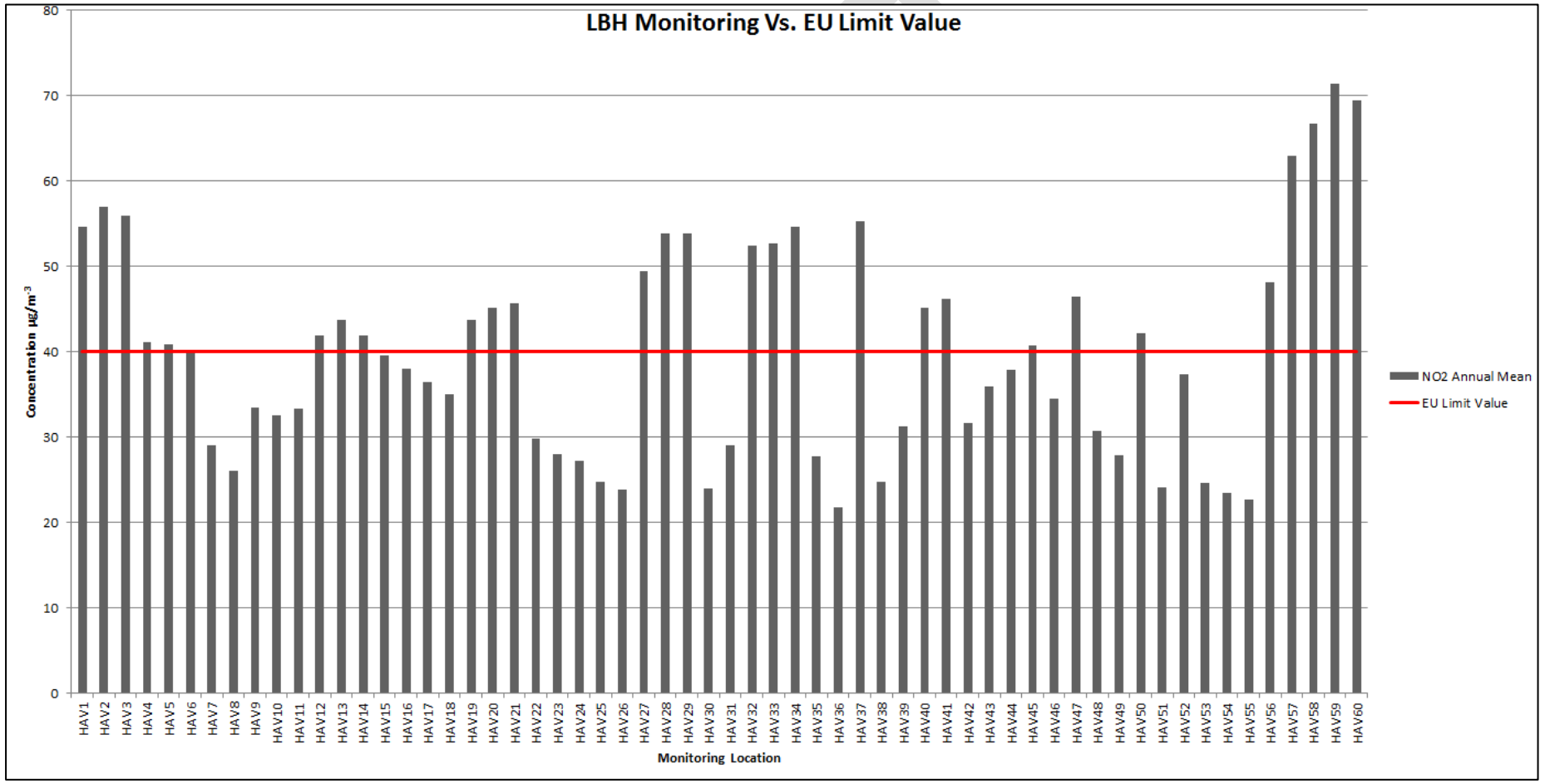


Figure 6: LBH Monitoring Locations (1)

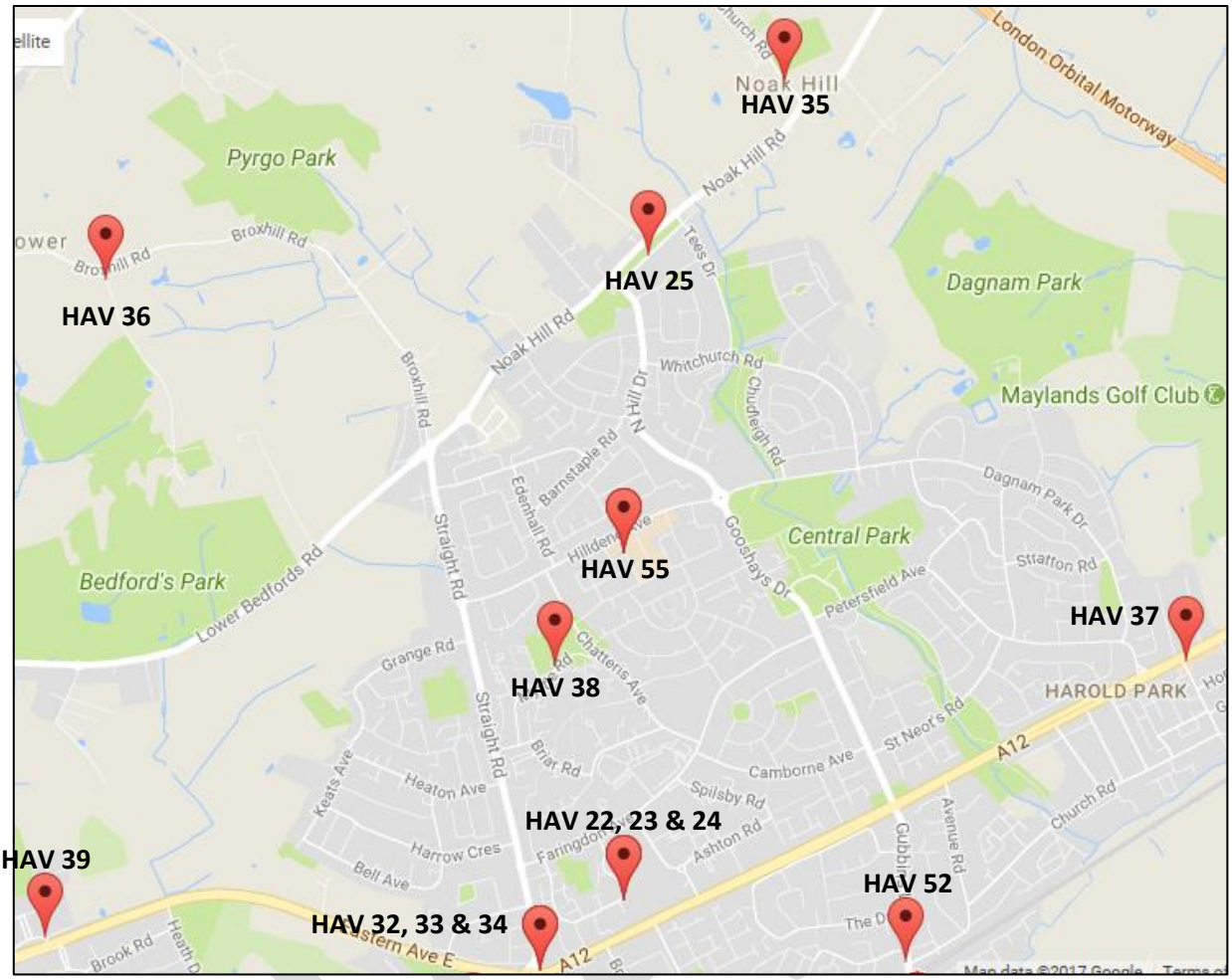


Figure 7: LBH Monitoring Locations (2)

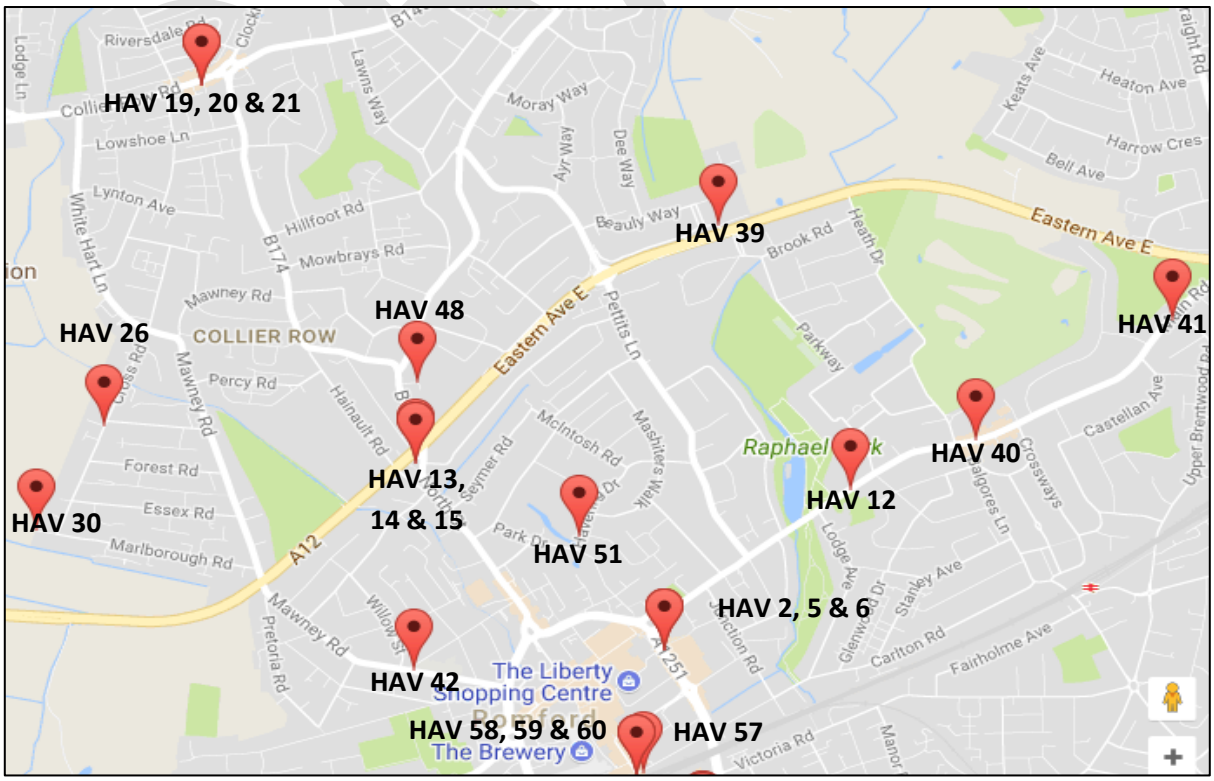


Figure 8: LBH Monitoring Locations (3)

Figure 9: LBH Monitoring Locations (4)

Figure 10: LBH Monitoring Locations (5)

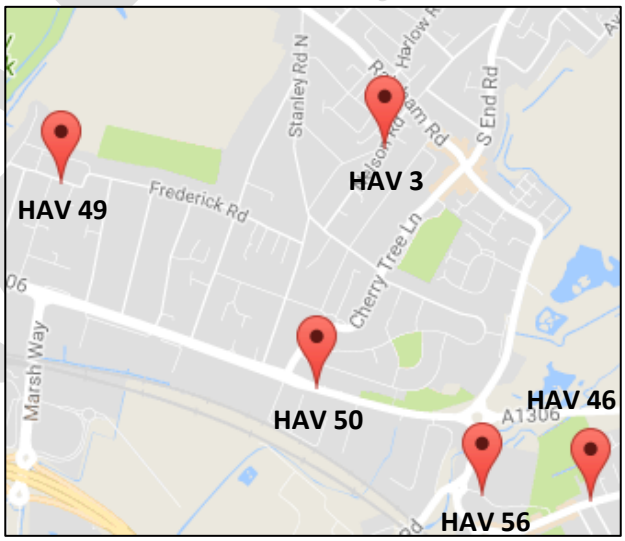
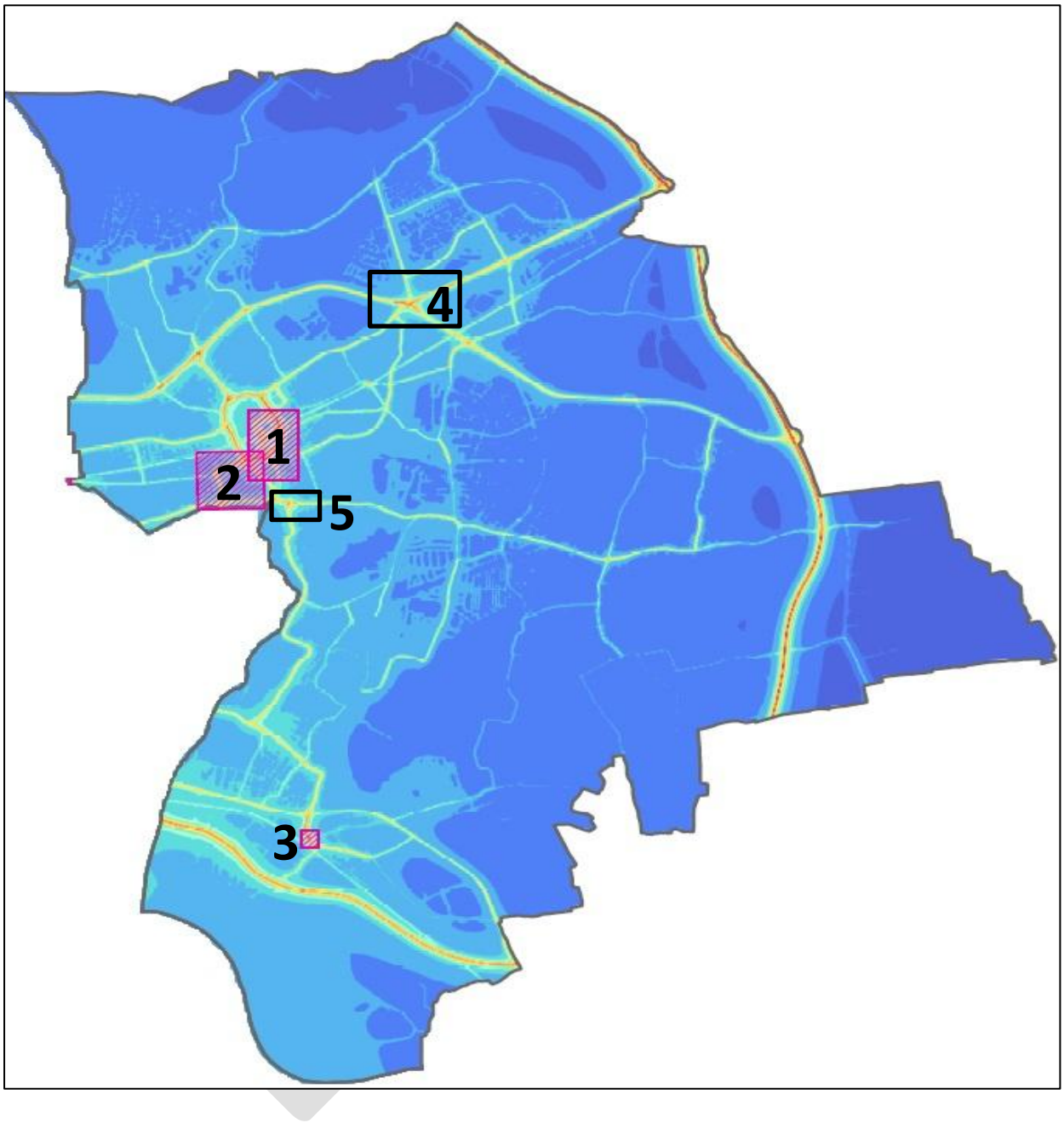


Figure 11: LBH Monitoring Locations (6)

Figure 12: Local 'Hotspots' in Havering



KEY

1. Romford Town Centre – Thurloe Gardens (77% bus & 11% cars). Nearest receptor: 5 m (residential properties)
2. Romford/Rush Green A124 Rush Green Road and Rom Valley Way (36% Bus & 37% HGV). Nearest receptor: 8 m (residential properties)
3. Rainham – Broadway (41% HGV & 31% Bus). Nearest receptor: 3 m (residential properties)
4. Gallows Corner. Nearest receptor: 20 m + (residential properties)
5. Roneo Corner. Nearest receptor: 5 m (residential properties)

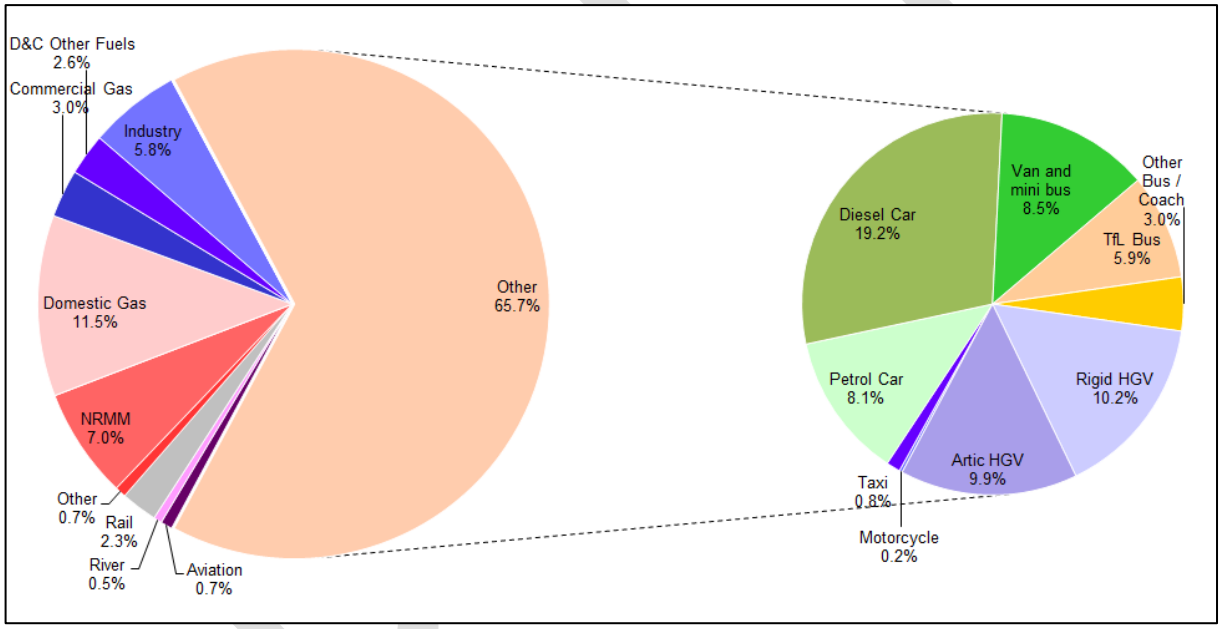
3.4 What are the sources of Air Pollution in Havering?

Pollution in Havering comes from a variety of sources, some of which are located outside of the Borough. In the case of Particulate Matter, a significant proportion comes from outside of London and even the UK.

The key transport routes of the M25, A12, A13 and A127 are major sources of motor vehicle tailpipe emissions which are the main source of pollution within the Borough. The M25 is operated and maintained by Highways England whilst the A12, A13 and A127 within Havering fall under the responsibility of Transport for London (TfL). In addition to these routes there are other sources such as the Thames Water's Riverside Sewage Treatment Works in Rainham and the industrial estates in Hornchurch, Rainham and Romford and Havering Crematorium in Upminster.

Trans-boundary sources include the Riverside Resource Recovery Incinerator (locally known as the Belvedere Incinerator) in Bexley; annual sub-Saharan dust deposits brought to the Borough on the prevailing winds and previously (until its closure in 2014) the Barking Power Station in the London Borough of Barking & Dagenham.

Figure 13: NO_x Emissions by Source and Vehicle Type (from the LAEI 2013)



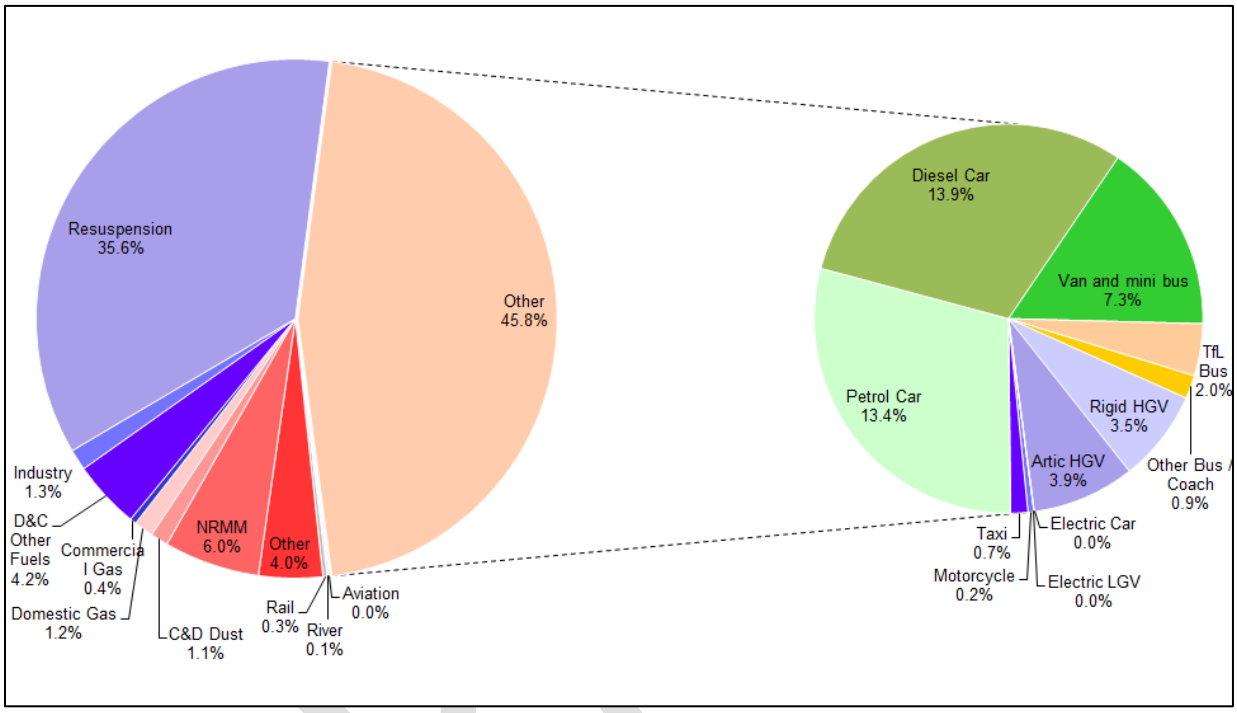
Motor vehicle tailpipe emissions have been identified as the main contributor to pollution in Havering and this is represented in the pie chart above.

The NO_x emissions produced in Havering originate from motor vehicles (65.7%), followed by Domestic Gas (11.5%), Non-Road Mobile Machinery (NRMM) (7.0%), Industry (5.8%), Commercial Gas (3.0%), D&C Other Fuels (2.6%), Rail (2.3%), Other (0.7%), Aviation (0.7%) and River (0.5%), as shown by the pie chart above.

The greatest contributor to NO_x emissions from motor vehicles is Diesel Cars (19.2%), followed by Rigid HGV (10.2%), Artic HGV (9.9%), Van and Mini Bus (8.5%), Petrol Car (8.1%), TfL Bus (5.9%), Other Bus/Coach (3.0%), Taxi (0.8%) and Motorcycle (0.2%).

Correspondence was received from TfL on 9th June 2016 updating the Council on the London Bus Emissions Reduction, which over the period of 2008 – 2013 reduced emissions from the bus fleet in Havering from 137.5 tonnes per year to 101.5 tonnes per year, with a prediction of a continuing reduction till 2030. TfL are currently undertaking a review of bus service provision along the Crossrail route.

Figure 14: PM_{10} Emissions by Source and Vehicle Type (from the LAEI 2013)

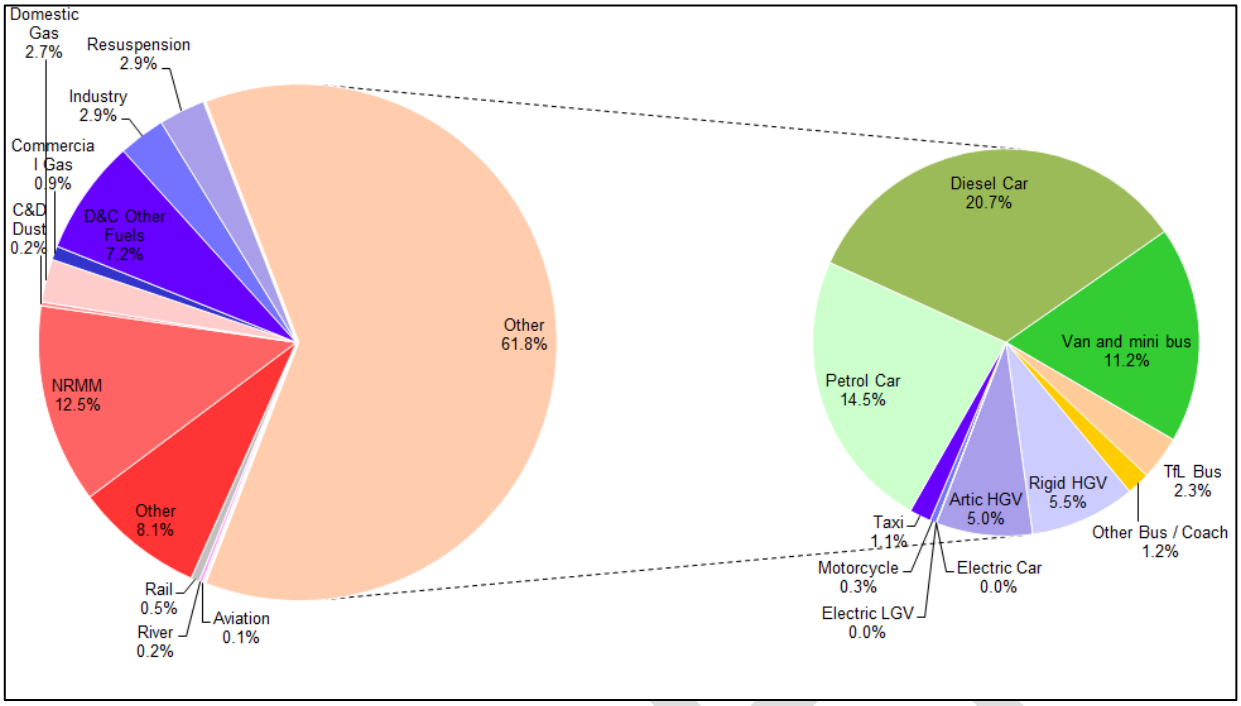


The majority of PM_{10} emissions produced in Havering originate from motor vehicles and this is represented in the pie chart above.

The PM_{10} emissions produced in Havering originate from motor vehicles (45.8%), followed by Resuspension (35.6%), NRMM (6.0%), D&C Other Fuels (4.2%), Other (4%), Industry (1.3%), Domestic Gas (1.2%), C&D Dust (1.1%), Commercial Gas (0.4%), Rail (0.3%), River (0.1%) and Aviation (0.0%).

The greatest contributor to PM_{10} emissions from motor vehicles is Diesel Cars (13.9%), followed by Petrol Cars (13.4%), Van and Mini Bus (7.3%), Artic HGV (3.9%), Rigid HGV (3.5%), TfL Bus (2.0%), Other Bus/Coach (0.9%), Taxi (0.7%), Motorcycle (0.2%) and Electric Car/LGV (0.0%).

Figure 15:$PM_{2.5}$ Emissions by Source and Vehicle Type (from the LAEI 2013)



The majority of $PM_{2.5}$ emissions produced in Havering originates from motor vehicles and this is represented in the pie chart above.

The $PM_{2.5}$ emissions produced in Havering originate from motor vehicles (61.8%), NRMM (12.5%), other (8.1%), D&C Other Fuels (7.2%), Resuspension (2.9%), Industry (2.9%), Domestic Gas (2.7%), Commercial Gas (0.9%), Rail (0.5%), C&D Dust (0.2%), River (0.2%) and Aviation (0.1%).

The greatest contributor to $PM_{2.5}$ emissions from motor vehicles is Diesel Cars (20.7%), followed by Petrol Cars (14.5%), Van and Mini Bus (11.2%), Rigid HGV (5.5%), Artic HGV (5.0%), TfL Bus (2.3%), Other Bus/Coach (1.2%), Taxi (1.1%), Motorcycle (0.3%) and Electric Car/LGV (0.0%).

4.0 Effects of Poor Air Quality in Havering

Short Term NO_2 Exposure

- A respiratory impact particularly in Asthma suffers.
- Increase in airway allergens and inflammatory reactions.
- Increased hospital admissions.
- Increased mortality.

Long Term NO_2 Exposure

- Reduction in lung function.
- Increased respiratory symptoms.

Short Term PM Exposure

- Lung inflammatory reactions.
- Respiratory symptoms.
- Adverse effect on the cardiovascular system.
- Increased usage of medication.
- Increased hospital admissions.
- Increased mortality.

Long Term PM Exposure

- Increase in lower respiratory symptoms.
- Reduced lung function in children.
- Increase in COPD.
- Reduction in lung function in adults.
- Reduction in life expectancy mainly owing to cardio pulmonary mortality and probably cancer.

Havering has a high percentage of residents over the age of 65 and many young families. These groups (the elderly and children) are particularly susceptible to the effects of poor air quality.

The effects range from cardiovascular disease and asthma, respiratory disorders and over a prolonged period have been linked to some cancers.

In 2012 the World Health Organisation (WHO) classified diesel as being carcinogenic to humans[6]. Additionally, air pollution particularly affects the most vulnerable in society: children (including unborn) and older people, and those with existing heart and lung conditions. There is often a strong correlation with areas of deprivation having the poorest air quality.

Research has shown that those living in more deprived areas are exposed to higher concentrations of air pollution, often because homes and residences of these groups are situated next to roads with higher concentrations of emissions. Deprived communities also generally suffer greater burdens from air-pollution-related death and sickness. In 2008 there were 11 deaths attributable to exposure to $PM_{2.5}$ in Gooshays Ward, 9 in Heaton and 10 in South Hornchurch[5].

The health impacts of air pollution should not be underestimated. More people in London are harmed by air pollution attributed to road transport than by road collisions and incidents[7] In London in 2010, 4,267 deaths per annum were shown to be directly attributable to the effects of air pollution; outer London boroughs accounted for 6.3% of all deaths[8].

Exposure to the principle vehicle pollutants affecting Havering (NO, $PM_{2.5}$ and PM_{10}) can have both short and long-term effects, ranging from respiratory inflammation, particularly in asthma sufferers, and increased used of medication, to reduced lung function, cancers and reduction in life expectancy.

Air pollution particularly affects the most vulnerable in society, namely children and older people. As well as the highest population of people aged 65 and over out of all the London Boroughs, and a relatively high percentage of 0-4 year old, Havering's prevalence of Asthma (4.8%) is significantly worse than London (4.6%). In addition, Havering has 61.7 per 100,000 deaths from Chronic

Obstructive Pulmonary Disease (COPD), which is significantly higher than both London (49.9 per 100,000) and England (52.6 per 100,000). (RCPCH 2016)[9]

Havering like all boroughs and district councils has a statutory obligation to review and assess air quality levels within its area against objectives set out in the UK Air Quality Strategy (AQS). As part of this review and assessment process, known as London Local Air Quality Management (LLAQM) the Council has undertaken various assessments which have determined that Havering will not meet the objectives for Nitrogen Dioxide (NO_2) and particulate matter (PM_{10}), without significant intervention measures.

4.1 Havering Compared to other London Boroughs

It is difficult to compare Havering's air quality to that of other London Boroughs due to a range of influencing variables and the fact that each borough is so different in comparison to the next. Monitoring sites are often located with different monitoring objectives and do not necessarily provide a general representative of the Boroughs overall air quality. They do however; provide an indication of the local air quality at that location. For more information visit the London Air website at:

https://www.londonair.org.uk/LondonAir/guide/WorstPlace.aspx

Figures released in 2013[10], showed that Havering's roads are one of the cleanest in London with "just" over 57% of them exceeding the European and National Limit for NO_2, with only Harrow (56%) and Bromley's (45%) roads performing better. However this should not be misinterpreted to mean that Havering has good air quality and no action should be taken, as London remains one of the most polluted areas of the country.

4.2 What is Havering doing already to improve air quality?

Havering is committed to improving its Air Quality for all, and over the past couple of years has completed/continuing the following projects;

- The adoption of Public Space Protection Orders (PSPO) around 4 schools: Wykeham Primary School (Rainsford Way Hornchurch) James Oglethorpe Primary School, (Ashvale Gardens Upminster) Parsonage Farm Primary School (Farm Road Rainham) and Rainham & Engayne Primary School, (Severn Drive Upminster). Previous to the adoption of the PSPO the schools experienced dangerous and illegal parking on or around the grounds during pick up/drop off times. Now if cars park illegally a fine known as a Fixed Penalty Notice (FPN) is issued for £100. This has resulted in the reduction of car use around the school grounds and made the area safer and air cleaner for pupils and staff during drop off/pick up.
- The creation of an extensive Air Quality Monitoring Network through the use of 61 NO_2 Diffusion Tubes, 2 continuous monitoring stations and 2 AQ Mesh Pods.
- Promotion of the free AirTEXT pollution forecast app. This tool provides air quality alerts by SMS text message, email and voicemail and 3-day forecasts of air quality, pollen, UV and temperature or the information can be found on the airTEXT website. The information provided is specific to Havering and allows the public to reduce their exposure to poor air quality.

- The delivery of Air Quality initiatives in schools. This programme was initially carried out in four primary schools which taught Year 5 students, parents and staff about air quality, how

they can improve their own air quality, how to reduce their exposure and improve the schools sustainable travel options.

- A borough wide Air Quality Awareness and Behaviour Change Campaign which has so far seen our Air Quality Champion 'Miles the Mole' visit 36 primary schools in the Borough alongside a Theatre Company and Air Quality lesson plans.
- The inclusion of Air Quality projects within the Youth Travel Ambassador Scheme with secondary schools, colleges and institutes of higher education.
- 'Clean Up' of Havering's own fleet vehicles, this included the upgrade of all lease cars to Euro V low emission vehicles, which will again be upgraded to Euro VI when they are up for renewal (if sufficient mileage/usage has occurred). Electric Vehicles are currently utilised by our Parks Department, however the purchase of electric buses or hybrids is currently prohibited by the cost and the heavy loads they are expected to handle. The buses are currently being transitioned over to diesel Euro VI to make them cleaner; however we will continue to look into alternatively fuelled models as the industry develops.
- The move from essential car use allowance system and the introduction of working from home initiatives has helped with the reduction in staff trips/mileage and associated emissions.
- The training of approximately 20 vocational drivers on Eco-driving and urban driving courses and the fitting of the ECO Packs to the For Transit & Connect vans which prompt drivers to change gear at the correct engine revs to aide with reducing fuel consumption.
- The review of planning applications to include (where necessary) air quality conditions to help mitigate against developments having a detrimental impact on local air quality.
- The production of the Air Quality Factsheet in conjunction with Public Health to give residents more information on how they can reduce their own exposure to poor air quality and how they can help improve the air quality in Havering.

5.0 What we want to deliver and improve in the future –The Action Plan

This Action Plan sets out the projects, policies and initiatives Havering Council and its partners propose to take over the next 5 years in order to improve air quality within its Borough by reducing Nitrogen Dioxide and Particulate Matter concentrations from the key emission sources i.e. road transport, new development and gas boilers. Likewise, the plan aims to increase awareness, knowledge and understanding of air quality and help everyone who lives, commutes or works in Havering to reduce their own exposure as well as to improve air quality.

The overarching aims of the Plan are to;

1. Continue to meet EU Objectives for 1,3-Butadiene, Benzene, Carbon Monoxide, Lead, PM_{10} and short term NO_2.
2. Continue to reduce concentrations of PM_{10} and $PM_{2.5}$
3. Continue to reduce concentrations of NO_2 to meet the long term EU Objective for NO_2.

The actions have been grouped into the following four action policies;

Action Policy 1: Air Quality Monitoring and Modelling

Action Policy 2: Public Health and Awareness Raising to encourage Smarter Travel

Action Policy 3: Reducing Emissions from Buildings and Developments

Action Policy 4: Reducing Emissions from Transport

Progress against this Plan will be reviewed annually, and this Plan has been reviewed and approved by xxxxx.

5.1 Funding

There is a budget of £125,000 allocated to Havering from the TfL Local Implementation Plan (LIP) funding stream, for 2018-19 which helps London boroughs deliver the Mayor's Transport Strategy at a local level, this includes work around air quality. Funding for future years expected from the TfL LiP fund subject to successful submissions. Additional funding may be achieved from the Mayors Air Quality Fund (MAQF), Mayors Air Quality Business Fund (MAQBF), Defra Air Quality Grant and other funds that become available. Havering will take the opportunity to bid for additional funding as and when it becomes available.

Action Policy One: Air Quality Monitoring and Modelling

Why do we monitor and model Air Quality in Havering?

Air Quality is monitored in Havering as part of the Council's statutory duties to review and assess the present and likely future air quality within its area. By monitoring the air quality around the borough, we can assess our compliance with air quality objectives, evaluate the effectiveness of policies and projects, and also help provide information and alerts to Havering's residents, workers and visitors when pollution levels are moderate or high.

By carrying out extensive monitoring, information can be gathered on long term trends in pollution levels at many locations in the Borough. We are then able to publish this data through our annual reporting to the GLA, keeping our residents up to date on Air Quality in Havering and the progress being made to improve the situation. These reports can be downloaded from Havering's Air Quality webpage at; https://www.havering.gov.uk/info/20085/air_quality/441/air_quality and the monitoring data can be accessed either from the London Air website or the Defra Diffusion Tube Datacentre.

What Monitoring & Modelling has already been done?

Havering has an extensive monitoring network after recently expanding from 4 to 39 locations. 61 Diffusion Tubes measure monthly average NO_2 concentrations and two continuous monitoring stations provide real time NO_2 and PM concentrations which are used for annual reporting to the GLA. The AQ Mesh Pods are used for local monitoring projects and provide real time NO_2 measurements, but are not currently a standardised method for reporting. The continuous monitoring stations provide real time information on air pollution levels in Havering to the London Air website and airTEXT, where information, alerts and advice for the public can be found.

In 2012 Havering commissioned KCL to produce a series of air quality maps for Havering showing baseline conditions for the year 2012 and predicted future conditions for 2015 and 2020. These were used to help determine areas of previously unknown poor air quality and help focus air quality projects in the areas that required those most.

Action No.	Action Description	Lead	Time Frame and Monitoring of Action	Funding	Benefits
1.1	Undertake detailed computer modelling of air quality in Havering. Produce a series of borough maps depicting the annual mean concentration levels of NO_2, PM_{10} and $PM_{2.5}$ for a base year of 2015 and future years (2020 & 2025).	Public Protection using and external expert consultancy.	Timeframe: 2018/2019 Monitoring of Action: N/A Review Date: Jan 2019	2018-19 LIP	• Provide evidence for planning decisions • Support major strategic transport and infrastructure projects for the Council.
1.2	Use AQ Mesh Pods to provide real time air quality measurements for schools to use as part of air quality publicity campaigns and to encourage walking to school.	Public Protection	Timeframe: 2018 onwards Monitoring of Action: Number of schools with AQ Mesh Pod. Review of air quality data provided by the AQ Mesh Pod Review Date: After each individual monitoring project	2019-20 LiP	• Identify areas of poor air quality outside of schools that were previously unknown. • Keep the public up-to-date on the latest pollution trends and air quality data. • Raise awareness and knowledge of the local air quality allowing the public to reduce their exposure to poor air quality.
1.3	Re-assess the status of the whole of Havering being declared an Air Quality Management Area (AQMA) and focus on key "hot spots" and major routes in the borough.	Public Protection	Timeframe: 2018 Monitoring of Action: N/A Review Date: Jan 2019	2018-19 LiP	• Focus actions on key hotspots and major routes in the borough to achieve better outcomes. • Supports a key aim of the Mayor of London to reduce the size and number of AQMA's.

Action No.	Action Description	Lead	Time Frame and Monitoring of Action	Funding	Benefits
1.4	Undertake feasibility study into the location and start-up of a new permanent continuous monitoring location.	Public Protection,	Timeframe: Early 2018 Monitoring of Action: N/A Review Date: 2019	2018 MAQBF 2018-19 LiP	• Greater detail available for reporting and planning in the area. • Keep the public up-to-date on the latest pollution trends and air quality data and increases knowledge of the local air quality.
1.5	Expand the current Diffusion Tube Network. Install further diffusion tubes for monitoring of NO_2 as part of match funding for the London Riverside Bid.	Public Protection	Timeframe: October 2017 – December 2018 Monitoring of Action: Number of additional diffusion tubes Review Date: February 2019	2018 MAQBF 2018-19 LiP	• Greater detail available for reporting and planning in the area. • Identify and assess areas of poor air quality that were previously unknown
1.6	Model likely air quality impact of planned major strategic schemes.	Public Protection	Timeframe: Nov 2017 – Jan 2018 Monitoring of Action: Number of modelled major schemes. Review Date: March 2018	2018-19 LiP	Support major strategic transport and infrastructure projects for the Council and assess their impacts on air quality, to ensure environmental sustainability.

Action Policy Two: Public Health and Awareness Raising to encourage Smarter Travel

Why is this important in Havering?

Poor air quality has a direct impact on the health and wellbeing of our residents, workers, commuters and visitors but it particularly affects the most vulnerable of our society; children, the elderly and those with pre-existing medical conditions such as asthma and Chronic Obstructive Pulmonary Disease (COPD). This is of particular concern in Havering as we have one of the largest over 65's population in London (23% of residents = 40,000 people) and between the years of 2010 and 2015 the Borough experienced the largest net inflow of children across all of London.

Informing, educating and raising public awareness about the local air quality and the effects it can have, is one of the ways to protect the most vulnerable of society and those particularly sensitive to the health impacts of air pollution. This information can provide people with the necessary tools to help reduce their exposure to poor air quality and promote a change in lifestyle, which in turn can help improve air quality

What has been done?

Havering has actively promoted airTEXT in past Air Quality Campaigns. AirTEXT is a free service which provides users with a SMS, email or voicemail alert when pollution levels are forecast to be high.

Presently the Borough has almost 90 schools with approved School Travel Plans (STP's), and over 55 schools use their STP's very actively. Havering is one of the leading London Boroughs in promoting active and sustainable travel with high numbers of Havering schools participated in the TfL STARS scheme. We currently have 55 accredited schools, 20 schools at Bronze level, 4 schools at Silver level and 31 schools at Gold level and are hoping to increase these numbers.

The Environmental Protection Team have partnered with Public Health which is especially important with promoting awareness of the subject as health professionals are a trusted voice on these issues.

The new Clean Air Campaign saw the creation of an Air Quality Champion for Havering – Miles the Mole, who features in his own informational video available to view on the Havering Air Quality webpage or the Council YouTube Channel. Miles has been promoting 5 small changes people can make to reduce their contribution to air pollution and reduce their exposure. These are;

- Switch off your engine whenever possible to reduce pollution;
- Walk and cycle more to improve your health and the environment;
- Get into greening; plant and grow more trees and flowers;
- Enjoy the outdoors in Havering's beautiful parks and open spaces; and
- Sign up for air alerts from airTEXT.

Miles has also been visiting schools as part of the Air Quality Education Programme launched by the Mayor of Havering.

Action No.	Action Description	Lead	Time Frame and Monitoring of Action	Funding	Benefits
2.1	Promote walking. Engage with over 50's forum to form a walking club.	Transport Planning	Timeframe: Summer 2018 Monitoring of Action: No. of members who join the walking club Review Date: Summer 2019	2018-19 LiP 2018-19 Coms	• Increase in the number of residents using sustainable travel methods. • Reduction in the number of vehicles using Havering's roads. • Health benefits for those swapping from using the car to walking. • Strengthened community.
2.2	Continue to use Miles the Mole as an air quality champion and educational prop. Our Air Quality Champion will continue to visit schools across the Borough to deliver the Air Quality Education Programme.	Communications	Timeframe: December 2017 – December 2018 Monitoring of Action: No. of schools visited Review Date: January/February 2019	2017-19 LiP	• Increase in number of children/staff/parents using sustainable travel methods to travel to and from school. • Reduction in number of idling vehicles in and around school - Less congestion outside schools and in surrounding local roads. • Increased awareness and knowledge of children/staff/parents around air quality • Safer streets for public to use. • Improve local air quality in and around the school. • Reduction in exposure
2.3	Support the London Riverside Business improvement District (BID) in an application for funding to provide a shuttle bus service in the Rainham riverside area.	Transport Planning	Timeframe: October 2017 Monitoring of Action: N/A Review Date: January 2018	2017-19 LiP	• Business Development & Engagement. • Reduced car number and mileage. • Increased work access availability. • Supports Havering's new Local Plan.

Action No.	Action Description	Lead	Time Frame and Monitoring of Action	Funding	Benefits
2.4	Promote use of public transport.	Transport Planning	Timeframe: 2018-2019 Monitoring of Action: No. of people using buses Annual Traffic Counts Review Date: 2020	2018-19 LiP	• Increase in the number of residents using sustainable travel methods. • Reduction in the number of vehicles using Havering's roads.
2.5	Public Health Input into delivery of AQAP. Director of Public Health to have responsibility for ensuring their Joint Strategic Needs Assessment (JSNA) includes information on Air Quality impacts on the population.	Public Health	Timeframe: 2019 Monitoring of Action: N/A Review Date: 2020	Public Health Staffing Budget	• Ensure that air quality is prioritised and that work on this agenda is recognised and rewarded within public health teams. • Ensure that public health outcomes are met.
2.6	Continue to promote the TfL STARS accredited travel planning programme with schools to reduce car use on school run.	Transport Planning	Timeframe: 2018 - 2022 Monitoring of Action: Increase in numbers of schools signed up & achieved accredited status Review Date: Annually	2018-2022 LiP Smarter Travel Budget	• Increased active travel within schools. • Healthier pupils, improved attendance and academic success • Fewer cars, less congestion and improved local air quality in and around the school. • Reduction in public exposure to poor air quality. • Raises awareness of air quality as an issue and can increase support for measures to improve air quality and public health, e.g. smarter travel and reduced idling.

Action No.	Action Description	Lead	Time Frame and Monitoring of Action	Funding	Benefits
2.7	Promote Smarter Travel initiatives with businesses and encourage local business to adopt workplace travel plans.	Transport Planning	Timeframe: 2019 - 2020 Monitoring of Action: No. of businesses which have adopted travel plans Review Date: 2021	2019-20 LiP Smarter Travel Budget	• Reduction in the number of vehicles using Havering's roads. • Healthier staff, improved attendance and reduction in staff sickness. • Reduction in outgoings/costs for businesses. • Improved local air quality.
2.8	Continue to promote airTEXT to make sure vulnerable residents are aware of the tool and how to use it.	Communications	Timeframe: 2019 - 2022 Monitoring of Action: No. of users Review Date: Annually	LiP	• Minimal cost to boroughs as can use existing commercial channels. • Exposure Reduction. • With different messaging, schemes such as *air*TEXT have the potential to reduce emissions. • Greater awareness on low pollution route travelling.
2.9	Investigate the feasibility of car Clubs in Havering.	Transport Planning	Timeframe: 2019-2020 Monitoring of Action: No. of available car club cars Review Date: 2021	LIP	• Access to vehicles for those that may not have previously had access. • Reduction in the number of private vehicles at new developments. • Reduction in local pollution generation. • Reduced number of single occupancy vehicles. • Reduced ownership costs of residents as car is not owned.
2.10	Support the LIP cycle training budget to promote "bike	Transport Planning	Timeframe: 2018 - 2022	TfL Cycling Grants	• Increase in the number of residents using sustainable travel methods.

Action No.	Action Description	Lead	Time Frame and Monitoring of Action	Funding	Benefits
	ability" in primary schoolsand also to adults and families and ofer free cycle maintenance workshops.		Monitoring of Action: Number of relevant workshops Review Date: Annually	LIP	• Reduction in the number of vehicles using Havering's roads. • Health benefits for those swapping from using the car to walking.
2.11	Encourage greater use of staff travelling to work sustainably through adequate provision of cycle infrastructure at Council buildings.	Transport Planning	Timeframe: 2018 - 2022 Monitoring of Action: No. of employees using sustainable travel methods Review Date: Annually	Cycle 2 Work scheme and LiP	• Greater number of employees travelling to work via sustainable travel methods • Exposure reduction for staff as well as emissions reductions. • Provides an opportunity to engage with businesses about the development and implementation of their Delivery and Servicing Management Plan. • Reduction in Council emissions. • Supports the Mayor of London's targets on the number of people travelling sustainably to work.
2.12	Deliver schemes that provide options for people to travel sustainably and encourage modal shift away from the car.	Transport Planning	Timeframe: 2018 - 2022 Monitoring of Action: No. of employees using sustainable travel methods Review Date: Annually	LIP Funding	• Improved local air quality • Improved local travel • Employment opportunities • Reduction in the number of private vehicles driven during the day and provide reliable transport for those who do not have access to a car • Supports the Mayor of London's targets in increasing the number of people travelling sustainably.
2.13	Offer workplace grants to businesses for infrastructure (e.g. cycle parking, lockers	Transport Planning	Timeframe: 2 017 - 2022	Smarter Travel/Transport Planning	• Health benefits for employees • Reduction in transport costs

Action No.	Action Description	Lead	Time Frame and Monitoring of Action	Funding	Benefits
	and showering facilities) that will encourage staff to walk, cycle, and use public transport.		Monitoring of Action: No. of Grants offered No. of businesses which receive grant Review Date: Annually	Sustainable Travel Grants	• Improvement in local air quality • Reduction of vehicle miles • Supporting major strategic transport and infrastructure projects for the Council. • Supports the Mayor of London's targets on the number of people travelling sustainably to work.

Action Policy Three: Reducing Emissions from Buildings and Developments

Why are these Emissions important?

Domestic and Commercial Heating (gas) is the second biggest contributor to NO_x and CO_2 emissions as well as a significant source of PM_{10} in Havering. A reduction in emissions from residential boilers can be achieved by a reduction in gas consumption and by improving the energy efficiency within homes and buildings.

The third and fourth biggest contributors to NO_x emissions as well as a significant source of PM_{10} in Havering are Industry and NRMM respectively. Smaller industrial processes are permitted under the Councils statutory duty in accordance with the Environmental Permitting Regulations. This legislation requires site operators to implement the best emission control practices available in order to prevent any detrimental impact to the local air quality.

The construction/demolition phase of a development, along with the associated NRMM and equipment can produce high intensity NOx and PM concentrations on a local geographical level. Impacts from these works on the local area are highly dependent on size, duration and location of the development. The planning system plays a crucial role in managing and mitigating the short and long term environmental impacts of new developments on the local air quality.

There are a number of developments which fall outside the boundaries of the normal planning process, such as Crossrail and the Rainham & Beam Park Development in which Havering has a key role in making sure emissions are kept to a minimum. Developments such as Crossrail and the Rainham & Beam Reach redevelopment are examples of high profile sites with significant timeframes and the potential to cause a detrimental impact on local air quality if not managed correctly.

What has been done?

Previously the Council has accessed over £6 million in external grants for Havering residents to provide insulation, heating and other energy efficiency measures. Delivery of the Decent Homes programme by Homes in Havering has allocated over £5 million per year for double glazing, boiler replacements and insulation to improve housing for Council tenants.

The Havering Local Development Framework Sustainable Design and Construction Supplementary Planning Document were adopted in 2009 and work is currently underway to produce a new Local Plan which will replace the key documents within the current Local Development Framework. Initial consultation on the Local Plan took place in February/March 2015 and the Council is now preparing its proposed submission version with further consultation in 2017. The policies in the new Local Plan are required to be in conformity with the NPPF and the London Plan.

What has the Council done to reduce its own footprint?

Havering through its 3 year Climate Change Action Plan has successfully made efforts to reduce its energy use, NO_x emissions and carbon footprint. Some key achievements since 2009 have been;

- Generating £1,059,000 cumulative savings from energy efficiency projects since 2009;

- Transforming street lighting and office lighting in Havering to LEDs, reducing energy use by 60-75%;
- Upholding standards of energy efficiency in new development and refurbishment;
- Five Council buildings and seven schools are now benefitting from renewable energy; and
- Undertaken a Local Climate Impacts Profile to identify key climate risks in Havering.
- Havering fleet comprises 210 vehicles powered by Ultra-Low Sulphur Diesel with a 7% bio mix across the fleet and 5 John Deere Gator Electric Utility Vehicles that are utilised by the Parks Department.

Action No.	Action Description	Lead	Time frame and Monitoring of Action	Funding	Benefits
3.1	Creation of Air Quality Supplementary Planning Guidance. This will provide guidance for developers to assess and reduce or mitigate the impact of emissions from new developments in Havering. This will also provide guidance for developers on London's Low Emission Zone for Non Road Mobile Machinery (NRMM)	Planning	Timeframe: 2018 Monitoring of Action: N/A Review Date: Annually	N/A (No direct funding required only staff time)	• Support development, while ensuring environmental sustainability of major developments. • Minimise the exposure of workers, nearby residents and future residents of new developments to poor air quality. • Co-benefits such as climate change adaption, sustainable urban drainage, reduction of urban heat island effect, increased biodiversity and quality of life. • Support the environmental and development goals of the new Local Plan. • Generation of possible income for development specific air quality projects.
3.2	Review current planning conditions, in relation to air quality, to ensure they are fit for purpose.	Public Protection	Timeframe: 2018 Monitoring of Action: N/A Review Date: Annually	N/A (No direct funding required only staff time)	• Support development, while ensuring environmental sustainability of major developments. • Ensure that new developments will not have an unacceptable negative impact on air quality (both during construction and operational phase). • Minimise the exposure of workers, nearby residents and future residents of new development to poor air quality conditions. • Support the environmental and development goals of the new Local Plan.

Action No.	Action Description	Lead	Time frame and Monitoring of Action	Funding	Benefits
3.3	Adopt and implement planning controls on combined heat and power (CHP) or biomass systems.	Planning	Timeframe: 2018 Monitoring of Action: Annual number of planning applications with condition applied. Review Date: Annually (April during production of Annual Status Report Report)	N/A (No direct funding required only staff time)	• Reduction in emissions from CHP or biomass systems in new developments. • Prevent onsite energy generation from becoming a major new source of emission in London. • Support the environmental and development goals of the new Local Plan. • Improved local air quality. • Reduction in exposure of new and existing residents to poor air quality. • Supports aims of the Mayor of London's London Plan to reduce emissions from new developments.
3.4	Adopt, implement and enforce planning controls on air quality neutral development. New major developments will be required to be air quality neutral as a minimum.	Planning	Timeframe: 2018 Monitoring of Action: Annual number of planning applications with condition applied. Review Date: Annually (April during production of Annual Status Report Report)	N/A (No direct funding required only staff time)	• Support development, while ensuring environmental sustainability of major developments. • Ensure that new developments will not have an unacceptable negative impact on air quality. • Prevent onsite energy generation from becoming a major new source of emission in London. • Improved local air quality. • Reduction in exposure of new and existing residents to poor air quality. • Supports aims of the Mayor of London's London Plan to reduce emissions from new developments.

Action No.	Action Description	Lead	Time frame and Monitoring of Action	Funding	Benefits
3.5	To ensure that new Housing Estate Regeneration Programme for **LBH** housing developments obtain the commitment from developers to a strategy of future reduction of reduced carbon foot print and minimal impact on air quality. Use of planting and trees to assist with AQ in the Short term immediate effect, but with longer term, neutral positive ambitions.	Housing	Timeframe: 2018 Monitoring of Action: N/A Review Date: 2019	N/A (No direct funding required only staff time)	• Ensure that the Council's 12 housing regeneration sites will not have a negative impact on air quality. • Support development, while ensuring environmental sustainability of major developments. • Improved local air quality. • Reduction in exposure of new and existing residents to poor air quality. • Supports aims of the Mayor of London's London Plan to reduce emissions from new developments.
3.6	**Adopt and implement planning controls for innovative green space and planting in new developments. Planning to work with grounds maintenance and parks at design stage for advice on**	Planning	Timeframe: 2018 Monitoring of Action: N/A	N/A (No direct funding required only staff time)	• Reduction in exposure of population to poor air quality. • Promotion of Healthy Living, Green Spaces and Sustainable Travel. • Co-benefits such as climate change adaption, sustainable urban drainage, reduction of urban heat island effect, increased biodiversity and quality of life.

Action No.	Action Description	Lead	Time frame and Monitoring of Action	Funding	Benefits
	greening and planting .		Review Date: 2019		• Supports aims of the Mayor of London's London Plan to reduce emissions from new developments & the Healthy Streets 10 year plan. • This will ensure that new developments will have sufficient greenery and open space to help improve local air quality
3.7	Promote and enforce the Smoke Control Areas to reduce the amount of unlicensed burning.	Public Protection	Timeframe: 2018 - 2022 Monitoring of Action: No. of complaints No. of bonfire visits/letters Review Date: Annually	LiP Funding	• Minimise incidents of unlicensed burning and the release of pollutants into the local area. • Improved local air quality. • Reduced public exposure to poor air quality.
3.8	Monitoring and implementation of Non Road Mobile Machinery (NRMM)	Public Protection	Timeframe: 2018 - 2022 Monitoring of Action: Number of Inspection Number of development registered on NRMM site Review Date:	Public Protection Staffing	• Keep amounts of particulate matter and oxides of nitrogen produced by NRMM to a minimum.
3.9	Promote public sector landlords (homes and	Housing	Timeframe: 2018 - 2020	Housing Staffing	• Reduction in local CO_2 production. • Energy savings and cost savings related with

Action No.	Action Description	Lead	Time frame and Monitoring of Action	Funding	Benefits
	public buildings) to take air quality and energy efficiency advice before refits, via the GLA RE:NEW and RE:FIT Programmes.		Monitoring of Action: No. of landlords requesting advice Review Date: Annually		updating boiler efficiency. • Direct funding schemes where consumers don't have to weigh up several years of repayments and are not restricted in the measures to implement due to the financial package being offered, would accelerate action.
3.10	Deliver infrastructure to ensure that Romford, Rainham and Beam Park Housing Zones are accessible by means other than the car and that residents are provided with options to travel sustainably (Including a new station)	Economic Development	Timeframe: 2019 - 2020 Monitoring of Action: Alternative means of transport available Review Date: TBC Development Completion	LiP Funding	• Support development, while ensuring environmental sustainability of major developments. • Minimise the amount of vehicles and pollution emissions. • Increased accessibility for those who do not have access to a car. • Support the environmental and development goals of the new Local Plan. • Reduction in exposure of population to poor air quality. • Promotion of Healthy Living, Green Spaces and Sustainable Travel. • Co-benefits such as climate change adaption, sustainable urban drainage, reduction of urban heat island effect, increased biodiversity and quality of life. • Supports aims of the Mayor of London's London Plan to reduce emissions from new developments & the Healthy Streets 10 year plan.
3.11	A1306 Redesign	Economic	Timeframe:	LiP Funding	• Same as 3.10.

Action No.	Action Description	Lead	Time frame and Monitoring of Action	Funding	Benefits
		Development	TBC Monitoring of Action: N/A Review Date: TBC Development Completion		
3.12	Identify previously unknown and new premises that require permitting under PPC. Determine these properties that require permitting for Pollution Prevention Control (PPC).	Public Protection	Timeframe: TBC Monitoring: Increase in number of PPC premises Review Date: Annually	Self-funding as charge for PPC license	• Prevent air pollution caused by unlicensed activities.
3.13	Signpost business contact and residents to the appropriate boiler scrappage schemes and energy efficiency grants; Promote businesses and residents to take air quality and energy efficiency advice; embed this practice as part of business as usual activity of the department	Energy Strategy	Timeframe: TBC Monitoring: Number of relevant audits Review Date: Annually	Energy Strategy Staffing	• Reduced NOx emissions from commercial premises. • Improved efficiency • and cost savings for businesses.

Action Policy Four: Reducing Emissions from Transport

Why is this important in Havering?

Road Transport is the greatest contributor to NO_x emissions in Havering, accounting for 65.7% alone. The key transport routes of the M25, A12, A13 and A127 and particular junctions, such as Gallows Corner are major sources of motor vehicle tailpipe emissions which contribute to air pollution concentrations within the Borough.

Havering actively supports and encourages business growth. Accommodating to development plans and commercially inclined, the borough is genuinely interested in helping businesses achieve their goals. However, with the main contributor to Havering's poor air quality being road transport it is important to ensure that businesses have the right support and information regarding air quality and the options open for them.

Poor air quality continues to be a problem in London and compliance with regulatory measures such as the Low Emission Zone (LEZ) is an important issue for fleet operators.

What has been done?

In partnership with the London Borough of Hackney, Havering produced a 'Sustainable Travel for Business Pack' which can be used by any type and size of business. This pack is designed to help advise businesses on the Borough on topics such as clean environments, sustainable travel options and gives an explanation of how they can use these environmental approaches to benefit their business and potentially save money. The pack contains information cards on 'Sustainable Travel', 'airTEXT', 'Electric Vehicles', 'Ultra Low Emission Vehicles', 'TfL Cycling Workplaces', 'Cycling' and 'Waste and Recycling'. The pack was successfully launched at the Leaders Business Network Event in 2015 and distributed to over 30 businesses in attendance. The Smarter Travel Team are continuing the work with this pack and it is available on the Council website free to download.

Advice available to support the efficient management of business freight operations includes the Delivery and Servicing Plans guide and the Freight Operators Recognition Scheme.

Action No.	Action Description	Lead	Time frame and Monitoring of Action	Funding	Benefits
4.1	Include requirement for suppliers of large council contracts that they have attained silver or gold FORS accreditation for their organisation and vehicles.te	OneSource	Timeframe: 2018 Monitoring of Action: Update procurement policies / rules Review Date: Annually	Staff Time	• Reduction in NO_2 emissions from the Council's contractors.
4.2	Introduction of dedicated drop off zones outside all schools for buses & coaches.	Assett Management			•
4.3	Renewal of Taxi Framework, with suppliers complying to the ULEZ & exploring ZEC (Zero Emission Capable) Standards	Assett Management	Timeframe: 2018-2019 Review Date: Annually		•
4.3	Provide Smarter Driver Training for all vocational drivers of the Council's fleet vehicles. Delivered by CPC training and FTA Van excellence accreditation	Asset Management	Timeframe: 2018-2019 Monitoring of Action: Number of drivers trained Review Date: Annually	Asset Management	• Reduction in the NO_2 emissions from the Council's fleet vehicles.
4.4	Provide adequate electric car charging infrastructure	Transport Planning	Timeframe: 2018 - 2022	LiP	• Increase in electric vehicle take up.

Action No.	Action Description	Lead	Time frame and Monitoring of Action	Funding	Benefits
	as per the Mayor's Draft Transport and Plan and Environmental Strategy This is a long term action		Monitoring of Action: Number of electric car charging points Review Date: 2020 after evidence gathering.to assess interest, and demand and feasibility.		• Reduction in polluting vehicles
4.5	Review parking charges policy (controlled parking zones)	Parking	Timeframe: 2019 Monitoring of Action: N/A Review Date: Annually	TBC/self-funding	• Reduction in polluting vehicles and NO_2 emissions.
4.6	Engage with businesses in the borough to discuss the options for upgrading/retrofitting.	Transport Planning	Timeframe: Monitoring of Action: N/A Review Date:	Staff Time	• Reduction in polluting vehicles and NO_2 emissions on Havering's roads • Business engagement & partnership
4.6	Plant greenery and trees (e.g. hedgerows and trees such as ash, common alder, field maple, larch, Norway maple, scots pine and silver birch) along main roads and town centres, which	Public Realm	Timeframe: 2018 - 2022 Monitoring of Action: N/A	Streetcare & LiP Funding	• Enhanced public space for sustainable travel, such as walking and cycling and associated health benefits including mental health. • Reduction in flood risk as part of sustainable urban drainage

Action No.	Action Description	Lead	Time frame and Monitoring of Action	Funding	Benefits
	can lead to an improvement in air quality based on available evidence		Review Date: Annually Monitoring of Action: N/A Review Date: TBC		systems. • Amelioration of high summer temperatures caused by the urban heat island effect and climate change. • Biodiversity benefits.
4.8	Develop Local Implementation Plan to support improvements in local air quality; together with working with TfL to ensure pollution sources outside of local control i.e. buses and commuter traffic are dealt with.	Transport Planning	Timeframe: TBC Monitoring of Action: N/A Review Date: Annually	TBC	• Make Havering's streets greener, safer and encourage more people to sustainably travel around the borough • Lobby the Mayor and TfL to ensure regional policies support local air quality improvements i.e. cleaner buses. • Support complimentary benefits highlighted in local and regional policies such as improving mental health, combating social inclusion and reducing noise pollution from roads.

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