

# Royal Borough of Greenwich Air Quality Action Plan 2017 - 2021



## Summary

This Air Quality Action Plan (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 the Royal Borough of Greenwich between 2017 and 2021.

This action plan replaces the previous action plan which was published in 2002. Highlights of successful projects delivered through the 2002 action plan include:

- Low Emissions Areas for major developments at Greenwich Peninsular, Millennium Village, The Warren, Tripcock Point and Love Lane. These were cited as examples of best practice in DEFRA guidance and the development of the new London local air quality management (LLAQM) policies.
- A lorry ban (over 7.5 tonne) was introduced on Romney Road in Greenwich Town centre; this helped to reduce pollutant concentrations in one of the busiest areas of the borough
- We have replaced 30 refuse collection vehicles with the cleanest Euro VI models and introduced two smaller fully electric vans.
- Eight double standard electric vehicle charging points and four double rapid chargers were installed in publicly accessible areas.
- The network of automatic monitors for NO<sub>2</sub> and Particulate Matter (PM<sub>10</sub>) has been increased to 11, making this the most extensive local authority network in London.

Air pollution is associated with a number of adverse health impacts; it is recognised as a contributing factor in the onset of cardio-vascular disease and asthma; in 2012 the World Health Organisation (WHO) has classified diesel as being carcinogenic to humans. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with existing heart and lung conditions. There is often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas<sup>1,2</sup>.

Greenwich is ranked as the 14<sup>th</sup> most affected London borough from health effects associated with poor air quality.<sup>3</sup> The most recent Joint Strategic Needs Assessment (JSNA) for Public Health identified 7 main disorders and conditions as priorities. The top 3 were:

1. Cardiovascular disease (heart disease, stroke)

<sup>1</sup> Environmental equity, air quality, socioeconomic status and respiratory health, 2010.

<sup>2</sup> Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006.

<sup>3</sup> BETTER ENVIRONMENT, BETTER HEALTH: A GLA guide for London's Boroughs London Borough of Greenwich, November 2013

2. Cancers (especially lung, breast and bowel)
3. Respiratory disorders (bronchitis and emphysema)

All of these conditions can be exacerbated by poor air quality.<sup>4</sup>

The annual health costs to society of the impacts of air pollution in the UK are estimated to be roughly £15 billion<sup>5</sup>. The Royal Borough of Greenwich is committed to reducing the exposure of its residents to poor air quality in order to protect and improve health.

The Royal Borough of Greenwich has developed actions that it is taking to improve air quality within its boundary and also depicts the actions the Council is taking in regards to the GLA's Air Quality Action Matrix requirements. Actions are aligned with the Council's Greener Greenwich strategy.

The Royal Borough of Greenwich has developed actions that can be considered within six broad topics:

- **Emissions from developments and buildings:** emissions from buildings account for about 15% of the NO<sub>x</sub> emissions across London so are important in affecting NO<sub>2</sub> concentrations;
- **Public health and awareness raising:** increasing awareness can drive behavioural change to lower emissions as well as to reduce exposure to air pollution;
- **Delivery servicing and freight:** vehicles delivering goods and services are mostly diesel-fuelled vehicles with high primary NO<sub>2</sub> emissions;
- **Borough fleet actions:** our fleet includes light and heavy duty diesel-fuelled vehicles such as mini buses and refuse collection vehicles with high primary NO<sub>2</sub> emissions. Tackling our own fleet means not only reducing pollutant concentrations in the borough but this also allows us to lead by example;
- **Localised solutions:** these seek to improve the environment of neighbourhoods through a combination of measures; and
- **Cleaner transport:** road transport is the main source of air pollution in London. We need to incentivise modal shift from private car use to walking, cycling and ultra-low emission vehicles (such as electric) when vehicle use is absolutely necessary.

Our priorities are to:

1. Manage the impact of future growth in the borough
2. Support healthier lifestyles for residents
3. Reduce the impact of traffic on air quality and congestion
4. Reduce our own impact on air quality

The Royal Borough of Greenwich has worked hard to engage with stakeholders and communities which can make a difference to air quality in the borough. We would like to thank all those who have worked with us in the past and we look forward to working with you again and welcome new partners to contribute as we deliver this new action plan over the coming years.

This AQAP outlines how we plan to effectively use local levers to tackle air quality issues within our control. However, there are a large number of air quality policy areas that are outside of the Council's influence (such as Euro standards, national vehicle taxation policy, taxis, roads controlled by Transport for London (TfL) and buses), and so we will continue to work with and lobby The

---

<sup>4</sup> Greenwich Joint Strategic Needs Assessment, 2012


<sup>5</sup> Defra. Air Pollution: Action in a Changing Climate, March 2010


Greater London Authority (GLA), TfL and central government on policies and issues beyond the Royal Borough of Greenwich's influence.

## **Responsibilities and Commitment**

This AQAP was prepared by the Environmental Health Department of the Royal Borough of Greenwich with the support and agreement of the departments specified in table 4.1 Air Quality Action Plan below. This AQAP will be subject to an annual review, appraisal of progress and reports to the Air Quality Task Force. Progress each year will be reported in the Annual Status Report (ASR) produced by the Royal Borough of Greenwich, as part of our statutory LLAQM duties.

**Environmental Protection Team**  
**Community Services**  
**Royal Borough of Greenwich**

 020 8921 8166

 4<sup>th</sup> floor The Woolwich Centre, 35 Wellington Street, London SE18 6HQ

 [environmental\\_protection@royalgreenwich.gov.uk](mailto:environmental_protection@royalgreenwich.gov.uk)

## Contents

Summary .....	1
Abbreviations.....	5
Foreword.....	5
Introduction .....	7
1. Summary of current air quality in the Royal Borough of Greenwich.....	7
1.2 Sources of Pollution in the Royal Borough of Greenwich.....	12
2 The Royal Borough of Greenwich’s Air Quality Priorities .....	15
2.1 Health and Wellbeing Strategy:.....	15
2.2 Transport.....	16
2.3 Growth .....	16
2.4 Sustainability and Planning.....	16
3 Development and Implementation of The Royal Borough of Greenwich AQAP .....	16
3.1 Consultation and Stakeholder Engagement .....	16
Table 3.1 Consultation Undertaken.....	17
3.2 Air Quality Task Force (AQTF) .....	18
4. Action Plan Priorities & Progress .....	18
4.1 Managing the impact of Growth.....	18
4.2 Supporting healthier lifestyles for residents.....	19
4.3 Reducing the impact of traffic .....	19
4.4 Reducing our own emissions .....	19
Appendix A Response to Consultation .....	42

## Table of figures

Figure 1: Modelled map of annual mean NO <sub>2</sub> concentrations from the London Atmospheric Emissions Inventory (LAEI) 2013).....	8
Figure 2: Modelled map of annual mean PM <sub>10</sub> from the LAEI 2013 .....	9
Figure 3: Modelled map of annual mean PM <sub>2.5</sub> from the LAEI 2013 .....	10
Figure 4: Location of NO <sub>2</sub> focus areas.....	11
Figure 5: NO <sub>x</sub> Emission by Source (from the LAEI 2013) .....	12
Figure 6: NO <sub>x</sub> emission by Vehicle type (From the LAEI 2013).....	13
Figure 7: PM <sub>10</sub> Emissions by Source (from the LAEI 2013).....	13
Figure 8: PM <sub>10</sub> Emission by Vehicle type (from the LAEI 2013).....	14
Figure 9: PM <sub>2.5</sub> Emissions by Source type (from the LAEI 2013).....	14
Figure 10: PM <sub>2.5</sub> Emissions by vehicle type (from the LAEI 2013).....	15

## **Abbreviations**

AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQS	Air Quality Strategy
AQO	Air Quality Objective
BEB	Buildings Emission Benchmark
CAB	Cleaner Air Borough
CAZ	Central Activity Zone
EV	Electric Vehicle
GLA	Greater London Authority
LAEI	London Atmospheric Emissions Inventory
LAQM	Local Air Quality Management
LLAQM	London Local Air Quality Management
NRMM	Non-Road Mobile Machinery
PM <sub>10</sub>	Particulate matter less than 10 micron in diameter
PM <sub>2.5</sub>	Particulate matter less than 2.5 micron in diameter
TEB	Transport Emissions Benchmark
RBG	Royal Borough of Greenwich
TfL	Transport for London

## **Foreword**

Tackling pollution and poor air quality head-on through a concerted, multi-faceted, evidence-based strategy, lies at the heart of the Royal Borough's Air Quality Action Plan.

As a council, we have always sought to be at the forefront of the fight against emissions and pollution. I am proud that we:

- Have more air quality monitoring stations than any other London borough.
- Were one of the first local authorities to pioneer the Mayor of London's Low Emission Neighbourhood project in West Greenwich and the peninsula.
- Have lobbied for expansion of the Ultra Low Emission Zones (ULEZs) and provided more charging points for electric vehicles in the borough.
- Ensure that all new refuse vehicles meet Euro VI standards and have partnered with Digital Greenwich on a ground-breaking project to deliver a fully electric refuse vehicle.
- Were awarded 'Cleaner Air Borough Status' by the Greater London Authority for implementing a suite of measures to tackle pollution.

We recognise however, that we cannot solve the problem of air pollution and emissions on our own. That's why we're working together with residents, community groups and other organisations to

deliver initiatives like the 'Eco-stars' programme where the Council and businesses commit to improving the green credentials of their fleets. We're also continuing to work closely with the Mayor of London's office and national government to find solutions to the London-wide problem of pollution and harmful emissions.

This Air Quality Action Plan has been developed in close consultation with residents and presents a wide set of clear priorities to manage the impact of future growth in the borough, support healthier lifestyles for residents, reduce the impact of traffic on air quality and congestion and reduce our own impact on air quality. This will help us to continue to deliver a cleaner and greener borough for all our residents and bequeath cleaner air and a healthier environment for the next generation.

Signed

A handwritten signature in black ink, appearing to read 'D. Thorpe', written in a cursive style.

Councillor Danny Thorpe Deputy Leader

## **Introduction**

This report outlines the actions that The Royal Borough of Greenwich will deliver between 2017 & 2021 in order to reduce concentrations of pollution, and exposure to pollution; thereby positively impacting on the health and quality of life of residents and visitors to the borough.

It has been developed in recognition of the legal requirement on the local authority to work towards air quality objectives under Part IV of the Environment Act 1995 and relevant regulations made under that part and to meet the requirements of the London Local Air Quality Management statutory process<sup>6</sup>.

### **1. Summary of current air quality in the Royal Borough of Greenwich**

The UK Air Quality Strategy (AQS), released in July 2007, provides the overarching strategic framework for air quality management in the UK and contains national air quality standards and objectives established by the Government to protect human health. The AQS objectives take into account EU Directives that set limit values which member states are legally required to achieve by their target dates.

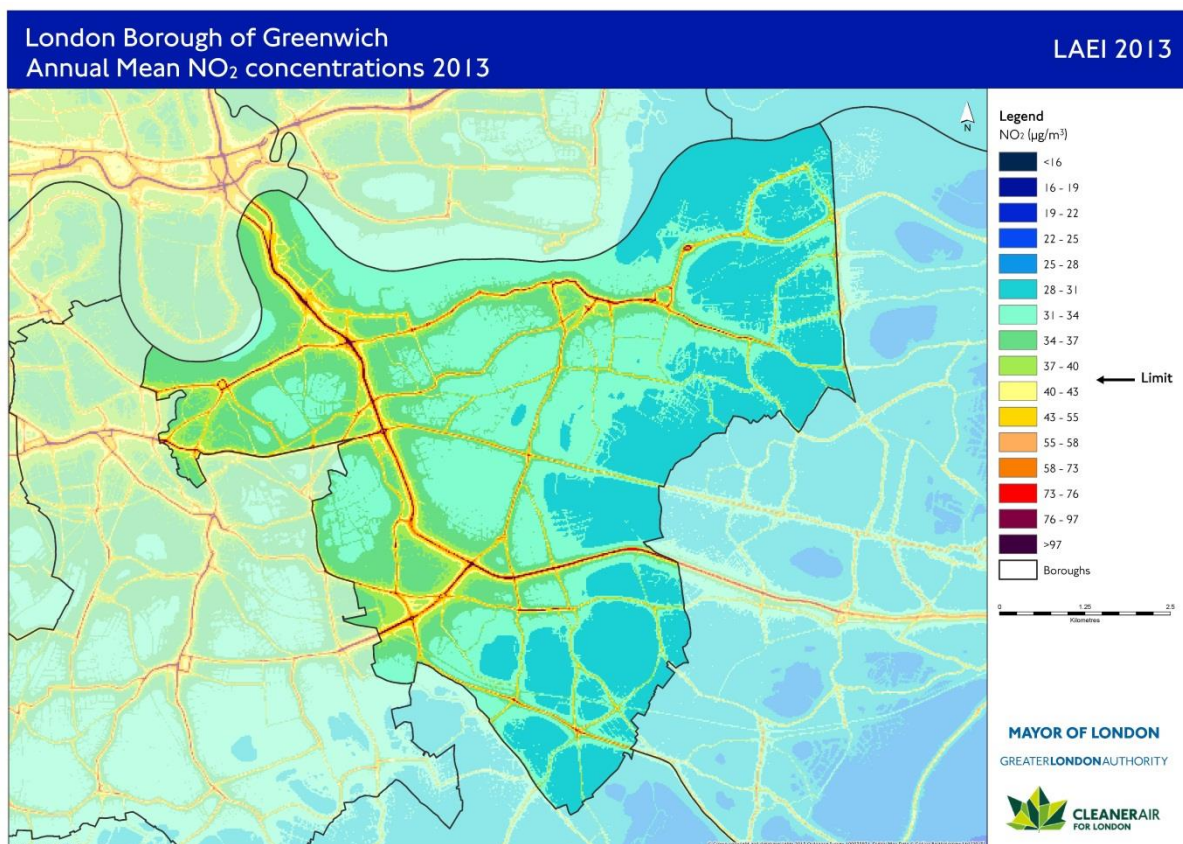
The Royal Borough of Greenwich is meeting all of the national AQS objectives other than for the gas Nitrogen Dioxide (NO<sub>2</sub>). The Royal Borough of Greenwich is meeting the current objectives for Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>) but as this pollutant is damaging to health at any level, this remains a pollutant of concern. The measured concentrations still exceed the World Health Organisation limit.

The UK Air Quality Strategy (AQS), released in July 2007, provides the overarching strategic framework for air quality management in the UK. It contains national air quality standards and objectives established by the government to protect human health.

---

<sup>6</sup> LLAQM Policy and Technical Guidance. <https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/working-boroughs>

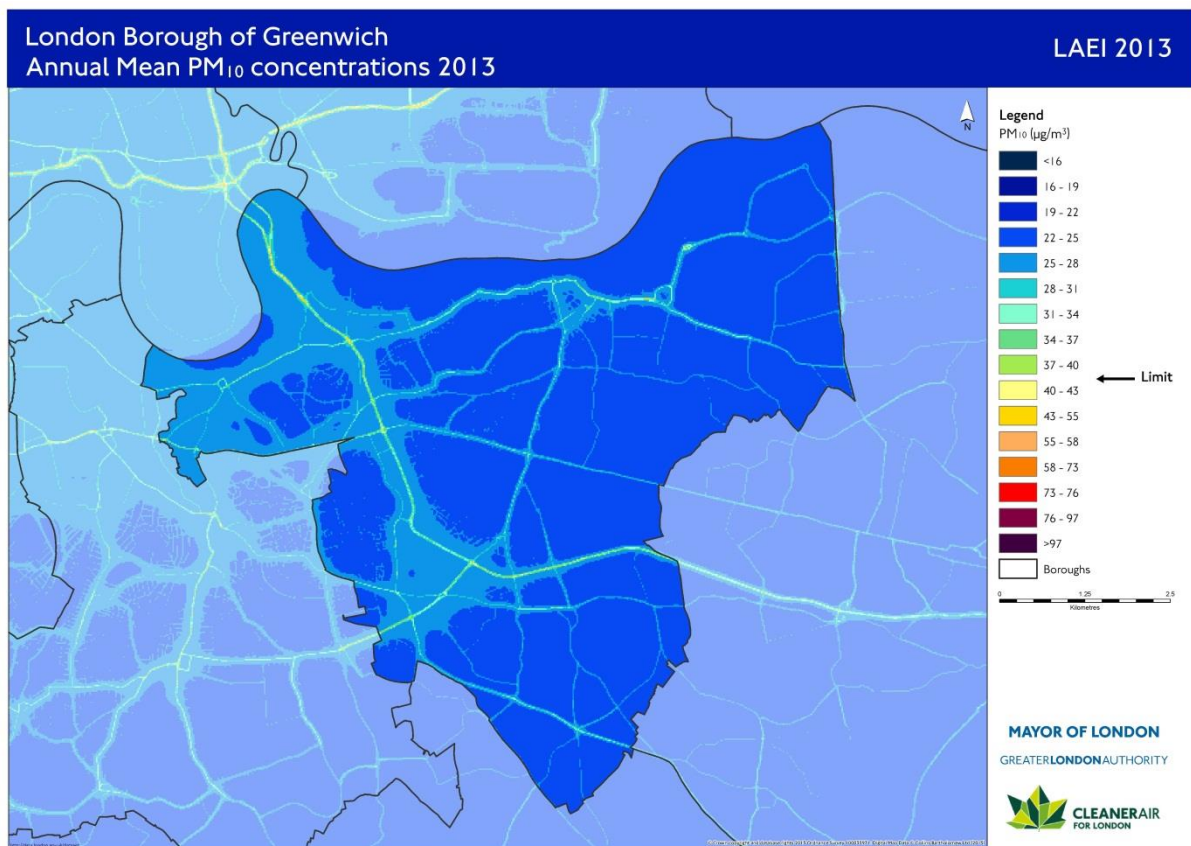
**Figure 1: Modelled map of annual mean NO<sub>2</sub> concentrations from the London Atmospheric Emissions Inventory (LAEI) 2013**



*The map shows that NO<sub>2</sub> concentrations are most elevated around the major roads in the borough, particularly the A2, A20, A205, A206 and A102 (Blackwall Tunnel Approach), which are dominated by through traffic. The major town centres of Greenwich, Woolwich and Eltham are also subject to concentrations of NO<sub>2</sub> above the objective limit.*

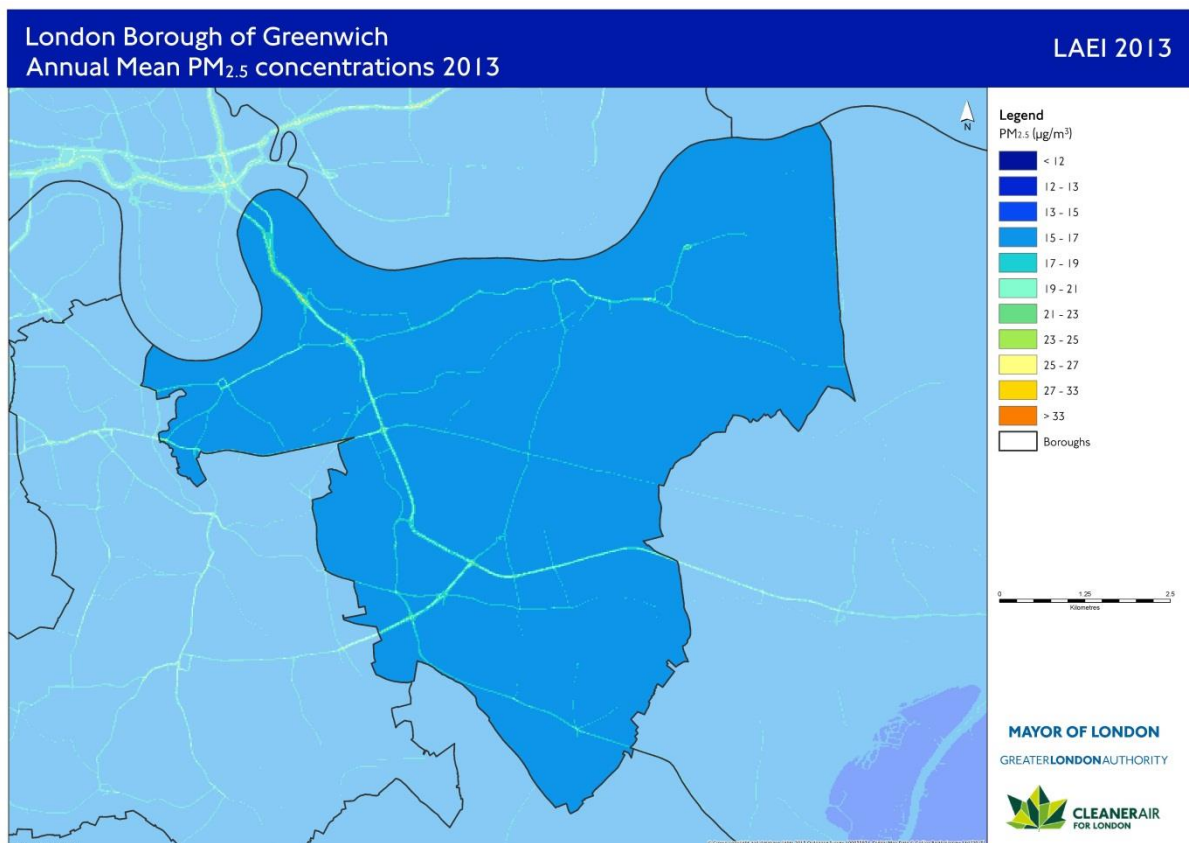


Figure 2: Modelled map of annual mean  $PM_{10}$  from the LAEI 2013



*This map shows  $PM_{10}$  levels are elevated around the major roads and in the major town centres. This suggests that the most significant source of  $PM_{10}$  in the borough is road transport.*

**Figure 3: Modelled map of annual mean PM<sub>2.5</sub> from the LAEI 2013**



Similarly to Figure 2, this map shows elevated levels of PM<sub>2.5</sub> are associated with road traffic. The aggregates zone does not appear from the modelling, to be a significant source of emissions.

### 1.1 Air Quality Management Area and GLA Focus Areas

An Air Quality Management Area (AQMA) was declared for the whole of the borough for the following pollutants:

Nitrogen dioxide (NO<sub>2</sub>): The national AQS annual average limit for this pollutant has been exceeded at some of our monitoring stations and modelling indicates it is being breached at a number of other locations. The hourly average limit at one monitoring site was also exceeded and modelling indicates we are at risk of breaching this limit at other locations.

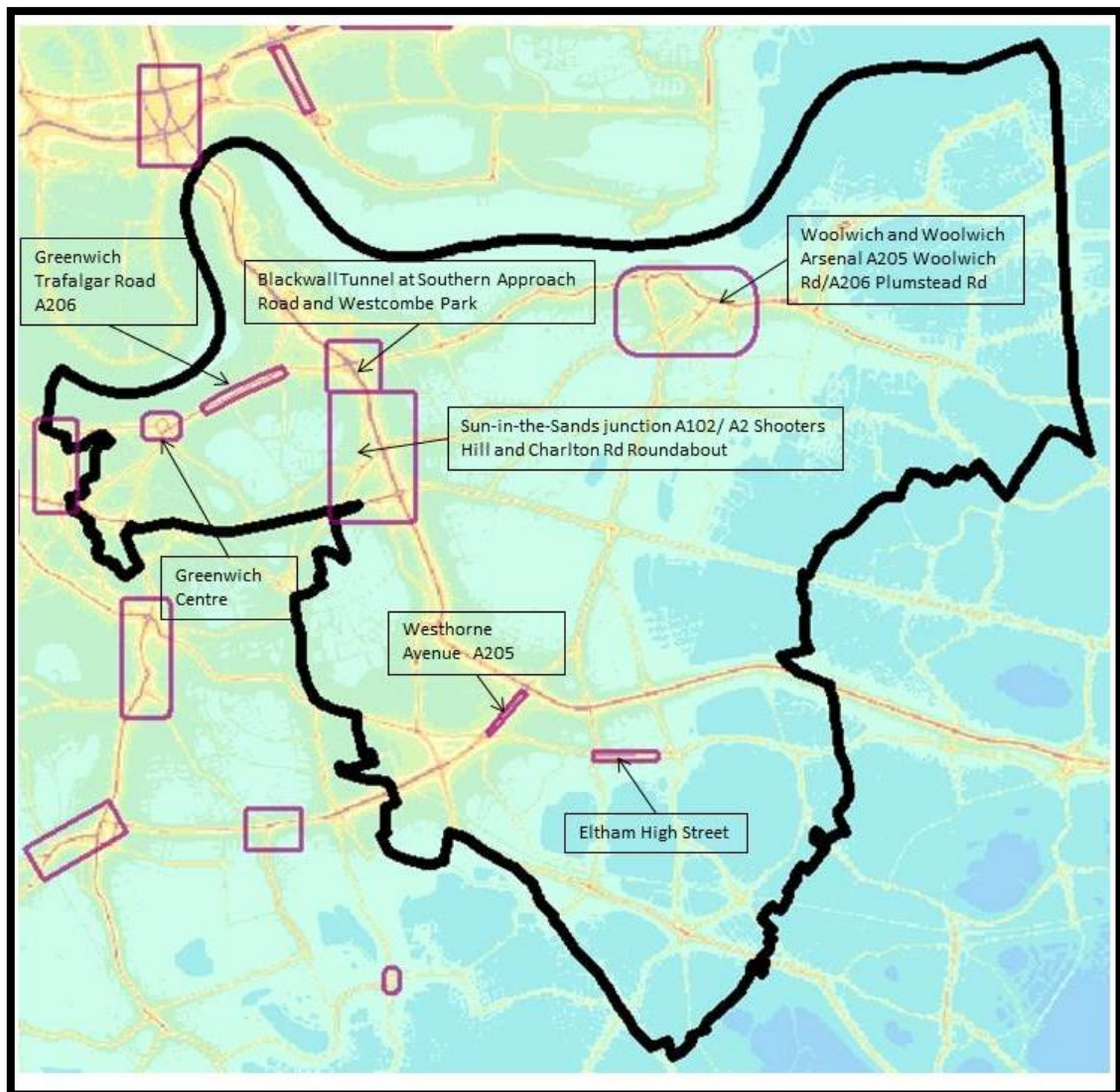
Particulate Matter (PM<sub>10</sub>): although we are now meeting national AQS Limits, we are exceeding the WHO air quality guideline limit for this pollutant. This pollutant has significantly adverse effects on health particularly for the most vulnerable in our society, therefore, we have a duty to ensure concentrations of PM<sub>10</sub> remain as low as possible. We have a formal responsibility to work towards reductions of PM<sub>2.5</sub>, which is a fraction of PM<sub>10</sub>. Concentrations of PM<sub>2.5</sub> are similarly below national AQS target values but above WHO guidelines.

An Air Quality Focus Area is a location that has been identified by the GLA as having both high levels of NO<sub>2</sub> and significant human exposure.

There are seven GLA focus areas in the Royal Borough of Greenwich. These are;

- Woolwich and Woolwich Arsenal A205 Woolwich Rd/A206 Plumstead Rd
- Blackwall Tunnel at Southern Approach Road and Westcombe Park
- Sun-in-the-Sands junction A102/A2 Shooters Hill and Charlton Rd Roundabout
- Greenwich Centre
- Greenwich Trafalgar Road A206
- Eltham High Street
- Westhorne Avenue A205

**Figure 4: Location of NO<sub>2</sub> focus areas.**



## 1.2 Sources of Pollution in the Royal Borough of Greenwich

Pollution in the Royal Borough comes from a variety of sources. This includes pollution from sources outside of the borough, and, in the case of particulate matter, a significant proportion of this comes from outside of London and even the UK. Of the pollution that originates in the borough the main sources of NO<sub>2</sub> are road transport, domestic gas and NRMM and the main sources of particulate matter are road transport, re-suspension and NRMM.

Figure 5: NO<sub>x</sub> Emission by Source (from the LAEI 2013)

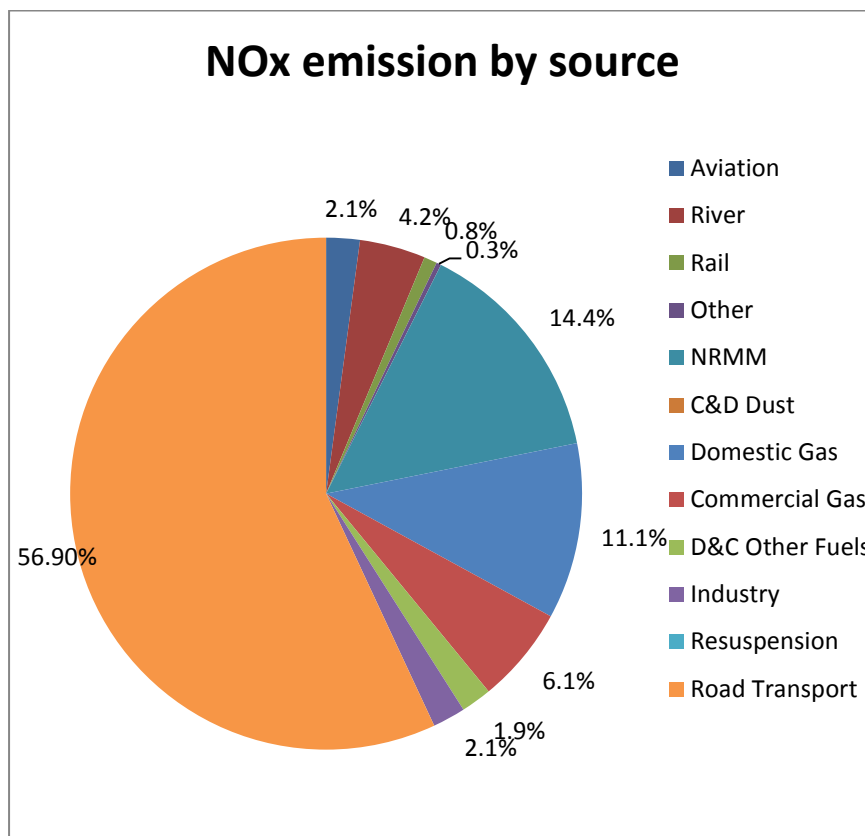


Figure 6: NOx emission by Vehicle type (From the LAEI 2013)

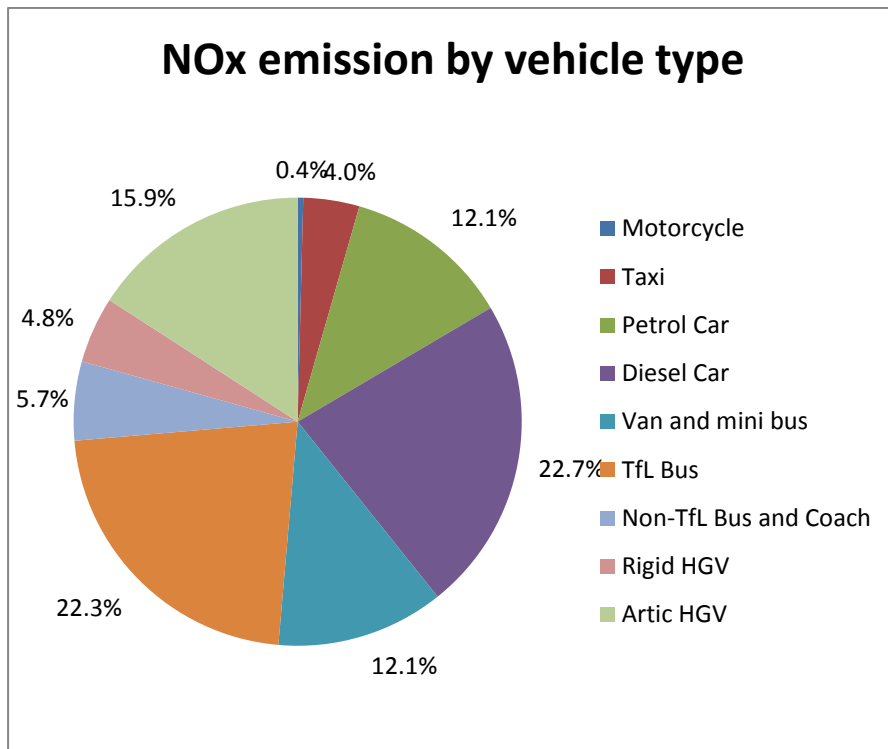


Figure 7: PM<sub>10</sub> Emissions by Source (from the LAEI 2013)

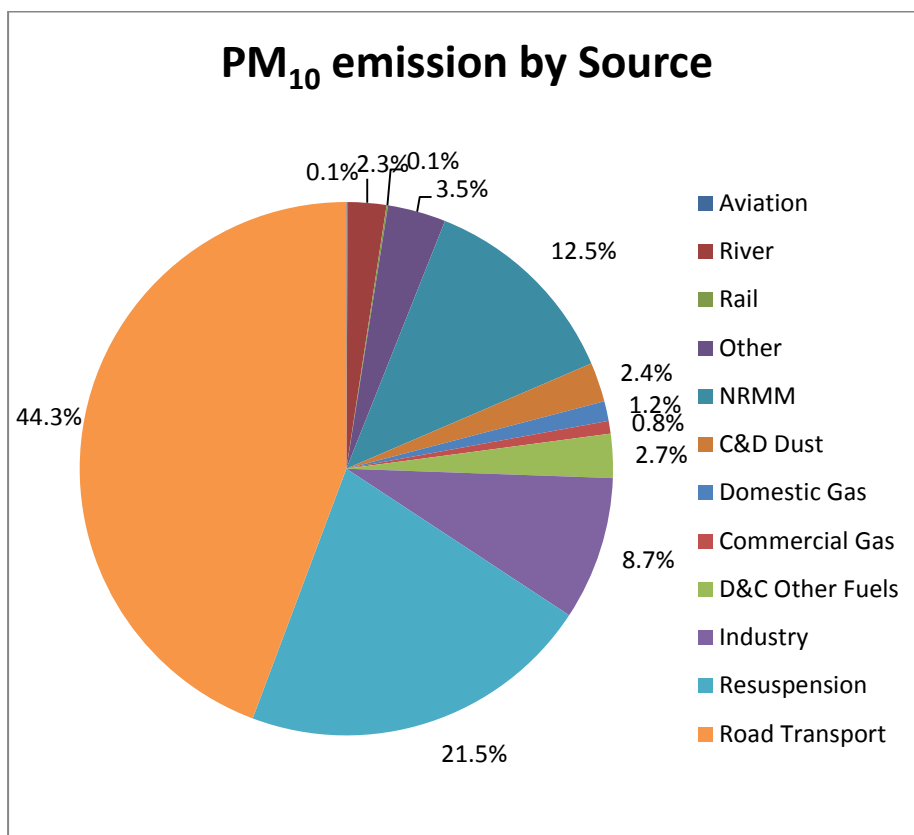


Figure 8: PM<sub>10</sub> Emission by Vehicle type (from the LAEI 2013)

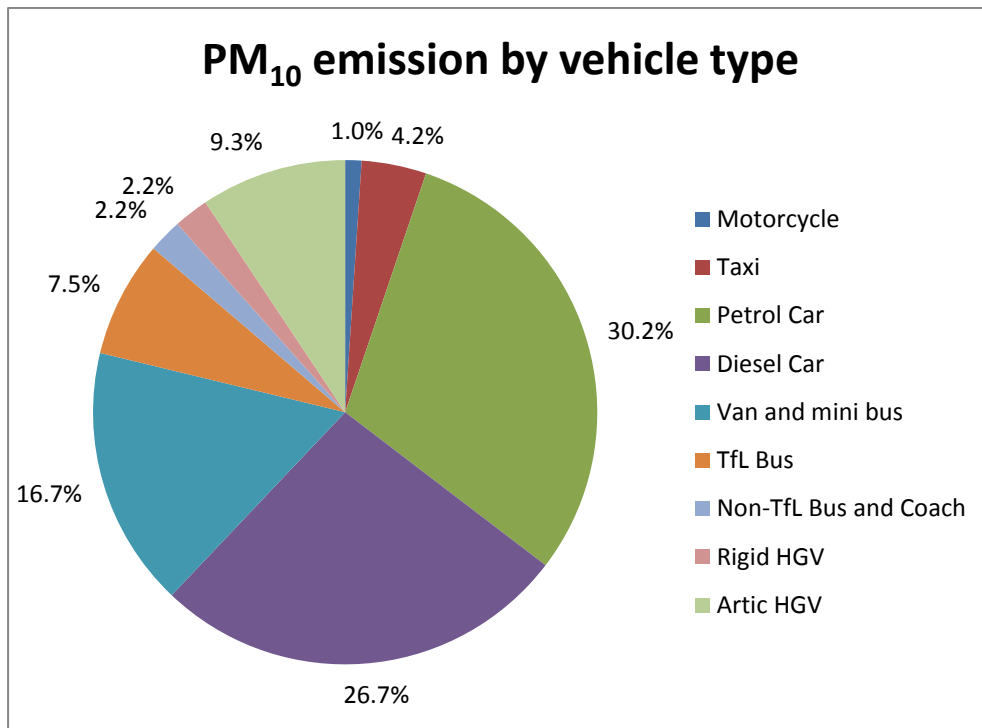


Figure 9: PM<sub>2.5</sub> Emissions by Source type (from the LAEI 2013)

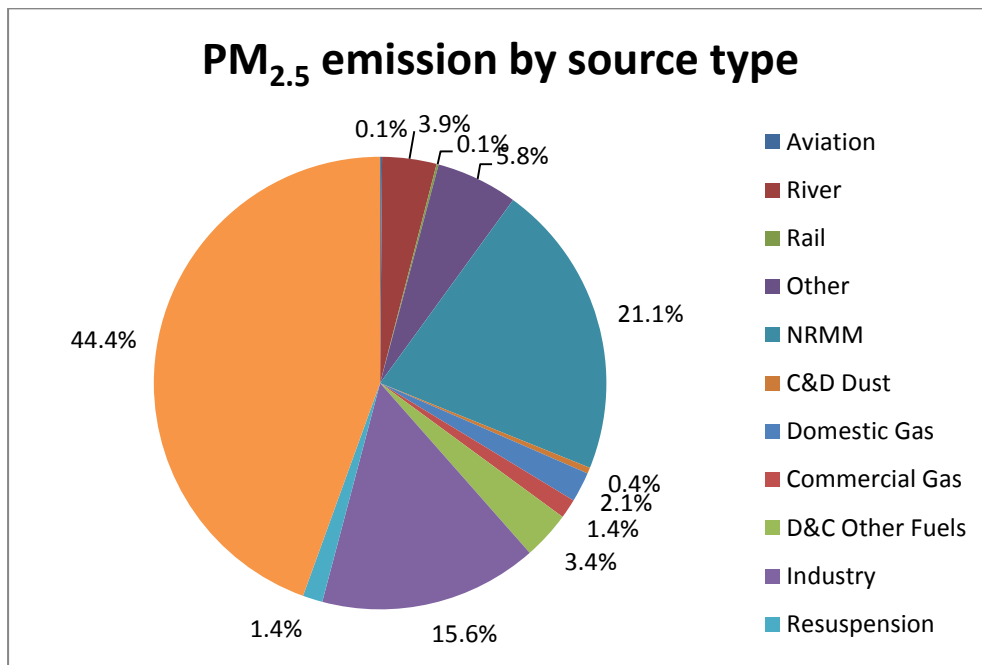
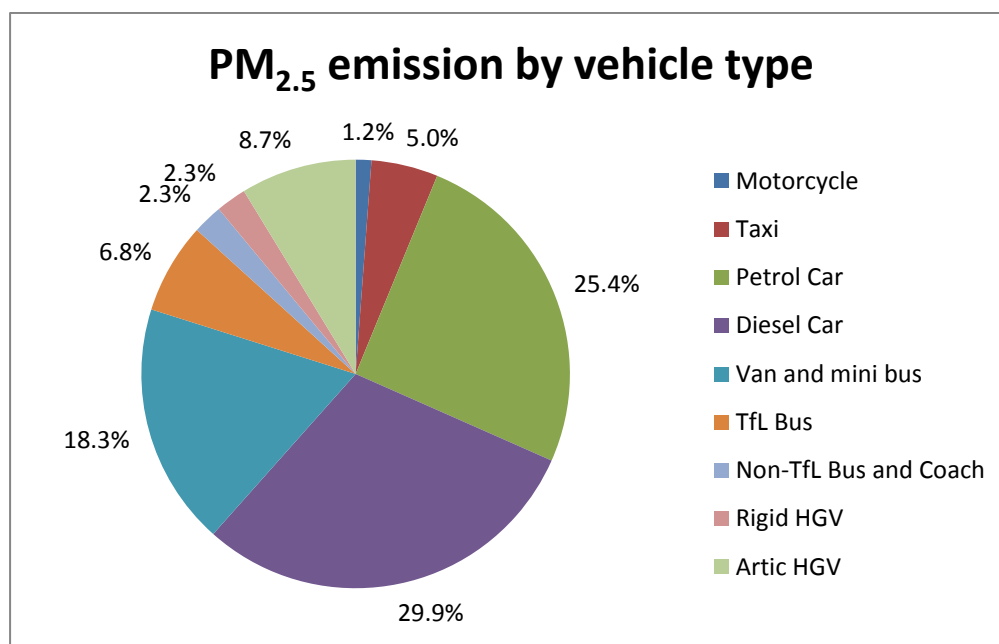




Figure 10: PM<sub>2.5</sub> Emissions by vehicle type (from the LAEI 2013)



Pollution in Greenwich comes from a variety of sources. This includes pollution from sources outside of the borough, and, in the case of particulate matter, a significant proportion of this comes from outside of London and even the UK. Of the pollution that originates in the borough the main sources of NO<sub>2</sub> are diesel vehicles and boilers, and the main sources of particulate matter are diesel vehicles and localised construction sites, including re-suspension. In relation to exposure, Figure 1 provides a more accurate picture, as this represents the ground level concentrations, with the road transport network identified as the main source.

## 2 The Royal Borough of Greenwich's Air Quality Priorities

Air pollution is a complex problem with links and dependencies to other council priorities. The paragraphs below set out the key council strategies that link with air quality:

### 2.1 **Health and Wellbeing Strategy:**

The Health and Wellbeing Strategy<sup>7</sup> identifies priority areas for public health, including "A focus on obesity", "Good mental health" and "A healthy workforce". The AQAP can contribute to meeting all of these priorities by promoting the uptake of healthier, active travel options and ensuring that our public realm is protected from air pollution, making green spaces easier and more pleasant to use.

The Health and Wellbeing strategy also identifies a number of major health conditions affecting the population of the borough. Among the six disorders identified three can be

<sup>7</sup> [http://www.royalgreenwich.gov.uk/downloads/download/466/health\\_and\\_wellbeing\\_strategy](http://www.royalgreenwich.gov.uk/downloads/download/466/health_and_wellbeing_strategy)

exacerbated by poor air quality (cardio vascular disease & stroke, respiratory disease and cancers). Any improvement in ambient pollution concentrations therefore has the potential to contribute to measures to tackle these conditions.

## **2.2 Transport**

Road traffic is one of the most significant contributors to air pollution in urban environments. It is therefore, vital that transport and air quality policies complement each other. The Council's Local Implementation (Transport) Plan (LIP)<sup>8</sup> sets out our transport priorities in detail, including commitments to promote active travel, improve the boroughs air quality and improve public transport. This will be done through measures to support the use of Crossrail, introduce express bus routes to improve journey times and improve North-South and orbital transport links in the borough.

There is also a detailed cycling strategy<sup>9</sup> to ensure that on-going improvements to the cycling infrastructure are well targeted and co-ordinated. The Council has been awarded funding from the Mayor's Air Quality Fund to deliver a Low Emission Neighbourhood<sup>10</sup> in Greenwich Town Centre and the Trafalgar Road corridor, two of the borough's Air Quality Action Areas. The programme will reduce harmful emissions, create a human-friendly environment, and improve road safety.

## **2.3 Growth**

From 2011 to 2041 the number of households in Greenwich is expected to grow by 50.7% and population by 37.5%. The Council's Growth Strategy brings together the vision for regeneration, planning, property, tourism and transport. It includes a commitment to sustainable development, including encouraging the design of buildings and environments that minimise energy usage; developing clean energy sources and improving the health of the population through healthy urban planning.

## **2.4 Sustainability and Planning**

The Royal Greenwich Local Plan<sup>10</sup> is the core strategic document for development in the borough up to 2028. A number of strategic priorities are laid out in the document including; improving accessibility, capacity and quality of the public transport network, and promoting sustainable travel in the Borough, ensuring that the necessary physical, social and green infrastructure is provided or existing infrastructure is enhanced to support the planned growth and development and encouraging major sustainable regeneration projects within Royal Greenwich."

# **3 Development and Implementation of The Royal Borough of Greenwich AQAP**

## **3.1 Consultation and Stakeholder Engagement**

---

<sup>8</sup> [http://www.royalgreenwich.gov.uk/info/493/planning\\_-\\_transport\\_policy/844/local\\_implementation\\_plan](http://www.royalgreenwich.gov.uk/info/493/planning_-_transport_policy/844/local_implementation_plan)

<sup>9</sup> [http://www.royalgreenwich.gov.uk/downloads/file/2131/royal\\_borough\\_of\\_greenwich\\_cycling\\_strategy\\_april\\_2014](http://www.royalgreenwich.gov.uk/downloads/file/2131/royal_borough_of_greenwich_cycling_strategy_april_2014)

<sup>10</sup> <http://www.royalgreenwich.gov.uk/lowemissionneighbourhood>

<sup>10</sup> [http://www.royalgreenwich.gov.uk/info/1004/planning\\_policy/869/local\\_development\\_framework/2](http://www.royalgreenwich.gov.uk/info/1004/planning_policy/869/local_development_framework/2)



In developing/updating the action plan we have worked with other local authorities, agencies, businesses and the local community to improve local air quality. Schedule 11 of the Environment Act 1995 requires local authorities to consult the bodies listed in Table 3.1. In addition we have undertaken the following stakeholder engagement:

- The draft air quality action plan was available on the Council’s web site in the summer of 2016
- Public consultation meetings, lead by the Deputy Leader of the Council were held at four locations in the borough in 2016
- Specific consultation was held with the business sector through the Councils e-forum for business
- Specific formal consultation was held with all statutory consultees

The response to our consultation stakeholder engagement is given in Appendix A.

**Table 3.1 Consultation Undertaken**

<b>Yes/No</b>	<b>Consultee</b>
Yes	the Secretary of State
Yes	the Environment Agency
Yes	Transport for London and the Mayor of London (who will provide a joint response)
Yes	all neighbouring local authorities
Yes	other public authorities as appropriate
Yes	bodies representing local business interests and other organisations as appropriate

### **3.2 Air Quality Task Force (AQTF)**

Overall direction about air quality policy is provided by the AQTF. Membership is set out below:

#### Councillors

- Cllr Danny Thorpe (Joint Chair) – Cabinet Member for Regeneration and Transport
- Cllr Jackie Smith (Joint Chair) – Cabinet Member for Community Safety and Environment
- Cllr David Gardner - Cabinet Member for Community Wellbeing and Public Health

#### Directorate of Community Services

- Head of Environmental Health Pollution and Residential Services,
- Assistant Director Community Safety and Environmental Health
- Environmental Health Team Manager – Environmental Protection

#### Directorate of Regeneration Enterprise & Skills

- Director
- Assistant Director
- Transportation Planning and Strategy Manager
- Principal Transport Planner
- Sustainability and Renewal Manager

#### Directorate of Health and Adult Services

- Director, Public Health
- Specialty Registrar

#### Chief Executive's Department

- Communications Officer

The Task force meets every four months to facilitate the production of this Action Plan. Responses to the public consultation can be found at Appendix B

## **4. Action Plan Priorities & Progress**

As well as promoting improvements in Air Quality the action plan priorities should seek to complement and, where possible, maximise co-benefits with these wider priorities. The four priorities for the AQAP are:

### **4.1 Managing the impact of Growth**

- New and refurbished buildings have the potential to add to emissions from domestic heating and cooling. These impacts can be addressed directly through emissions limits or indirectly by reducing the energy demand in new buildings.
- New residents will need to travel for work and leisure. These impacts can be addressed by measures to encourage walking and cycling or by working with TfL to further improve public transport provision.
- An increased provision of services to meet extra demand such as refuse collections will create additional emission. Negative impacts can be reduced by designing new developments with due consideration to operational efficiency and ensuring only the cleanest vehicles are used.

- Construction and demolition activities can have a significant impact on local air quality. These impacts can be minimised by using the planning system to ensure best practice techniques are employed on all sites.
- New roads and river crossings have the potential to increase pollutant concentrations unless they are well designed and well placed. The Royal Borough of Greenwich should work closely with TfL to ensure that necessary infrastructure improvements are well designed and well placed to minimise any detrimental effects on air quality.

#### **4.2 Supporting healthier lifestyles for residents**

- Measures to encourage active travel such as walking and cycling can support residents maintain an active lifestyle, which has additional health benefits beyond those achieved through improving air quality.
- New developments in the most accessible parts of Royal Borough of Greenwich that lie within Controlled Parking Zones to be car free, and developments in areas of high on-street parking stress to be car-capped.
- Good quality outdoor spaces encourage residents to be more active and can have benefits for mental health and wellbeing. Ensuring that outdoor spaces are protected from pollution sources not only makes them more pleasant to use but reduces resident's exposure.
- Three of the priority health disorders and conditions in Greenwich may be exacerbated by poor air quality. Therefore any improvements in air quality can be expected to improve outcomes in overall public health.

#### **4.3 Reducing the impact of traffic**

- We will lobby TfL for the current ULEZ to be improved and strengthened, including expansion of the zone to the M25 at the earliest possible date.
- We will support London wide and national schemes to encourage the uptake of cleaner vehicles, such as improved electric charging networks and vehicle scrappage schemes can play an important role in improving vehicle stock on the roads.
- Using the cleanest possible vehicles for public, private and freight transport can have a significantly positive impact on pollution concentrations.

#### **4.4 Reducing our own emissions**

- The Royal Borough Greenwich is a large fleet operator. We will continue to improve our vehicles which will not only have a positive impact on local air quality but also demonstrates what can be achieved as an example to other fleet operators.
- The Royal Borough of Greenwich operates a large council housing stock and a number of office buildings. By improving both direct emissions and energy efficiency for these buildings the impact on local Air Quality can be minimised.

- Improving our own emissions puts us in a stronger position when we seek higher environmental standards from council suppliers and contractors; by meeting high standards ourselves we demonstrate how it can be done and what the benefits are. Experience of implementing our own measures can also help in framing any guidance for fleet operators and building designers in the Borough.
- Progressing the Council's Travel Plan<sup>11</sup> to increase a wider awareness amongst staff; and secure a modal shift in travel by staff to steadily increase walking, cycling, public transport and car clubs and car sharing while reducing drive alone car usage. Some of the benefits expected are a healthier workforce, and less congestion in the Borough at peak times.

The Royal Borough of Greenwich has developed actions that it is taking to improve air quality within its boundary and also depicts the actions the Council is taking in regards to the GLA's Air Quality Action Matrix requirements (See Table 6.1 Details the actions the Council is taking to improve air quality within its boundary; and in response to the GLA's air quality action matrix).. Actions are aligned with the Council's Greener Greenwich strategy.

The GLA matrix actions have been grouped into six categories:

1. Emissions from developments and buildings;
2. Public health and awareness raising;
3. Delivery servicing and freight;
4. Borough fleet actions;
5. Localised solutions;
6. Cleaner transport.

The department responsible for delivery of each of the actions is also highlighted in the table.

---

<sup>11</sup> Greenwich Council, Woolwich Centre Travel Plan, Date: 28th June 2011 (Version: 5.7)

Table 4.1

Details the actions the Council is taking to improve air quality within its boundary; and in response to the GLA's air quality action matrix				
Royal Borough of Greenwich - AQAP Policy Provision				
Action	Details	Timescales	Responsibility	Cleaner Air Borough Criteria
Member commitment	<p>Create and maintain an Air Quality Task Force (AQTF) to provide strategic direction. The AQTF will be chaired by the lead member for regeneration and transport and supported by senior officers from Environmental Health, Transport, Sustainability and Renewal, Planning and Public Health. Officers from other departments will be included as and when necessary.</p> <p>As well as providing a forum for information sharing and promoting cross-departmental working the officers will report back to the AQTF to ensure implementation and strategy remain co-ordinated.</p> <p>The AQTF will receive an annual review of progress against the action plan on the anniversary of the formal adoption</p>	On-going	<p><b>Lead member</b>                      Environmental Health                      DRES                      Planning                      Public Health                      Sustainability                      Housing                      Finance</p>	Political leadership
Council Wide Policy	Directors of Public Health and Regeneration, Enterprise and Skills to sign off Air Quality Action Plan (AQAP) and Annual Status Report (ASR).	On-going	DRES Public Health	Leading by example
	<p>Ensure air quality is included as a strategic factor in all relevant policy areas including:</p> <ul style="list-style-type: none"> <li>- Master plans for area re-development</li> <li>- Long Term Transport Strategy</li> <li>- Local area or borough wide energy plans</li> <li>- Greener Greenwich Strategy</li> <li>- Public Health Strategy</li> <li>- Planning policy</li> </ul>	On-going	Environmental Health DRES Planning Public Health Sustainability	Leading by example
Planning Policy	For 'major developments' the Council will require a developer to assess the air pollution impact of the proposed development. If air pollution levels are above the National Objective levels, and the development will lead to any increase in levels of the pollutant exceeded, this would be a ground for considering refusal of the application	Consideration of new wording for Development Control policy E(c) in Core Strategy review in 2020	Planning	Leading by example
Procurement	I. Introduce a corporate requirement for FORS, CLOCS, or ECOstars accreditation for all council suppliers with large fleets.	On-going	Finance Sustainability Environmental	Leading by example

	<p>2. develop Sustainability criteria for standard inclusion in invitations to tender.</p> <p>3. Investigate how environmental and Sustainability issues may be embedded in procurement and business case processes</p> <p>4. Provide best practice guidance on reducing air quality impact of procurement for smaller contracts</p> <p>5. Review current procurement practice and identify changes that can be made to reduce the number of delivery and servicing vehicles serving council administrative buildings, including links to freight consolidation centres</p>		Health	
Finance	<p>Explore the feasibility of Developing, within existing resources, the actions set out in the matrix below. Alternatively, identify additional resources required and seek agreement for their provision through the council's constitutional arrangements.</p> <p>Prioritise actions in AQAP to ensure best use is made of available funds both existing S106 and future CIL. Maintain accurate accounting for air quality expenditure.</p> <p>Work with other departments to identify opportunities for new air quality improvement initiatives when an underspend is available</p>	On-going	<p>Environmental</p> <p>Health</p> <p>Finance</p> <p>DRES</p> <p>Planning</p> <p>Sustainability</p> <p>Public Health</p>	Taking action

Table 4.2

GLA Air Quality Action Matrix – Royal Borough of Greenwich Provisions							
ID	Action description	Actions already taking place in RBG	Responsibility	Expected emission or concentration benefit	Time for implementation	How implementation will be monitored	Further Information/Proposed Actions
<b>Action Category: Emissions from development and buildings</b>							
1	Ensuring emissions from construction are minimised	The Council has a condition for construction dust, but no actions are taking place in planning to monitor dust emissions. Development control also requires Construction Management Plans.	DRES-Planning, TPG, DCS-Environmental Health	PM mass emission (not quantifiable)	Year 1, then on going	Number of applications for discharge of this condition approved	<ul style="list-style-type: none"> <li>Develop a process for ensuring planning officers are aware of current air quality regulations and these are considered within the planning process.</li> <li>Review planning conditions for air quality and amend in line with current policy. A review of all conditions will occur in 2017.</li> <li>Ensure that Construction and Demolition method statements are referred by planning to EH for review at the discharge stage.</li> <li>Ensure that EH officers are aware/trained to check plans against GLA guidance.</li> <li>Implement a policy to ensure all relevant developments comply with the GLA Control of dust and emissions during construction and demolition – Supplementary planning guidance 2014</li> </ul>
2	Ensuring enforcement of Non Road Mobile Machinery (NRMM) air quality policies	The Council will roll out a requirement to comply with the GLA's NRMM policies on all major development sites in the Borough	DRES-Planning, DCS-Environmental Health	NO <sub>x</sub> and PM mass emission (not quantifiable)	New planning guidance in place by March 2018 and enforced from April 2018	Number of inspections/enforcement actions	<ul style="list-style-type: none"> <li>Agree condition / s106 approach to securing this action</li> <li>Agree approach to inspection/enforcement and funding</li> </ul>

3	Enforcing CHP and biomass air quality policies	EH officers review Air Quality Assessments, on major applications which should include this. Standard planning condition recommended by EH for CHP to meet AQN limits and/or limits in Air Quality Assessment.	DRES-Planning,  DCS-Environmental Health	NO <sub>x</sub> mass emissions, quantifiable against benchmarks (in principle)	Year 1, then on going	Number of times conditions requested/ applied/ discharged	<ul style="list-style-type: none"> <li>Use the planning process to ensure all new combined heat and power (CHP) units and communal boilers meet the air quality neutral (AQN) standard as detailed in the London Plan.</li> <li>The Council to keep a record of number of CHP's/Biomass boilers refused on air quality grounds</li> <li>Planning condition for CHP and communal boilers to be reviewed</li> <li>Ensure that planning and EH officers are aware of issues Ensure that related discharge of conditions is referred to EH</li> </ul>
4	Enforcing Air Quality Neutral policies	EH officers review Air Quality Assessments, on major apps which should include this. Enforcement is integrated in normal planning practices (i.e. conformity with plans and/or discharge of conditions).	DRES-Planning,  DCS-Environmental Health	NO <sub>x</sub> and PM mass emissions, quantifiable against benchmarks (in principle)	Year 1, then on going	Number of times conditions requested/ applied/ discharged	<ul style="list-style-type: none"> <li>Design standard conditions for major developments and a standard boiler emissions condition for minor developments</li> <li>Ensure relevant discharge of conditions applications are referred to EH.</li> <li>Secure S106/CIL funding for air quality improvements if AQN is not possible.</li> </ul>
5	Development which may increase air pollution or introduce receptors to polluted areas make a financial contribution to deliver air quality improvements.	Contributions are currently sought on an ad hoc basis	DRES Planning/S106 Team	Ensure developers make contribution to Councils AQ Action Plan	Year 1, then on going	Number of developments where S106/CIL contributions are obtained	<ul style="list-style-type: none"> <li>Collection of developers contribution</li> <li>Expenditure of receipts on AQ Action Plan</li> </ul>



6	Ensuring adequate, appropriate, and well located green space and infrastructure is included in new developments	RBG currently ensures that adequate, appropriate and well located green space is included in new developments through its Local Plan and planning conditions.	DRES-Planning, DCS-Environmental Health, DRES-Sustainability	N/A	Years 2-4	Review amount of new greening provided in new developments. Measure in m <sup>2</sup> or number of new trees planted.	<ul style="list-style-type: none"> <li>• Ensure that Air Quality is considered for green space provision, and agree standards.</li> <li>• Build resource on effective planting for AQ improvement/ screening.</li> <li>• Ensure relevant officers are aware of appropriate planting and location requirements for green space</li> </ul>
7	Ensuring that Smoke Control Zones are appropriately identified and fully promoted and enforced	RBG receive complaints of smoke from domestic premises, and already act to ensure inappropriate fuels/appliances are identified and removed.	DCS-Environmental Health, Communications,	Negligible	Year 1	Number of bonfire visits/letters, any other CAA actions (enforcement, call out and/or provision of advice)	<ul style="list-style-type: none"> <li>• Better promotion of SCZ's on website,</li> <li>• Planning informative for any new solid fuel burners</li> <li>• Promotion of RBG garden waste collection service</li> <li>• Information on potential for nuisance and adverse health effects of smoke from bonfires</li> </ul>
8	The Council will work closely with the Environment Agency to drive up environmental standards in processes with an Environmental Permit enforced either by the Council of the Agency	The Council already inspects premises with an Environmental Permit to the standards set out in statutory guidance.	DCS-Environmental Health.	None specific	From 2017	Liaison meetings held	Contact made with Environment Agency to agree meeting dates
9	Promoting and delivering energy efficiency retrofitting projects in workplaces	RBG is undertaking significant energy efficiency works to its own housing stock. At the end of	DRES-Sustainability	NO <sub>x</sub> mass emissions (estimated from gas use	On-Going	Numbers of boilers replaced or efficiency measures	<ul style="list-style-type: none"> <li>• Improve energy efficiency in the Royal Borough's corporate buildings through a Carbon Management Plan and in corporate buildings through the GLA's RE:FIT programme; focussing on five buildings in</li> </ul>

	and homes using the GLA RE:NEW and RE:FIT programmes to replace old boilers /top-up lost insulation in combination with other energy conservation measures.	2013/14 94% of RBG owned properties had been brought up to the Decent Homes Standard, and the Standard Assessment Procedure average rating of Council owned housing stock is 69 (band C), which is considered to be very energy efficient. Energy efficiency improvement works have included: <ul style="list-style-type: none"> <li>• Insulation programmes- external, cavity wall and loft. With external wall insulation currently in progress or commissioned at around 34 sites.</li> <li>• Upgrading heating systems.</li> <li>• Voltage optimisation</li> <li>• Window replacement.</li> </ul>	DRES – Housing Strategy,  DCS – Asset Management,  DCS- Environmental Health	or emission factor changes)		implemented and (for corporate buildings) changes in energy use.	<p>phase I.</p> <ul style="list-style-type: none"> <li>• Introduce boiler NOx emission standards for all RBG housing stock for upgraded heating system.</li> <li>• Continue with and carry out further energy efficiency improvements to Council owned housing stock, including insulation and window and roof replacement programmes.</li> <li>• Complete the second pilot of the Greenwich Homes Standard, which includes energy efficiency improvements, at John Wilson Street</li> <li>• Retrofit energy efficiency measures to up to five Council blocks in the East Greenwich area as part of the European Horizon2020 smart cities programme.</li> <li>• Promote energy efficiency in both council and private homes.</li> <li>• Facilitate the completion of a District Heating Network to take advantage of waste heat from the Greenwich Power Station.</li> <li>• Investigate the installation of a water source heat pump and associated infrastructure as part of the European Horizon2020 smart cities programme, as an addition to the district heat network at Greenwich Power Station.</li> </ul>
<b>Action Category: Public Health and awareness raising</b>							
10	Ensure that Directors of Public Health (DsPHs) are fully briefed on the scale of the problem in	RBG's Public Health Team is fully engaged with the air quality agenda and work closely with the	DCS- Environmental Health, AOPS,	N/A	On-going	N/A	<ul style="list-style-type: none"> <li>• DsPHs to sign off Air Quality Action Plan and ASRs</li> </ul>

	RBG; what is being done, and what is needed. A briefing should be provided.	Environmental Health team	Public Health				
11	Public Health Teams should be supporting engagement with local stakeholders (businesses, schools, community groups and healthcare providers). They should be asked for their support via the DsPH when projects are being developed.	RBG's Public health teams have a wide variety of links with local stakeholders throughout the community, and the Council will look to utilise these links for the purpose of improving air quality. However, the benefit of a requirement for support via the DPH would depend on the types of projects developed through the action planning process which will vary between each borough and their individual priorities.	Director of Public Health	N/A	On-going	N/A	<ul style="list-style-type: none"> <li>• Explore these links and use them where appropriate and consistent with data protection requirements</li> <li>• Explore the development of a campaign to educate vulnerable groups on the cause and effect of poor air quality and how they can protect their own health.</li> </ul>
12	Director of Public Health to have responsibility for ensuring their Joint Strategic Needs Assessment (JSNA) has up to date information on air quality impacts on the population	RBG already includes air quality in the JSNA, and supports this as being beneficial across council departments and wider.	Director of Public Health, DCS- Environmental Health	N/A	For each new JSNA	N/A	<ul style="list-style-type: none"> <li>• Maintain Air Quality information in each JSNA and Health and Wellbeing Strategy update.</li> <li>• Identification of linked areas in PHOF/JSNA where Air Quality actions might support public health goals.</li> </ul>

13	Strengthening co-ordination with Public Health by ensuring that at least one public health specialist within the borough has air quality responsibilities outlined in their job profile	RBG has a consultant grade post with responsibility for air quality, and have found that this has facilitated closer links across the departments with responsibility for air quality.	Director of Public Health, DCS-Environmental Health	N/A	Year 1, then on going	Meeting minutes and emerging action.	<ul style="list-style-type: none"> <li>Retain consultant/PH membership on Air Quality Task Force.</li> </ul>
14	Director of Public Health to sign off Statutory Annual Status Reports and all new Air Quality Action Plans	RBG will ensure that the Director of Public Health will review and approve the Annual Status Report and all new Air Quality Action Plans before submission to the GLA & DEFRA.	Directors of Public Health,	N/A	Year 1, then on going	N/A	<ul style="list-style-type: none"> <li>AQAP and ASR will be signed off by DsPH. Continued working with PH team will ensure knowledge of air quality impacts in RBG.</li> </ul>
15	Ensure that the Head of Transport and Head of Planning is fully briefed on the Public Health duties and the fact that all directors (not just Director of Public Health) are responsible for delivering them, as well as on air quality opportunities and	RBG already ensures that the Head of Transport and the Head of Planning as well as the DPH are fully briefed and updated on health duties and air quality, through the internal AQ taskforce.	Director of Community Services, AOPS, Public Health, DRES- Transportation, Planning	N/A	Year 1, then on going	Meeting minutes and emerging action.	<ul style="list-style-type: none"> <li>Air Quality officers in RBG maintain close working relationships with colleagues in Transport planning and ensure that policies are aligned to achieve air quality benefits.</li> <li>Transport planners are also members of the Air Quality Task Force</li> </ul>

	risks related to transport in the borough. Provide a briefing which can be disseminated amongst the Transport and Planning teams.		DCS- Environmental Health				
16	Engagement with businesses	RBG currently engages with business on issues which link with air quality such as adopting sustainable transport and reducing employee car use, and achieving London Healthy Workplace Charter accreditation.	DRES- Sustainability & Transportation  DRES- Business Engagement Team  AOPS  Public Health  DCS- Environmental Health  Environment Agency	Tools to be provided by ECOstars (under development - we could volunteer to try these with our fleet if trial period is needed)	Year 1, then on going	By report from external partners (ECOstars)	<p>Bonfires:</p> <ul style="list-style-type: none"> <li>Promotion of RBG garden waste collection service to discourage bonfires</li> <li>Provide information on the health effects and potential for nuisance from having bonfires.</li> </ul> <p>ECOstars:</p> <ul style="list-style-type: none"> <li>ECOstars Greenwich launched March 2016</li> <li>Consider how business engagement can support the success of other projects (e.g. any arising under: 18, 20, 21, 38, 39 or C)</li> </ul>
17	Promotion of availability of airTEXT and the London Air Quality Network	RBG was involved with the setting up of the airTEXT website facility together with other Beacon Authorities in 2008, and has	DCS- Environmental Health	none	Year 1, then on going	Increase in user numbers	<p>Update RBG website to provide comprehensive information on air quality including the following subject areas:</p> <p>-Smoke control zones</p>

		run advertising in the past. Air Quality data from monitoring stations is also uploaded on a daily basis to the publicly available London Air Quality Network website.	Corporate Communications				<p>-AirText</p> <p>-London Local air Quality Management “Dashboard”</p> <p>-Other air quality campaigns</p> <ul style="list-style-type: none"> <li>Enhanced presence on website</li> <li>Investigate with Public Health if there are vulnerable user groups/specialist teams who could make more use of these resources</li> <li>Ensure logos/links/QR codes are included on any publicity materials for AQ projects.</li> </ul>
18	Encourage schools to join the TfL STARS accredited travel planning programme by providing information on the benefits to schools and supporting the implementation of such a programme including reducing car use	The Council actively promotes the STARS scheme, and over 50% of the Borough’s schools are already members of STARS	DRES - Transportation	NO <sub>x</sub> and PM mass emissions, quantifiable against benchmarks (in principle	Years 2-4	Increase in numbers of schools signed up. Counted decrease in number of cars on school run (can be estimated in mass emission terms).	<ul style="list-style-type: none"> <li>Identify barriers for schools to participate in active travel initiatives and work towards improvement.</li> <li>Participate in GLA air quality audit for schools</li> </ul>
19	Raising awareness of Air Quality	As part of the current Horizon 2020 project in which the Council already participates, additional lamp-post mounted air pollution	Digital Greenwich, DRES Sustainability; DCS	The additional data gained will help inform planning	December 2016- December 2018	Monitors installed from December 2016, platform up and running	Feedback to overall 2 Horizon2020 funded Sharing Cities, smart city programme

		monitors will be placed in the Horizon 2020 study area (principally the Greenwich Peninsula and East Greenwich). This is a 'demonstration area' where the integrated smart city solutions will be implemented, and the Borough acts as demonstrator area of all project activities within London/UK.	Environmental Health DRES Transportation	decisions and provide additional information for public dissemination through a data platform		by December 2018	
--	--	--	--	---	--	------------------	--

**Action Category: Delivery servicing and freight**

20	Update procurement policies to include a requirement for suppliers with large fleets to have attained at least Bronze Fleet Operator Recognition Scheme (FORS) and Construction Logistics Cycle Safety (CLoCS) accreditation when appropriate.	The Council considers that this would be a useful tool to improve air quality, and will investigate its potential inclusion into RBG policies. Inclusion of FORS as part of contract best practice is being progressed.	DRES Sustainability Finance Fleet Management	NO <sub>x</sub> and PM mass emissions, quantifiable against benchmarks (in principle	Year 1, then on going	Internal reporting	<ul style="list-style-type: none"> <li>Apply contract conditions for compliance with FORS/CLoCS standards.</li> </ul>
----	--	---	--	--	-----------------------	--------------------	---

21	<p>Update RBG Procurement policies to ensure sustainable logistical measures are implemented (including requirements for preferentially scoring bidders based on their sustainability criteria, and requirements for suppliers with large fleets to have attained bronze Fleet Operator Recognition Scheme (FORS) accreditation) or EcoStars equivalent.</p>	<p>The Council considers that this would be a useful tool to improve air quality, and will seek to update procurement policies to ensure sustainable logistical measures are implemented</p>	<p>Finance DRES - Sustainability</p>	<p>NO<sub>x</sub> and PM mass emissions, quantifiable against benchmarks (in principle)</p>	<p>Year 1, then on going</p>	<p>Internal reporting</p>	<ul style="list-style-type: none"> <li>• Incorporate FORS and/or ECOstars accreditation into all future contracts.</li> </ul>
22	<p>Re-organisation of freight to support consolidation (or micro-consolidation) of deliveries, by setting up or participating in new logistics facilities, and/or requiring that council suppliers participate in these</p>	<p>This action is included as part of travel plans for new developments,  RBG are participating in the South London Freight Consolidation partnership funded via s106 money</p>	<p>DRES- Transportation, DRES- Sustainability, Corporate Procurement, DRES-</p>	<p>NO<sub>x</sub> and PM mass emissions, quantifiable against benchmarks (in principle)</p>	<p>Years 2-4</p>	<p>Project Milestones</p>	<ul style="list-style-type: none"> <li>• Review current procurement practice and identify changes that can be made to reduce the number of delivery and servicing vehicles serving council administrative buildings</li> <li>• participation in S London Freight partnership</li> </ul>



			Planning, DCS- Environmental Health				
23	priority loading for ultra-low emission delivery vehicles	Being progressed as part of Low Emission Neighbourhood work	DRES- Planning DRES- Transportation	NO <sub>x</sub> and PM mass emissions, in principle	Years 2-4	Use of system, observed congestion reductions	<ul style="list-style-type: none"> <li>To be proposed at East and South-East region sub group for consideration</li> <li>Included in Low Emission Neighbourhood works</li> </ul>
<b>Action Category: Borough fleet</b>							
24	Assess and gain accreditation for RBG's fleet and fleet management against schemes such as the Fleet Operator Recognition Scheme (FORS), aiming for Gold accreditation; and the EcoStars accreditation.	RBG are currently FORS Bronze accredited, although this accreditation has a greater focus on vulnerable road user safety than air quality. RBG are also currently credited with 3 stars under the ECOstars programme	Fleet Management	NO <sub>x</sub> and PM mass emissions, quantifiable against benchmarks (in principle)	Year 1, then on going	Achievement and maintenance of accreditation	<ul style="list-style-type: none"> <li>Maintain current accreditation and work towards improvement.</li> </ul>
25	Increasing the number of hydrogen, electric, hybrid, bio-methane and cleaner (e.g. Euro VI) vehicles	30 of RBG's 40 Refuse Collection Vehicles (RCVs) have Euro VI engines. The Council has also increased the bio-diesel mix fuelling its	Fleet Management	NO <sub>x</sub> and PM mass emissions, quantifiable against	Year 1, then on going	Numbers of vehicles affected.	<p>Continue to invest in improving the environmental and air quality impact of the refuse collection fleet, including:</p> <ul style="list-style-type: none"> <li>Rolling review each time a vehicle is replaced to seek ultra-low emission vehicle replacement, where</li> </ul>

	in the boroughs' fleet.	refuse collection fleet in line with the Mayor's call for Local Authorities to increase their use of Bio-diesel, and RBG's own wish to reduce the impact of its fleet. All Council vehicles also operate on Ultra Low Sulphur Diesel and use Additone fuel additive to increase performance and lower emissions. RBG also currently operates two electric vans		benchmarks (in principle)			available <ul style="list-style-type: none"> <li>Increasing the mix of clean fuel types in the fleet, such as electric powered vans and increasing provision of electric vehicle infrastructure at the Birchmere Centre</li> <li>Introduce 10 electric vans in 2016-17 and 10 in 2017-18 and charging points at Birchmere depot</li> </ul>
26	Accelerate uptake of new Euro VI vehicles in borough fleet	RBG has already introduced a number of Euro VI vehicles, including the majority of Refuse collection vehicles	Fleet Management	NO <sub>x</sub> and PM mass emissions, quantifiable against benchmarks (in principle)	Year 1, then on going	Numbers of vehicles affected.	Continue to invest in improving the environmental and air quality impact of the refuse collection fleet, including: <ul style="list-style-type: none"> <li>Introduce Euro VI vehicles through the vehicle replacement programme, with a plan that all RCVs include Euro VI engines by 2019/20</li> </ul>
27	Smarter Driver Training for drivers of vehicles in Borough Own Fleet (i.e. through training of fuel efficient driving and providing regular re-training of staff)	RBG fleet has been assessed as 3 stars under the EcoStars scheme. The need for additional driver training for RBG drivers will be considered in the ECOstars roadmap. RCV driver behaviour is also already monitored and addressed	Fleet Management Waste Services	NO <sub>x</sub> and PM mass emissions, quantifiable against benchmarks (in principle)	Year 1, then on going	Number of drivers trained (as a proportion of the total). Possible emissions reduction calculation (ECOstars tool)	<ul style="list-style-type: none"> <li>Ensure driver training is delivered / received as part of the ECOstars roadmap.</li> <li>Offer driver training to non-fleet vehicle drivers</li> </ul>

		through the Mercedes Fleetboard telematics system. Policy is in place to allow specific drivers to go 'straight to the job' to further ensure the amount of driving is minimised ensuring more efficient fuel use.					
--	--	--	--	--	--	--	--

**Action Category: Localised solutions**

28	Green Infrastructure	RBG is aware of the air quality benefits that Green Infrastructure can provide, and ensures and encourages the retention and development of green space through its Local Plan. This includes encouraging the connecting up of the Borough's green space network.	DRES- Sustainability Parks and Open Spaces DRES- Planning DRES- Transportation	Unknown, theoretical concentration decrease - could be monitored with diffusion tubes.	Years 2-4	Internal reporting, monitored concentration improvements	<ul style="list-style-type: none"> <li>Conduct research into best and emerging practice in the use of green infrastructure for air quality benefits, including assessing which species are most appropriate for the Royal Borough.</li> <li>Investigate how and where the Royal Borough's Green Infrastructure may be enhanced and improved, including how the Borough's urban green spaces such as land on estates, or other similar Council owned parcels of land, may better contribute to this network.</li> <li>Consider how and where greening can be increased in transport infrastructure, for example greening improvements such as the use of low-level planters to segregate cycle lanes and street trees.</li> </ul>
29	Low Emission Neighbourhoods (LENs)	£2.1m of funding delivering programme of measures in pilot LEN area in west Greenwich/Peninsula, including:	DRES- Transportation DRES-	More than 10% decrease in PM10/NOx on top of background	March 2019 (completion of pilot LEN)	Air Quality monitoring equipment Traffic data	Produce case studies of lessons learned from pilot LEN area to roll out to other parts of the Borough (and securing funding to do so)  Link measures to Borough's Sharing Cities programmes

		<ul style="list-style-type: none"> <li>E-car clubs</li> <li>Electric vehicle charging points</li> <li>E-bike programmes</li> <li>Upgraded public realm and highways schemes to enable walking and cycling</li> <li>Bus priority and upgraded bus fleets</li> </ul>	Sustainability DCS- Environmental Health Environment Agency	level improvements			
<b>Action Category: Cleaner Transport</b>							
30	Discouraging unnecessary idling of vehicle engines (e.g. through anti-idling campaigns and enforcement activity)	<p>The Royal Borough of Greenwich would support new actions to discourage traffic idling. Mechanisms exist to discourage idling. A balance would need to be struck between encouragement and enforcement.</p> <p>The Council will set up an 'anti idling' project specifically targeted at sensitive sites such as schools, including as part of the LEN</p>	DRES- Transportation DCS- Environmental Health	<p>The intention is to reduce exposure to a vulnerable group (schoolchildren) to high levels of air pollution and to encourage a more healthy way to get to school</p> <p>NO<sub>x</sub> and PM mass emissions, not quantifiable</p>	2017 - 2018	<p>The effectiveness of the programme will be assessed by the installation of monitors to see if there are positive changes to air quality at the entry to specific schools at the start and end of the school day</p>	
31	Speed control measures e.g. lowering the legal	RBG is delivering a phased roll out of borough wide 20 mph zones and limits on	DRES-	NO <sub>x</sub> and PM concentrations	On-going, projected completion by	Transportation reported progress.	<ul style="list-style-type: none"> <li>Assess which 'traffic calming' measures result in less deceleration/acceleration and promote smooth driving.</li> </ul>

	speed limit to 20mph in built up residential areas	residential roads and as part of town centre major schemes. However, the Council note that there is debate on the extent to which reducing speeds to 20mph contributes an air quality benefit; and that employing such a measure is valid for other reasons such as road safety.	Transportation	(monitoring)	2023.	Could support with monitoring (e.g. to work out which kinds of calming measures are most effective)	<ul style="list-style-type: none"> <li>Prioritise these for use in Greenwich 20 mph zones.</li> </ul>
32	Expanding Car Clubs and increasing the proportion of electric, hydrogen and ultra-low emission vehicles in their fleet.	RBG are currently expanding Car Clubs in the Borough, with each Car Club expected to take a minimum of 5 privately owned vehicles off the road, reducing emissions significantly. An e-car club pilot is being trialled as part of the LEN project	DRES- Transportation Fleet DRES-Sustainability Parking	NO <sub>x</sub> and PM mass emissions, potentially quantifiable against benchmarks	Years 2-4	Numbers of available car club cars, use statistics from provider, reduction in local private car ownership	<ul style="list-style-type: none"> <li>Continue the expansion of car clubs in the Borough to reduce the number of privately owned, and older higher polluting, vehicles</li> <li>Maintain or increase the number of car club bays required at each new development</li> <li>Make street parking bays available in areas of high demand for new car club spaces</li> <li>Work to ensure low emission, ULEVs or electrics for all new car club bays (or a set/high proportion thereof)</li> </ul>
33	Very Important Pedestrian Days (e.g. no vehicles on certain roads on a Sunday) and similar initiatives	RBG holds dedicated Car Free days, the last of these being in 2016 in Greenwich Town Centre. Regarding similar initiatives, RBG has an extensive community engagement programme on active travel. This includes the annual Great Get	DRES- Transportation DRES-Sustainability Corporate Communications	Intermittent local concentration benefits with suitable monitoring this could be easily publicised.	Years 2-4	Number of days implemented, monitoring results	<ul style="list-style-type: none"> <li>Investigate the introduction of regular Car Free days (either enforced or voluntary),</li> <li>Car free events (e.g. in conjunction with the O2, or Charlton Athletic)</li> <li>Consider Car Free Days as promotional tool to support other actions (e.g. new cycle paths etc)</li> </ul>

		Together which is the borough's key community event, and which always includes a sustainable travel 'arena'. RBG will continue these schemes including as part of LEN programme					<ul style="list-style-type: none"> <li>Develop partnerships with other organisations to hold car free events</li> </ul>
34	Free or discounted residential parking permits for zero emission cars	RBG is currently seeking to advance this action as part of its new Parking Strategy Action Plan.	DRES- Transportation  DRES- Parking	NO <sub>x</sub> and PM mass emissions, potentially quantifiable against benchmarks	Year 1, then on going	Number of permits issued (emissions savings can be quantified against benchmarks)	<ul style="list-style-type: none"> <li>Implementation in parking policies</li> </ul>
35	Surcharge on diesel vehicles below Euro 6 standards for Resident and Controlled Parking Zone permits	RBG will explore this further as a possible action and in relation to Mayor's ULEZ consultation outcomes	DRES- Transportation  DRES- Parking	NO <sub>x</sub> and PM mass emissions, potentially quantifiable against benchmarks	Year 1, then on going	Number of permits issued (emissions savings can be quantified against benchmarks)	<ul style="list-style-type: none"> <li>Implementation in parking policies</li> <li>Await outcome of Mayor's proposed ULEZ and vehicle scrappage schemes</li> </ul>
36	Installation of residential electric charge points	Roll out of EVCPs through development control obligations in line with the London Plan, the LEN scheme and expansion of other on-street networks across Borough through partnership with Bollere/	DRES- Transportation, DRES- Parking, DRES- Planning	NO <sub>x</sub> and PM mass emissions, potentially quantifiable against benchmarks	Year 1, then on going	Usage statistics	<ul style="list-style-type: none"> <li>Identify major developments where electric vehicle charge points (EVCPs) can be installed. Ensure all EVCPs are compliant with current standards</li> <li>Provision of road space and pavement space to support charging infrastructure.</li> <li>Ensuring that charging infrastructure provided by development is consistent with the London wide</li> </ul>

		Source London					network.
37	Installation of rapid chargers to help enable the take up of electric taxis, cabs and commercial vehicles (in partnership with TfL and/or OLEV)	In 2015, using funding from the Office for Low Emission Vehicles, RBG installed 4 new rapid electric vehicle charging points across the Borough, to add to the existing 12 charging points. We will take relevant action to support TfL or their partners to roll out this scheme to new areas.	DRES- Transportation,  DRES- Parking	NO <sub>x</sub> and PM mass emissions, potentially quantifiable against benchmarks	Year 1, then on going	Usage statistics	<ul style="list-style-type: none"> <li>Identify suitable locations and secure funding to expand the electric vehicles charging infrastructure network</li> </ul>
38	Reprioritisation of road space; reducing parking at some destinations and or restricting parking on congested high streets and A roads to improve bus journey times, cycling experience, and reduce emissions caused by congested traffic	RBG has a transport hierarchy through which pedestrians, bikes and buses are prioritised, and private car use is ranked as the lower priority. Reprioritisation of road space in this manner is also incorporated in infrastructure improvements to encourage cycling. For example the narrowing of road lanes for vehicles, and the widening of cycle lanes on Bexley Road. The current Eltham High Street Major Scheme is another example where the allocation of road space is	DRES- Transportation  DRES- Sustainability  DCS- Environmental Health	NO <sub>x</sub> and PM mass emissions, quantifiable against benchmarks. NO <sub>x</sub> and PM concentration (monitoring)	Year 1, then on going	Traffic counts and congestion metrics	<ul style="list-style-type: none"> <li>Incorporate this as part of the consideration LIP3 and/or emerging Transport Strategy</li> <li>Identify suitable locations (cycle severance, frequently blocked bus lanes, congested streets etc.) for new improvements, to support active travel</li> <li>Implement road redesigns to re-prioritise space</li> <li>Ensure that new major developments prioritise road space for sustainable transport modes and public transport over other uses.</li> </ul>

		seeking to readdress the balance between place and movement in line with the Mayor's Roads Task Force's findings					
39	Provision of infrastructure to support walking and cycling	RBG delivers a wide range of activity to support walking and cycling. The Borough has a Cycling Strategy which commits the Council to a significant programme of cycling infrastructure improvements. Through this, cycle networks have been improved and developed to include for example, a new 1.6 mile traffic-free route between Plumstead and Thamesmead on the Ridgeway, and 261 secure cycle parking spaces installed across RBG housing estates by the end of 2015.	DRES- Transportation,  DRES- Sustainability,  DCS-  Environmental Health	NO <sub>x</sub> and PM mass emissions, probably unquantifiable	Year 1, then on going	Infrastructure usage statistics, some schemes may be amenable to ambient monitoring	<ul style="list-style-type: none"> <li>• Encourage and enable modal shift from private car use to public transport, walking.</li> <li>• Lobby for provision of the London cycle hire scheme in the world heritage site.</li> <li>• Ensure that Air Quality is taken into account in future enhancements to the walking and cycling strategies.</li> <li>• Promotion of infrastructure enhancements as they come on line.</li> <li>• Incorporate walking and cycling as priorities within the emerging Long Term Transport Strategy (LTTS), which will act as an overarching vision for sustainable transportation in the Borough.</li> <li>• Identify the major infrastructure projects needed to be delivered in the medium and longer term in order to help meet our sustainable transport objectives, and we will lobby TfL and other partners to help us complete those schemes.</li> <li>• Develop a walking strategy to improve provision for pedestrians as part of the LTTS.</li> <li>• Promote the use of existing pool bikes for short journeys by staff.</li> </ul>
40	Local Low Emission Zones (LEZ)	RBG supports the extension of Low Emission Zones and	DRES-  Transportation,	NO <sub>x</sub> and PM mass emissions,	Year 1, then on going, local Low Emission Zones	Monitored concentration change,	<ul style="list-style-type: none"> <li>• Continue to lobby for ULEZ extension to the M25 at the earliest possible time.</li> </ul>



		neighbourhoods	DCS- Environmental Health, TfL	quantifiable against benchmarks. NO <sub>x</sub> and PM concentrations (monitoring)	would be year 2 - 4 Year 1, then on going, local Low Emission Zones would be year 2 - 4	operational statistics (e.g. numbers of vehicles paying toll)	<ul style="list-style-type: none"> <li>Failing this, or in advance of this investigate the potential for local Low Emission Zones (or "Clean Air Zones") as DEFRA guidance emerges through 2016 (particularly A2; A20; A206 focus areas)</li> </ul>
--	--	----------------	---	--	--	---	---

## **Appendix A Response to Consultation**

Public consultation was carried out between 21 July and 30 September 2016

### **Statutory Consultees**

- GLA (inc TfL) – response received
- Environment Agency – response received
- LB Tower Hamlets – no response
- L B Barking & Dagenham – no response
- LB Bexley – no response
- LB Lewisham – no response
- LB Newham – no response
- LB Bromley – no response

### **Business Interests**

RBG Comms Team sent out email to all RBG contacts drawing their attention to the consultation. One business response received from Calor Gas

### **Written responses**

29 written responses received directly. These include responses on behalf of the **Westcombe Society (WS)**, the **East Greenwich Residents Association (EGRA)**; **No to Silvertown Tunnel (NST)** and the **Charlton Central Residents Association (CCRA)**. Comments from these organisations are suffixed by WS –for Westcombe Soc & EGRA for East Greenwich Residents Association CCRA – Charlton Central Residents Association There were also 28 responses received via the ‘have your say’ web site.

### **Public Meetings**

4 public meetings held in September in Thamesmead, Eltham, Woolwich & Greenwich. Presentation on air quality generally made at Charlton Residents meeting 4 October were further comments made. Responses summarised in this report.

### **Statutory Consultee Response**

Environment Agency

- Need to embed air quality actions into planning process
- To ensure that a full area air quality assessment is undertaken to assess the impacts of a large development or opportunity area. The Council should not simply rely on the developers plans
- Where waste operations are relocated due to redevelopment, the new facilities are designed and operated to minimise dust emissions. This could include a requirement for buildings to enclose the facility
- Where new receptors are constructed close to existing facilities, the new development should be designed to prevent impact from the existing nuisance industries. Greenwich millennium village cited as good practice
- Failure to include reference to Environmental Permitting
- Want to liaise with RBG on Env Permitting issues
- Want to ensure that new buildings are not impacted by stacks from existing buildings
- Current planning decisions based on current and historic air pollution levels. Headroom should be allowed to take account of permitted but not yet constructed developments
- RBG actions should be coordinated with the Mayor’s new plans

- NRMM should be extended over the whole of RBG area (action 2)
- RBG should publish list of AQ proposals which should be S106/CIL funded action 4
- RBG should look at coordination between Greenwich Power Station and Council boiler replacement [I think we are doing this – easy win] (action 7)
- Air quality is cross department issue and should have involvement from PH Planning and EH (actions 8, 10 & 12)
- EA and Env Protection to work together on impact from business sites (action 14)
- EA wants to be involved in Greenwich LWN (action 27)

### **GLA/TfL**

Very positive general feedback

- Provide include additional local actions where appropriate. Specific suggestion for Greenwich LEN.
- Clarification on action on bonfires (action 14)
- No actions proposed for GLA focus areas (except Greenwich LEN as mentioned above)
- Require suppliers to use ULEZ compliant vehicles
- Anti-idling needs specific actions
- Differential car parking. GLA support and offer to share data

### **Business Response**

There was one response from Calor Gas. Their response

- promoted the use of LPG to reduce emissions from the Council's own fleet,
- suggested differential parking charging for LPG vehicles,
- embed provision for LPG infrastructure in local development plans

### **Summary of Public Responses**

#### **General**

- Plan not ambitious enough
- Inadequate funding to support air quality work and proper use of existing funds 1 response
- No indication of how objectives are to be achieved 1 response
- More detail needed
- Action plan needs to be followed up
- More dissemination on air quality on Council Web Site including public presentations and meeting with local group representatives (WS)
- Want specific measure for GLA focus area for Blackwall Tunnel southern approach (WS)
- Closer working with TfL & GLA 2 responses
- Focus on development of renewable energy sources for public buildings and housing (NST)
- Focus on LEN plans
- Divesting RBG pension fund of fossil fuel investments

#### **Green Space**

- Support more green space 7 responses (CCRA & EGRA)
- Specific mention vertical gardens 2 response (CCRA)
- Objection to changes to Hervey Rd sports ground 3 responses
- Support complete Thames side walk/cycle path 3 responses
- Research into green spaces not needed – they don't reduce pollution 2 responses

#### **ULEZ**

Support ULEZ 6responses (EGRA & NST)

### **Vehicle scrappage**

Support 1 response (EGRA)

### **Freight consolidation**

Support 1 response

### **Planning**

- Object Enderby Wharf Cruise Liner terminal 23 responses (plus WS & NST)
- Support shore power for cruise terminal 6 responses (plus WS)
- Oppose new IKEA 10 responses (EGRA)
- Oppose new Sainsbury 1 response (EGRA)
- Need to assess cumulative impacts of developments 3 responses (EGRA)
- New developments to minimise pollution & traffic 1 response
- Oppose Silvertown Tunnel 12 responses (NST)
- Oppose re-opening of Greenwich Power Station 4 responses
- Oppose London City Airport Expansion 1 response
- Too much new housing in already polluted areas 2 responses (EGRA)
- Planning don't take air pollution seriously 2 responses (CCRA)
- Must have design standards for air pollution for new build and residential conversions with buildings away from polluted areas 1 response CCRA
- Planning conditions must be monitored and enforced 1 response CCRA
- Questions why plans to increase road capacity in the Borough have been omitted (NST)
- No traffic reduction plans (NST)

### **Public transport**

- Cleaner busses 1 response
- Cleaner taxis 1 response
- Much greater effort must be put into making public transport accessible via walking and cycling - through improvements to the public realm and prioritisation of those modes

### **Highways issues**

- Specific junction improvements at: Plumstead High St; Plumstead Station; Woolwich New Rd Pear Tree Way/Horn Link Lane; Blackwall Lane/Tunnel Ave; Greenwich Park St/Trafalgar Rd; Greenwich High Rd/ Greenwich Church St; Greenwich High Rd/Norman Rd; Indus Rd Shooters Hill Road 1 response  
Well Hall Rd replace traffic lights with roundabout
- 20 mph speed limit 3 responses
- Failure to enforce 20 mph limit 3 responses
- Provision must be made for cross-river cycle journeys (NST)
- More cycleways 6 responses (EGRA)
- Lobby TfL for traffic reductions on their roads 1 response
- Forbid changing lanes at entrance to Blackwall Tunnel plus lights to be installed 1 response
- Scheme to get drivers to switch off in queues to Blackwall tunnel 1 response
- Phase out gyratory system in Greenwich town centre 1 response
- Force coaches to switch off engines 1 response
- Engine idling generally 2 responses
- Excessive speed on A206 & A205 1 response
- Differential parking charges for more polluting vehicles 2 responses (EGRA)
- Support Car clubs with electric hybrid cars 1 response

- Support car free days 2 response
- More electric vehicle charging points
- Support reprioritisation of road space away from cars 1 response
- Support road pricing 1 response Plus WS
- Ensure bus lane timing consistent through the borough 3 responses
- Rat running Archery Rd Eltham 1 response
- More 'single phase' traffic lights in the borough-improve traffic flows
- Extension of the Congestion Zone
- Greener Public Transport

### **Monitoring**

- More monitoring required on Woolwich Church St 1 response
- More monitoring required on primary school A102 1 response
- More clarity on the emissions targets and how they will be reached
- Installation of smart meters and assessment of boilers for their efficiency regarding emissions (NST)
- More information on Indoor Air Quality
- AQ monitors and alerts issued when air quality is at a dangerous level for vulnerable people

### **Schools**

- More sustainable transport for schools discourage 'school run' 3 responses
- Improved education for Borough Resident residents regarding AQ & health implications (NST)