



London Borough of Merton

Air Quality Action Plan

2017 - 2022



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The Council's Commitment to Air Quality

Air pollution is recognised as a major contributor to poor health with more than 40,000 premature deaths attributed to poor air quality across the UK each year, and an associated annual health cost to society estimated to be £15 billion. Air pollution is associated with a number of adverse health impacts; it is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, because areas with poor air quality are often less affluent.

Air quality has been identified as a priority both nationally and within London, where pollution levels continue to exceed both EU limit values and UK air quality standards. Pollution concentrations in Merton continue to breach the legally binding air quality limits for both Nitrogen Dioxide (NO₂) and Particulate Matter (PM₁₀). The air quality monitoring network run by Merton has shown that the UK annual mean NO₂ objective (40µg/m³) continues to be breached at a number of locations across the borough including Colliers Wood, Morden, Tooting and South Wimbledon. In some locations the NO₂ concentration is also in excess of the UK 1-hour air quality objective (60µg/m³) which indicates a risk not only to people living in that area but also for those working or visiting the area.

Pollution in Merton 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 comes from outside of London and even the UK. Obviously for these sources the council has limited control; however, local sources are primarily from road transport and from development/buildings.

There are a number of UK and London focused initiatives, both ongoing and planned, which will have an impact on air quality within Merton, but it is clear that local action is also required to ensure that the health and wellbeing of local communities is protected. This Air Quality Action Plan identifies a number of measures through which emissions can be reduced at a local level.

In order to achieve the necessary improvement to air quality, there needs to be a firm commitment and continued cooperation across the relevant departments and services within the council to ensure that actions are implemented effectively and efficiently. We will also continue to work collaboratively with neighbouring authorities, the Greater London Authority and Transport for London in pursuing shared air quality improvement initiatives and responsibilities.

The London Borough of Merton is committed to reducing the exposure of people in Merton to poor air quality in order to improve health. This updated Air Quality Action Plan identifies Merton Council's priorities for tackling air quality over the next 5 years and is supported by the departmental Heads of Service for Environmental Health, Transport, and Planning; the Director of Public Health and Cabinet members.

Foreword: Councillor Ross Garrod, Cabinet Member for Environment



One of the greatest environmental challenges we face is air pollution. On a daily basis we are reminded of the social and economic cost of poor air quality. Almost 10,000 of our fellow Londoners are dying prematurely each year and it is costing the UK economy £54 billion a year. It is all of our duty whether as individuals, local government or national government to do our bit to improve the air that we breathe.

Merton is one of the greenest boroughs in London with over 100 parks and greenspaces but we too have toxic air. As Cabinet Member responsible for Air Quality I am determined to do everything within my power to introduce measures to tackle this issue.

Already as a local authority we are leading the way through the introduction of the Diesel Levy to target the most pollutant vehicles using our roads. We are also providing the facilities such as increased electrical car charging points and cycle pathways to make it easier for people to make the transition to cleaner and greener lifestyles.

The Air Quality Action Plan outlines the steps we as a local authority will be taking to do our bit to tackle this serious issue. But it must be acknowledged that we cannot do it alone and I would welcome ideas from residents, schools and community groups identifying action they can take to compliment the Council's action plan. Together we can help improve the air we breathe.

Foreword: **Dagmar Zeuner, Director of Public Health**



Air pollution is recognised as a major contributor to poor health with more than 9,000 premature deaths attributed to poor air quality in London every year. Poor air quality does not just have an adverse impact on health but also on the economy and the environment of our city.

We know that the greatest impact of air pollution is felt by the most vulnerable: the young, the elderly and people with heart and respiratory conditions. Furthermore, people living in more deprived areas tend to be exposed to higher concentrations of air pollution, often because their homes or local schools are located near busy roads with higher concentrations of vehicle emissions.

As with other outer-London boroughs, driving still remains the biggest contributor to air pollution in Merton. Other every day activities such as heating our homes are also contributors to air pollution, but we can't just stop these activities overnight as they are essential part of everyday lives. Therefore we must look at innovative ways that we can take action at a local level to reduce air pollution and minimise the risk to our population.

Public Health Merton works across the council with colleagues in planning, education, leisure and regulatory services to demonstrate the links between health and wellbeing; and how working together we can find better solutions to complex problems like air quality. Merton's new Air Quality Action Plan (AQAP) is a good example of how we seek to ensure that health and wellbeing is embedded into all Merton Council's plans and strategies.

The AQAP sets out a framework to improve the health and wellbeing of local residents, people who work in the borough and those who visit the borough; by way of a number of measures from promoting sustainable travel, providing guidance to developers on the impact of new development on air quality and looking at enforcement measures that could be taken by the council in order to minimise emission from vehicles around key locations such as schools.

We are committed to reducing the exposure of people in Merton to poor air quality, in order to improve health and wellbeing for all of those who live, work or visit the borough.

1. Introduction

This Air Quality Action Plan (AQAP) has been produced as part of our duty to London Local Air Quality Management statutory process and in recognition of the legal requirement on the local authority to work towards air quality objectives under Part IV of the Environment Act 1995. It outlines the action we will take to improve air quality in the London Borough of Merton between 2017 and 2022 and replaces the previous action plan which ran from 2004 to 2017. Highlights of successful projects delivered through the past action plan are included in Appendix C.

Air quality monitoring and dispersion modelling data which provides information on the nature and extent of the air pollution problem in the borough is presented in Appendices D and E; this includes information supplied from the London Atmospheric Emissions Inventory and includes maps of pollution concentrations for NO₂, PM₁₀ and PM_{2.5} for the borough, together with source apportionment charts which can be used to identify the relative proportions of local emission sources.

This report outlines the actions that Merton Council will deliver for the period 2017-2022 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. We recognise that there are a large number of air quality policy areas that are outside of our influence (such as Euro standards, national vehicle taxation policy, taxis and buses), and so we will continue to work with and lobby regional and central government on policies and issues beyond Merton's influence.



2. Merton's Air Quality Priorities

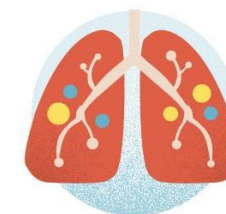
This AQAP is updated in line with new GLA guidance to reflect changes in local air quality management (LAQM) and to ensure that local measures are current, effective and sufficiently targeted to address the GLA air quality focus areas and any other air quality 'hotspots' identified within the borough.

There have been a number of significant air quality actions implemented at both local level and by the Greater London Authority and Transport for London since publication of Merton's first AQAP, including implementation of the Low Emission Zone; the introduction of the Sustainable Design and Construction and Control of Dust and Emissions Supplementary Planning Guidance; highway and public transport improvements and investment in a wide range of sustainable transport initiatives. Many of these are likely to have had an impact on air quality within the borough, however despite these improvements, air quality in Merton remains poor in a number of locations.

The Local Air Quality Management system for London (LLAQM) acknowledges that boroughs cannot solve the problem of air quality alone but that they do have a central role to play in improving air quality through the use of key levers such as parking, planning and local roads together with very specific knowledge of the communities that they serve.

The GLA Technical Guidance (LLAQM.TG16) states that it is important that the updating process focuses on the effective implementation and delivery of measures developed to address the specific local air quality issues, and are part of an integrated package of measures linking with other key policy areas, notably:

- Land-use planning and sustainable development;
- Transport Planning, promoting sustainable transport, local transport management, integration with Local Implementation Plans (LIPs);
- Climate change policies in relation to carbon management and reduction of greenhouse gas emissions;
- Low Emission Strategies providing an integrated approach to promoting emission reduction strategies covering both air quality and climate change;
- Public Health Outcomes (PHO) policy areas, to promote health and wellbeing; and
- Education programmes to promote health and wellbeing and also the principles of sustainability.



The source apportionment data identifies road transport as contributing more than 50% of the overall emissions of NO_x and particulate matter within the borough. The dispersion modelling and Focus Area maps (Appendix D) also identify the areas experiencing the highest concentration of pollutants where there is relevant exposure. In the majority of cases these areas extend along the key transport links where there are high volumes of traffic, both local and through traffic.

One of the key measures to reduce emissions from traffic in the Air Quality Focus Areas and 'hotspots' is the proposed 'Detailed assessment of traffic management solutions' (AP measure 15). This will require a detailed local review of key traffic routes and analysis of traffic data to evaluate the benefit of potential junction improvements, re-routing options, improved signalling, and new parking/ loading restrictions in the boroughs' Air Quality Focus Areas and 'hotspots'. The assessment will use air quality modelling assessment methods to prioritise appropriate traffic management scenarios based on air quality benefit, feasibility and cost-effectiveness in close liaison with the Transport department and TfL.

Merton is limited in how much it can achieve directly in reducing traffic on the TfL red routes through the borough, but there is potential to include AQAP measures to identify and address local causes of congestion and to lobby GLA and TfL to extend the principles of the planned Ultra-Low Emission Zone to the GLA focus areas and local pollution 'hot-spots' within the borough.

The updated AQAP is linked to the Merton Council Sustainable Transport Strategy and Local Implementation Plan (LIP2) which covers the period 2011 – 2031. The plans include measures to improve cycling/walking infrastructure and generate associated promotional events, provide additional electric vehicle charging infrastructure and car club facilities. A number of major projects for delivery through LIP2 include a scheme to re-route heavy goods traffic around South Wimbledon, with additional schemes to smooth traffic flows, improve transport linkages, cycle facilities and pedestrian access planned for Mitcham, Colliers Wood and Morden.

Merton is keen to encourage the uptake of low emission vehicles and will be promoting this through a range of measures including the introduction of an emissions based parking levy for residents living within the borough. The AQAP also explores opportunities to reduce emissions from delivery and service vehicles and to enhance/optimize new and existing electric vehicle charging infrastructure through the Local Implementation Plan and Supplementary Planning Guidance.

It is recognised that the predicted increase in population across London and the requirement for additional housing and infrastructure across the region is likely to have an impact on traffic growth and air quality. To manage and minimise the impact of these changes the updated AQAP includes adoption of Supplementary Planning Guidance to inform developers on the impact of development on air quality, and ensure that approved schemes include effective mitigation and maximise the opportunity to improve infrastructure for sustainable transport.

Merton will also be working in partnership with 14 other boroughs to develop a Non-Road Mobile Machinery (NRMM) 'toolkit' to enable contractors to evaluate and minimise emissions from NRMM sources.

It is also important to build on existing successes generated by the previous AQAP. Emissions from school traffic and the benefits of active travel for school children has been the focus of the existing STARS project and the CleanerAir4Schools project funded through the Mayor's Air Quality Fund. The updated AQAP includes a package of measures designed to continue the work with schools, parents and pupils with the objective of further improving awareness of air quality and optimise parents' and children's desire and opportunity to adopt sustainable travel options.



Key Priorities for the Updated AQAP 2017 - 2022

- Establish and maintain an effective air quality steering group to ensure that the implementation of AQAP measures is coordinated effectively between relevant council services;
- Encourage the uptake of low emission vehicles through the introduction of an emissions-based parking levy for residents living within the borough, and review the effectiveness of the measure over the next two years;
- To identify the key causes of traffic congestion within our Air Quality Focus Areas and pollution 'hotspots' and to determine effective measures for improving traffic flow through those areas using detailed air quality and traffic management modelling tools;
- To evaluate the air quality benefits and feasibility of introducing 'mini' Ultra-Low Emission Zones in the areas of the borough identified as having the poorest air quality;
- To provide guidance to developers on the impact of development on air quality and ensure that approved schemes include effective mitigation and maximise the opportunity to improve infrastructure for sustainable transport options;
- To formalise anti-idling enforcement in order to minimise emission from vehicles around key locations such as schools, taxi-ranks, Air Quality Focus Areas and hotspots;
- To continue to work with schools, parents and students to improve awareness of AQ and to optimise parents' and children's desire and opportunity to adopt sustainable travel options;
- To review Merton's air quality monitoring network to ensure that it effectively identifies areas of poor air quality, and provides accurate data to enable us to evaluate air quality trends and the impact of AQAP measures.



You will see in this report that we have 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 as well with new partners as we deliver this new action plan over the coming years.

3. Air Quality Action Plan 2017 - 2022

Table 1 shows the London Borough of Merton AQAP. It contains:

- A list of the actions that form part of the plan;
- The responsible individual and departments/organisations who will deliver this action;
- Estimated cost to the council;
- Expected benefit in terms of emissions and concentration reduction;
- The timescale for implementation; and
- How progress will be monitored.

Table 1: Air Quality Action Plan 2017 – 2022

The actions have been grouped into six categories: Emissions from developments and buildings; Public health and awareness raising; Delivery servicing and freight; Borough fleet actions; Localised solutions; and Cleaner transport. The actions have been assessed against the possible magnitude of air quality benefits and scored in line with the LLAQM borough air quality action matrix (see key below). The ratings should be regarded as providing an indicative guide only; where an action is to be the subject of detailed evaluation a more accurate quantification of the air quality benefit will be calculated.

Magnitude of Air Quality Benefits

High = 1

Medium = 2

Low = 3

Action Category	Action ID	Action description	Responsibility	Cost	Magnitude of emissions/ concentration benefit	Timescale for implementation	How implementation will be monitored	Further information
Emissions from developments and buildings	1	Adoption of Merton Air Quality Supplementary Planning Guidance to ensure emissions from new development is minimised and effective mitigation integrated in scheme design.	LBM – Planning Dept.	£6K	1 (Benefits potentially significant but not quantifiable)	2018	<ul style="list-style-type: none"> - SPG adopted - Number of schemes assessed - Additional infrastructure achieved 	Air Quality SPG to require air quality mitigation and community sustainable transport measures to be delivered through planning condition and s.106 planning agreements.
Emissions from developments and buildings	2	Ensuring enforcement of Non Road Mobile Machinery (NRMM) air quality policies	LBM – EH Dept.	£10K	1	2017/18	<ul style="list-style-type: none"> - Study conclusions accepted - Number sites checked - Reduction in emissions NO_x/PM₁₀ 	NRMM emissions study to identify compliant machinery and develop checklist for contractors.
Emissions from developments and buildings	3	Map Focus Areas & air quality 'hotspots' on planning GIS maps	LBM – Planning Dept.	£5K	2 (Benefits potentially significant but not quantifiable)	2017	<ul style="list-style-type: none"> - Maps updated - Number of applications within air quality 'layer' identified for assessment 	Incorporate air quality 'layer' onto planning mapping system to identify and prioritise areas for planning control linked to air quality SPG. Associated training/guidance package provided to Planning Officers to spot potential development risks to local air quality and identify appropriate mitigation strategies.
Emissions from developments and buildings	4	Enforcing CHP and biomass air quality policies	LBM – EH Dept.	£6K	2 (Benefits potentially significant but not quantifiable)	2018	<ul style="list-style-type: none"> - Identify relevant installations and incorporate air quality controls into planning conditions - Enforce relevant planning conditions 	Domestic and commercial heating appliances contribute more than 30% of total NO _x emissions in LBM. CHP and Biomass boilers to be evaluated in terms of air quality as well as carbon emissions.

Emissions from developments and buildings	5	Enforcing Air Quality Neutral policies	LBM – Planning Dept. EH Dept.	£0	2 (Benefits potentially significant but not quantifiable)	ongoing	- Number of assessments received - Number assessments accepted	Enforce Air Quality Neutral requirement through planning condition/enforcement.
Emissions from developments and buildings	6	Ensure that Smoke Control Zones fully promoted and enforced	LBM – EH Dept.	£10K	2	ongoing	- No. incidents detected - No. enforcement notices issued	Restrictions to be publicised via council website and local campaigns to increase awareness of impact of solid fuel/wood burning on AQ and restrict bonfires.
Emissions from developments and buildings	7	Promoting and delivering energy efficiency retrofitting projects in workplaces and homes.	LBM	Unknown	1	ongoing	- Review Climate change strategies and energy efficiency programmes to ensure that air quality pollutants are also adequately controlled	Merton has no housing stock but strategies are in place to promote retrofit programmes to reduce carbon emissions from workplaces and homes through the LB Merton's Climate Change Strategy and Action Plan 2014 – 2017. Future strategies to ensure that air quality emissions are not compromised particularly in areas of poor air quality.
Public health and awareness raising	8	Public Health Policy	LBM – Public Health Dept. EH Dept.	£0	n/a (Benefits potentially significant but not quantifiable)	ongoing	- Updated AQAP and ASR to be signed off by Director of Public Health (DPH) - Health & Wellbeing Strategy to include air quality as key theme - Joint Strategic Needs Assessment (JSNA) to be regularly updated on air quality impacts on the population - DPH retained as member of air quality steering group	DPH to be kept fully briefed on air quality status. All AQAP feasibility studies to include assessment of PM _{2.5} emission reduction potential. All adopted AQAP measures to evaluate impact on PHOF indicators and Public Health teams to support engagement with local stakeholders (businesses, schools, community groups and healthcare providers). Include ongoing planned programmes

Public health and awareness raising	9	Engage with Head of Transport to identify air quality opportunities and risks related to transport in the borough.	LBM – Transport Dept. EH Dept.	£0	n/a (Benefits potentially significant but not quantifiable)	ongoing	<ul style="list-style-type: none"> - Provide air quality briefing for dissemination to Transport team - Identify opportunities to integrate AQAP measures into LIP2 and Sustainable Transport Plan - Evaluate risks to transport in all air quality feasibility studies - Engage Head of Transport as key air quality steering group member 	Important that AQAP measures are assessed to identify risks and opportunities to transport. Head of Transport support important for implementing local transport management measures and for provision of traffic data and modelling of options. LIP 3 will be produced in 2018 – air quality to be fully integrated as a key factor particularly in relation to AQFAs and 'hotspots'. (See measure 14). - Air quality representatives to be consulted on any transport plans which are likely to have impact on air quality to ensure impacts can be mitigated/minimised.
Public health and awareness raising	10	Promotion of Love Clean Air website (south London cluster)	LBM – Public Health Dept. EH Dept.	£3K	3	ongoing	<ul style="list-style-type: none"> - Regularity of website updates - Number of website 'hits' - Increased feedback on air quality issues. - Positive feedback on user surveys 	Optimise website potential by providing regular updates on local air quality initiatives; promote availability of AirText notification service; invite contact from local residents to identify local air quality issues/opportunities; circulate consultations and publicise events.
Public health and awareness raising	11	Air quality at schools – STARS review	LBM – School Travel Plan Coordinator	Unknown	2	ongoing	<ul style="list-style-type: none"> - Increase in modal shift for school transport routes in borough - Reduction in pollutant concentrations 	Continue to share knowledge of existing projects in other boroughs which show measurable increase in modal shift in boroughs with participating schools. Update/refresh Merton School Travel Plans/STARS school projects in line with new/proven initiatives.

Delivery servicing and freight	12	Update Merton procurement policies to include a requirement for suppliers with large fleets to have attained silver Fleet Operator Recognition Scheme (FORS) accreditation/ EcoStars accreditation scheme.	LBM – Transport Commissioning	£0	3	2018	<ul style="list-style-type: none"> - Review procurement policies - Identify scope for updating terms mid contract - Reduction in emissions from council deliveries 	New contracts awarded in 2016/17 for majority of Merton services including waste collection/parks etc. Review existing contracts for sustainability criteria and opportunities to update. Review future contracts to incorporate use of any appropriate consolidation facilities and include requirements for preferentially scoring bidders based on their sustainability criteria.
Borough fleet actions	13	Review procurement contract for outsourced transport services.	LBM – Transport Commissioning	£0	3	2018	<ul style="list-style-type: none"> - Review procurement policies from other boroughs to establish best practice - Adopt revised procurement policy incorporating low emission vehicle standards - Evaluate reduction in emissions from vehicles operating under new contract. 	Limited number of fleet vehicles operated by Merton. New contracts awarded in 2016/17 for majority of Merton services including waste collection/parks etc. Review future contracts to include updated vehicle emission standards and include requirement to preferentially score bidders based on sustainability criteria.
Localised solutions	14	Detailed assessment of traffic management solutions for GLA Focus Areas and AQ 'hotspots'.	LBM – Traffic & Highways	£20K per Focus Area	1	2018/ 19	<ul style="list-style-type: none"> - Review progress of Morden town centre redevelopment plan (LIP2). - Incorporate planned HGV re-routing scheme for South Wimbledon. - Identify potential improvements to bus links/stops/timing specific to 	Undertake detailed local survey of key traffic routes to identify potential junction improvements, re-routing options, improved signalling, and parking/loading restrictions in GLA focus areas and in air quality 'hot-spots'. Make full use of existing traffic data, relevant planning assessment outputs and other local

							<p>AQFAs in conjunction with TfL.</p> <ul style="list-style-type: none"> - Liaise with local businesses within air quality focus areas to implement green travel plans/delivery and servicing plans/delivery re-timing/ improve vehicle emissions. - Evaluate outcome of London Borough of Richmond upon Thames delivery re-timing trial and extend if appropriate to include deliveries within Air Quality Focus Areas as part of 'mini- LEZ'/Clean Air Zone project. See measure 15. 	<p>information to identify possible traffic management scenarios to improve traffic flow and remove identified points of congestion. Scenarios to be evaluated based on source apportionment data, traffic data and other local knowledge. Detailed AQ dispersion modelling to evaluate AQ impact of measures and local traffic modelling to assess impact on safety/wider highway network. Link with current LIP2 programme and integrate outcomes into LIP 3.</p>
Localised solutions	15	'Mini 'Ultra-Low Emission Zone status for Air Quality Focus Areas and pollution 'hotspots' in Merton.	LBM – EH Dept. TfL	Unknown	1	2018/ 19	<p>The mini-ULEZ could incorporate measures such as:</p> <ul style="list-style-type: none"> - Restricting access to HGVs during peak traffic periods in AQFAs, link to delivery re-timing trial to minimise congestion caused by lorry loading/unloading - GLA/TfL to ensure that zero emission buses only access routes through AQFAs by 2020 - GLA/TfL to ensure that ULEZ standards for taxi's and Private Hire vehicles apply to routes within AQFAs by 2020 - Restrict access to all non-compliant vehicles within 	<p>Undertake campaign for GLA/TfL to designate AQ focus areas in Merton as 'mini-ULEZ' or Clean Air Zones (CAZ). ULEZ is predicted to reduce NOx by 51% in central London and by 10% in outer London. Introducing ULEZ-type restrictions to AQFA's on a local scale would fulfil GLA's requirement for boroughs to target measures effectively, would reduce emissions; incentivise uptake of low emission vehicles and encourage more active travel.</p>

							<p>AQFA defined on basis of emissions in line with ULEZ</p> <ul style="list-style-type: none"> - Improve access/ infrastructure for zero emission vehicles within AQFAs by introducing rapid charge facilities for electric vehicles in suitable locations e.g. public car parks, supermarkets, fuel stations, taxi/private hire ranks etc. - Introduce street parking surcharge for diesel vehicles using on-street parking bays in AQFA/mini-ULEZ - Identify opportunities to install green walls/hedges to disrupt dispersion of pollutants in AQFAs 	
Localised solutions	16	School Air Quality 'Audit'	LBM – EH Dept. GLA	£2K per school	3	2017	<ul style="list-style-type: none"> - Review outcomes of Mayor's School Air Quality Audits Programme at Merton Abbey and Park Community schools. - Undertake air quality monitoring using diffusion tubes or personal exposure monitoring system - Review feasibility of options to reduce emissions and/or reduce exposure - Implement improvements - Repeat/maintain monitoring to gauge impact on pollution concentrations. 	Undertake audit of Merton schools/nursery classes to identify potential measures to reduce school children's exposure to pollution in areas with poor air quality. Health evidence indicates that the health of very young and the elderly can be significantly compromised by exposure to poor air quality. Children attending school located close to busy or congested roads are vulnerable, with school traffic also increasing emissions at peak times. Consider options such as:

								<ul style="list-style-type: none"> - Moving school entrances/play areas - Enforce no engine idling schemes around schools - Impose changes to local roads to restrict polluting vehicles around schools - Pedestrianisation of roads near school entrances - Introduce green infrastructure around schools to absorb/disrupt pollutant dispersion - Formalise walking buses for large numbers of children, by funding a paid walking bus 'conductor' similar to the school crossing supervisor.
Cleaner transport	17	Formalise anti-idling enforcement	LBM – EH Dept. Parking Services	£12K	2	2018	<ul style="list-style-type: none"> - Identify resources for enforcement of anti-idling regulations. - Identify key areas for enforcement of anti-idling areas - Number of penalty notices issued - Reduction in number of vehicles idling 	Focus enforcement on schools, taxi-ranks, air quality focus areas and hotspots. Use parking enforcement officers to enforce anti-idling regulations. Conduct publicity campaign using website, notices, school projects etc.
Cleaner transport	18	Provision of EV charge infrastructure	LBM – EH Dept. ZipCar flex and Enterprise (formerly City Car Club) TfL OLEV	Ongoing	2	2017/ 18	<ul style="list-style-type: none"> - Increase in number of ultra-low emission car club vehicles - Number car club members giving up car ownership - Change in emissions from car club vehicles. - Increase in provision of on-street charge points 	Existing programme to provide electric vehicle charge points via LIP2. Additional options for incentivising the uptake of electric vehicles include : <ul style="list-style-type: none"> - Increased percentage of electric vehicles in car club schemes. Review car club parking provision

							<ul style="list-style-type: none"> - Increase in utilisation of EVCPs across borough - Increase in EVs registered in Merton - Increase in number of electric taxis/PH vehicles licenced/operated within borough. 	<p>to align with current charge points or agree provision of new infrastructure with car club operators.</p> <ul style="list-style-type: none"> - Increase provision of on-street EV charging facilities in residential areas. Link to diesel parking levy by using revenue to fund on-street charging infrastructure where community make request for specific streets/neighbourhoods. - Evaluate opportunities for electric vehicle charge points (EVCP) at taxi ranks in Merton to encourage use of EV taxis/PH vehicles outside ULEZ.
Cleaner transport	19	Emissions based parking levy for residential and business parking permits in Merton.	LBM – EH Dept.	£20K	Potentially significant and to be reviewed	2017	<ul style="list-style-type: none"> - Approval of scheme by Council - Reduction in number of permits issued for diesel vehicles - Calculated change in emissions in years 1 & 2 versus modelled predictions. 	Merton Emissions Parking Levy report produced 2016. Objective to encourage residents to replace diesel cars with less polluting vehicles by implementing a phased increase in the parking permit surcharge for diesel cars. 5000 residential parking permits issued in Merton are for diesel cars. Modelled emission reductions for levy calculated based on on-road emissions data rather than manufacturers specifications. In years 1 & 2 discount applies for EVs and no surcharge applied to petrol vehicles. Impact of diesel surcharge to be reviewed for a period of 2 years, with introduction of more

								comprehensive emissions-based parking scheme thereafter.
Cleaner transport	20	Provision of infrastructure to support walking and cycling across the borough	LBM – Future Merton TfL	Unknown	1	Ongoing	<ul style="list-style-type: none"> - Finalise detailed design and specification for Wandle trail - Complete proposed traffic management projects to support walking/cycling infrastructure. - Review potential for implementing Bike share scheme at key locations. 	<ul style="list-style-type: none"> - Cycle Quietway between Clapham Common & Wimbledon forming the Merton section of the Wandle trail. Funded by TfL - Safer Routes to Schools: Ongoing traffic management & safety projects funded by TfL and coordinated by Future Merton, the council's regeneration team.

Appendix A: Response to Consultation

Table A.1 Summary of Responses to Consultation and Stakeholder Engagement on the AQAP

Consultee	Category	Response
LB Merton AQAP Steering Group	Local authority departments.	<p>Broadly supportive of identified measures. Securing adequate resources identified as a key component for ensuring successful implementation and completion of measures.</p> <p>Opportunity for increased collaborative working between Air Quality team, Planning and Transport identified. Sharing existing information to ensure that air quality impacts are effectively assessed and mitigated/reduced in planning and traffic management schemes.</p> <p>Ongoing initiatives which are effective at reducing emissions from transport and buildings/development incorporated into updated AQAP.</p>

Appendix B: Reasons for Not Pursuing Action Plan Measures

Table B.1 **Action Plan Measures Not Pursued and the Reasons for that Decision**

Action category	Action description	Reason action is not being pursued (including Stakeholder views)
Emissions from developments and buildings	No air quality actions within this theme discounted.	
Public health and awareness raising	No air quality actions within this theme discounted.	
Delivery servicing and freight	No air quality actions within this theme discounted.	
Borough fleet actions	Join the Fleet Operator Recognition Scheme (FORS) for the borough's own fleet. Increase number of alternatively fuelled vehicles in boroughs fleet. Accelerate uptake of Euro VI vehicles in boroughs fleet. Smarter driving training for boroughs fleet drivers.	Not being pursued as services involving vehicle fleet have been contracted out. Focus instead on future procurement policies. See above. See above See above
Localised solutions	Green Infrastructure	Action not identified as stand-alone measure but incorporated into wider schemes focussing on AQ Focus

	Low Emission Neighbourhoods	<p>Areas and schools where green infrastructure would be beneficial and practical.</p> <p>Action not identified as stand-alone measure but some principles incorporated into two other measures; 14 & 15 which propose to tackle local air pollution hotspots using a package of targeted measures. Previous project based on LEN principles at Willow Lane Industrial Estate funded by MAQF but no new funding identified.</p>
Cleaner transport	<p>Very Important Pedestrian Days (e.g. no vehicles on certain roads on a Sunday) and similar initiatives</p> <p>Speed control measures e.g. lowering the legal speed limit to 20mph in built up residential areas</p> <p>Free or discounted parking charges at existing parking meters for zero emission cars.</p>	<p>Not supported by Scrutiny Committee</p> <p>A number of 20mph speed limits and 20mph zones have been introduced in Merton. Air quality benefits have not been assessed or established. No plans to extend scheme.</p> <p>Incorporated as potential option for 'mini-ULEZ'/CAZ. See measure 15.</p>

Appendix C

Successful projects delivered through Action Plan 2004 -2017:

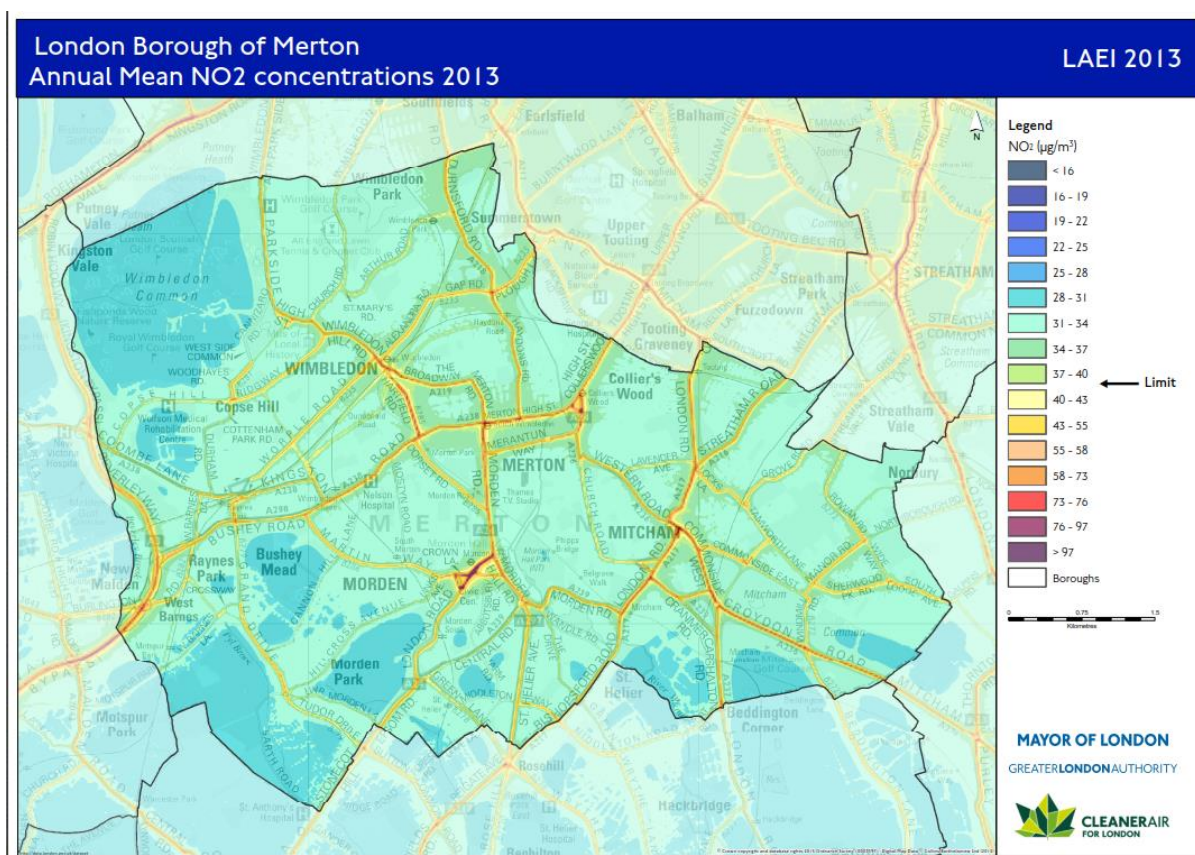
- Introduction of car clubs across borough currently operated by Zipcar and City Car Club (Action No 8)
- Introduction of Controlled Parking Zones including 4 new zones and 73 waiting and loading reviews in 2015/16 (Action No 10)
- Signed up to Walkit.com walking strategy in 2010 (Action No 15)
- Implemented Safer Routes to School/Walking Bus scheme via School Travel Plans (Action No 16)
- Implementation of London Cycle Network (Action No 17)
- Provision of go on-street cycle parking facilities via Local Implementation Plan
- Participated in CleanerAir4Schools – joint project between Croydon, Merton, Richmond and Wandsworth including 'walk once a week campaign', School Travel Plan champions training events held in three schools in each borough(Mayor's Air Quality Fund project 2015 - 2017)
- Provision of electric vehicle charging infrastructure including 21 new charge points installed in 9 locations across the borough during 2016.
- AQ project at Willow Lane Industrial Estate, Mitcham. Funded through Mayors Air Quality Fund (2013 -16). Project increased green infrastructure through planting schemes; enhanced road/gully cleansing to reduce re-suspension of dust; delivered sustainable travel training & support and raised awareness of air quality to approximately 150 local businesses.

Appendix D: Summary of current air quality in Merton

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.

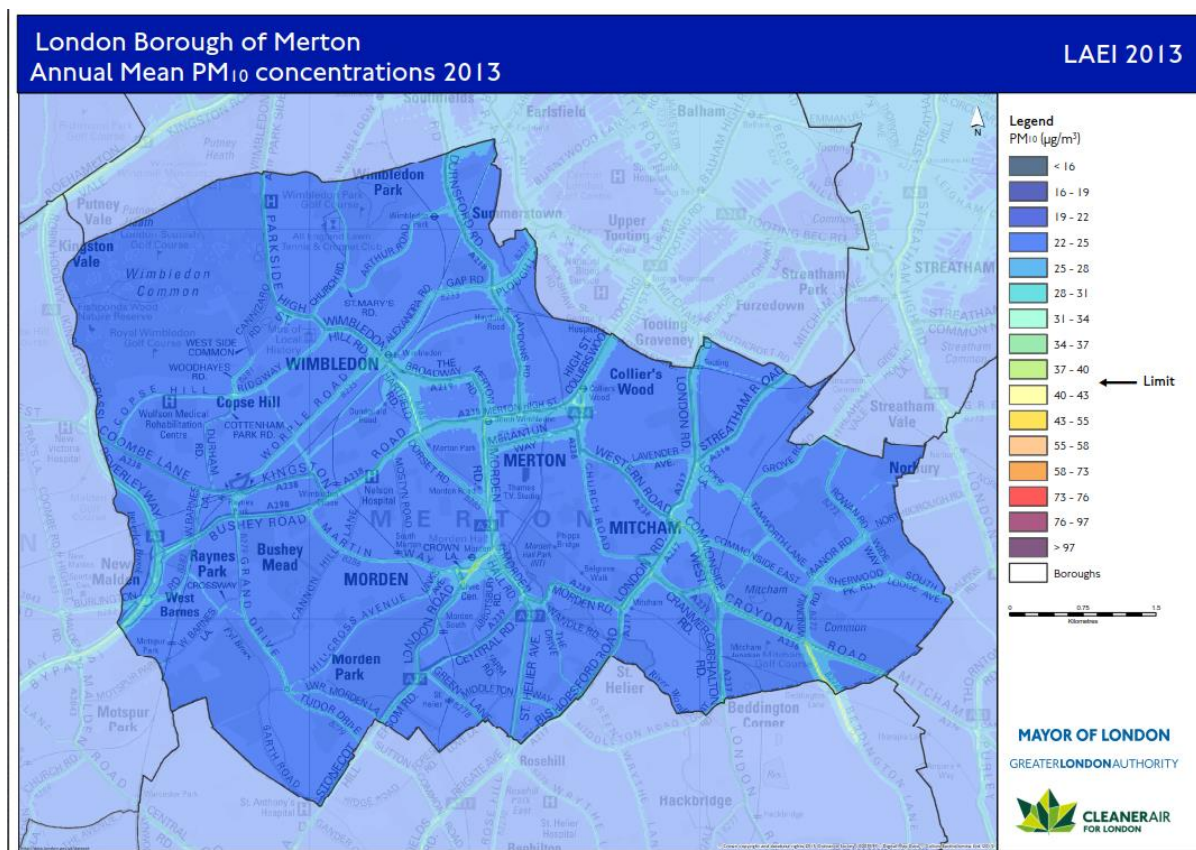
Merton borough is meeting the national AQS objectives for all pollutants other than for Nitrogen Dioxide (NO₂). Based on limited monitoring data Merton is also meeting the current objectives for Particulate Matter (PM₁₀ and PM_{2.5}), however pollutant dispersion modelling indicates that levels of PM₁₀ are likely to be exceeding the annual mean objective at specific locations and as both PM₁₀ and PM_{2.5} are damaging to health at any level, this remains a pollutant of concern.

Figure 1: Modelled map of annual mean NO₂ concentrations (from the LAEI 2013)



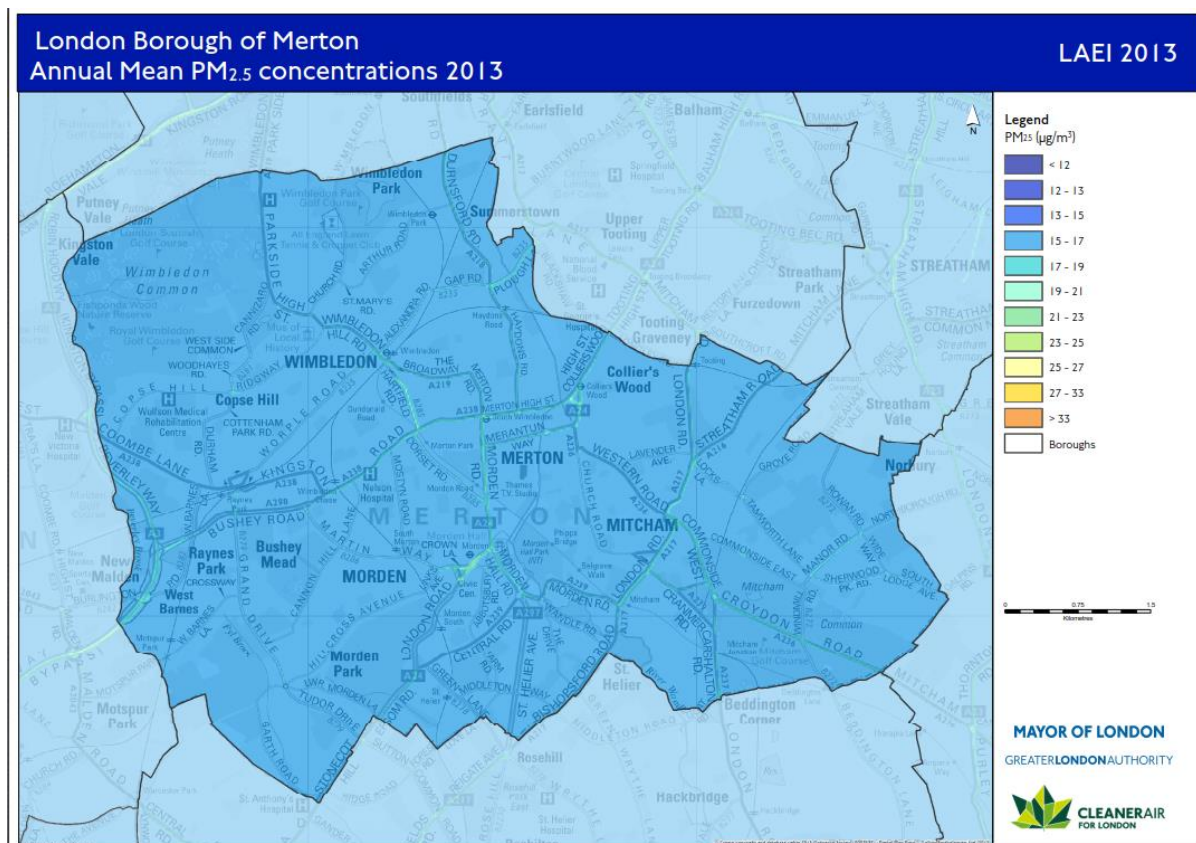
The modelled NO₂ concentrations clearly identify the contribution of road traffic emissions with exceedance of the NO₂ annual mean objective closely correlated with the main transit routes and busy junctions within the borough.

Figure 2: Modelled map of annual mean PM₁₀ (from the LAEI 2013)



Exceedance of the PM₁₀ annual mean objective also extends along the main transport links. The main areas of concern are in the centre of Morden and a section of the B272 Beddington Lane in the south east corner of the borough.

Figure 3: Modelled map of annual mean PM_{2.5} (from the LAEI 2013)



PM_{2.5} concentrations are not currently monitored in Merton but the dispersion model identifies elevated concentrations along the main transit routes and in the town centres within the borough, as would be expected. There is no regulatory standard applicable to English local authorities in respect of PM_{2.5} however, the EU Ambient Air Quality Directive (2008/50/EC) does set out air quality standards including an exposure reduction obligation, a target value and a limit value (25µg/m³ by 2020). The GLA has introduced a 'PM_{2.5} borough role' for air quality teams to consider how existing and new priority actions can help reduce PM_{2.5} levels in their area, and to work collaboratively to align any new measures with the objectives of the borough Public Health team.

Public Health Outcomes Framework

The current Public Health Outcomes Framework (PHOF), produced by Public Health England, provides an indication of differences in life expectancy and healthy life expectancy between communities. The fraction of mortality attributable to particulate air pollution (Indicator 3.01) for Merton borough is as follows:

Region/community	Particulate air pollution (Indicator 3.01)(Feb 2017)
London Borough of Merton	5.3
London Region	5.6
England	4.7

Source: Public Health Outcomes Framework – Public Health England (website accessed March 2017)

The PHOF data indicates that the fraction of mortality attributable to particulate air pollution is slightly below the average value for the London region but is higher than the average for England.

For other pollutants Nitrogen Dioxide (NO₂) concentrations remain in excess of the UK Air Quality Objectives at a number of locations across the borough. Monitoring during 2015 indicated that the annual mean NO₂ objective of 40µg/m³ was exceeded at several locations including Colliers Wood, Morden, Tooting and South Wimbledon. At monitoring sites in Tooting and High Street, Merton the NO₂ concentration was measured in excess of 60µg/m³ which is indicative of an exceedance of the 1-hour Air Quality Objective. This short term objective represents a risk to individuals spending as little as an hour in the area of exceedance and is therefore significant not just for people living in that area but also for those working or visiting the area.

AQMAs and Focus Areas

In Merton an Air Quality Management Area (AQMA) has been declared for the whole borough.

The AQMA has been declared for the following pollutant/s:

- Nitrogen Dioxide - we are failing to meet the EU annual average limit for this pollutant at some of our monitoring stations and modelling indicates it is being breached at a number of other locations. We may also be breaching the UK 1-hour Air Quality Objective based on measured concentration for NO₂ being in excess of 60µg/m³ at some locations within the borough.
- Particulate Matter (PM₁₀) – whilst monitoring data from the automatic monitoring station at South Wimbledon indicates we are complying with the UK Objectives and EU Limits, the wider modelling data indicates that we are likely to be breaching the 24-hour and annual mean PM₁₀ Objectives at a number of locations across the borough. We are also exceeding World Health Organisation air

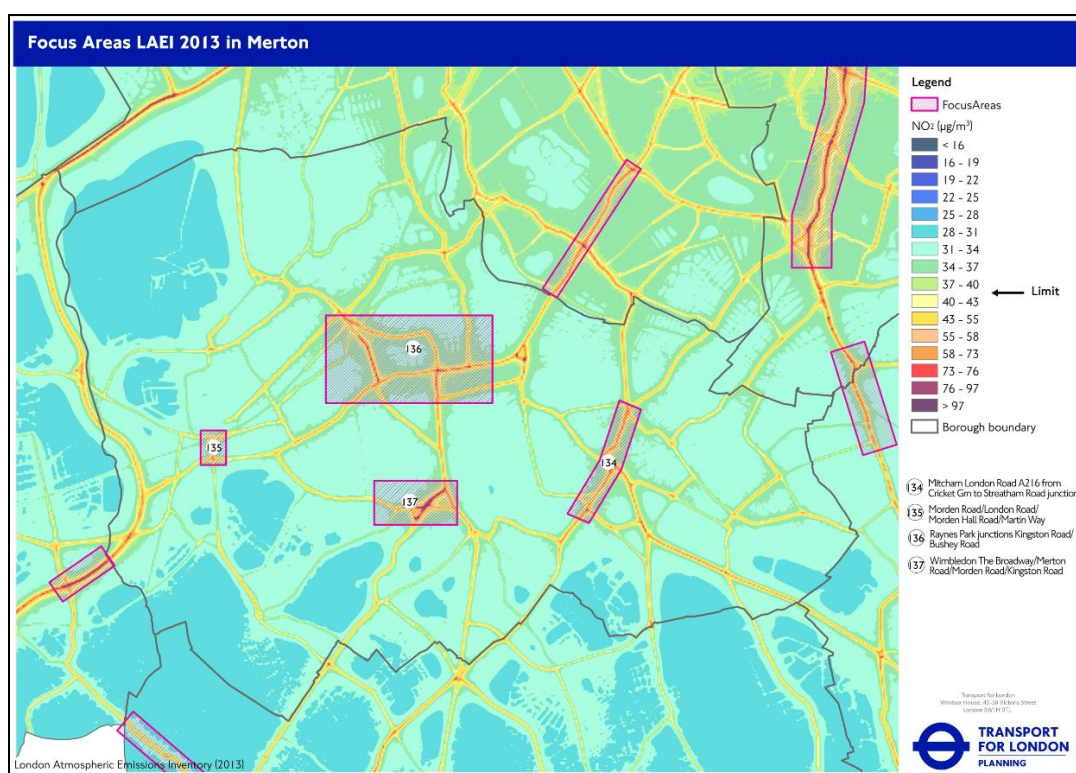
quality guideline for this pollutant, and we have a formal responsibility to work towards reductions of PM_{2.5}.

An Air Quality Focus Area is a location that has been identified as having high levels of pollution and human exposure. There are four focus areas in the borough. These are in the main centres of Mitcham, Morden, Raynes Park and Wimbledon.

Figure 4: London Borough of Merton GLA Focus Areas (2013)

Focus Area Ref.	Location
Focus Area 134	Mitcham - London Road A216 from Cricket Green to Streatham Road junction
Focus Area 135	Morden - Morden Road/London Road/Morden Hall Road/Martin Way
Focus Area 136	Raynes Park - junction Kingston Road/Bushey Road
Focus Area 137	Wimbledon - The Broadway/Merton Road/Morden Road/Kingston Road

Figure 5: Map of London Borough of Merton Focus Areas (2013)



Appendix E: Sources of Pollution in Merton

Pollution in Merton 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 London and beyond the UK.

Of the pollution that originates in the borough the main sources of NO₂ are transport (57.1%), domestic gas boilers (18.8%) and static non-road mobile machinery (11.6%). The main sources of particulate matter are road transport (50.4%), re-suspended dust from roads and surfaces (19.9%) and static non-road mobile machinery (10.3%). (See figures 6, 7 and 8 below).

In respect of the transport sources the LAEI source apportionment data for the borough indicates that diesel vehicles contribute approximately 90% of the NO_x emissions and 80% of the PM₁₀ emissions (based on 2013 modelled data). This supports the evidence from the dispersion modelling (Figures 1, 2 & 3) which indicates that the highest concentrations of both NO₂ and PM₁₀ are most closely associated with the main traffic routes and road junctions within the borough.

Figure 6: NO_x Emissions by source and vehicle type (from the LAEI 2013)

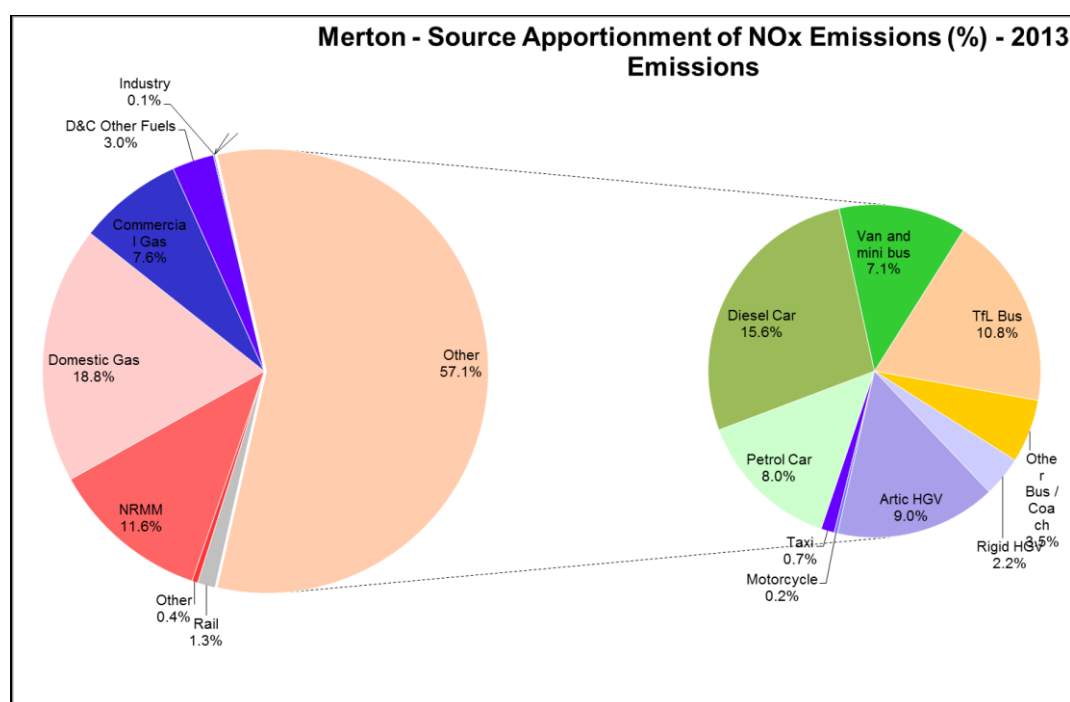


Figure 7: PM₁₀ Emissions by source and vehicle type (from the LAEI add date)

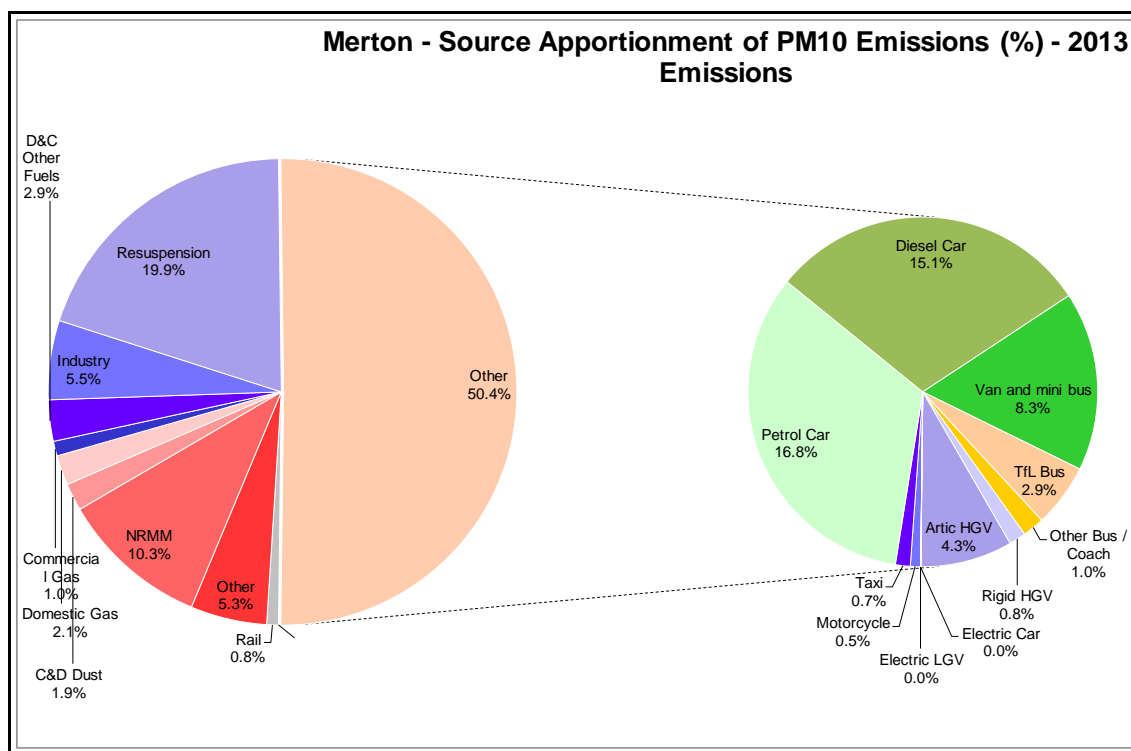
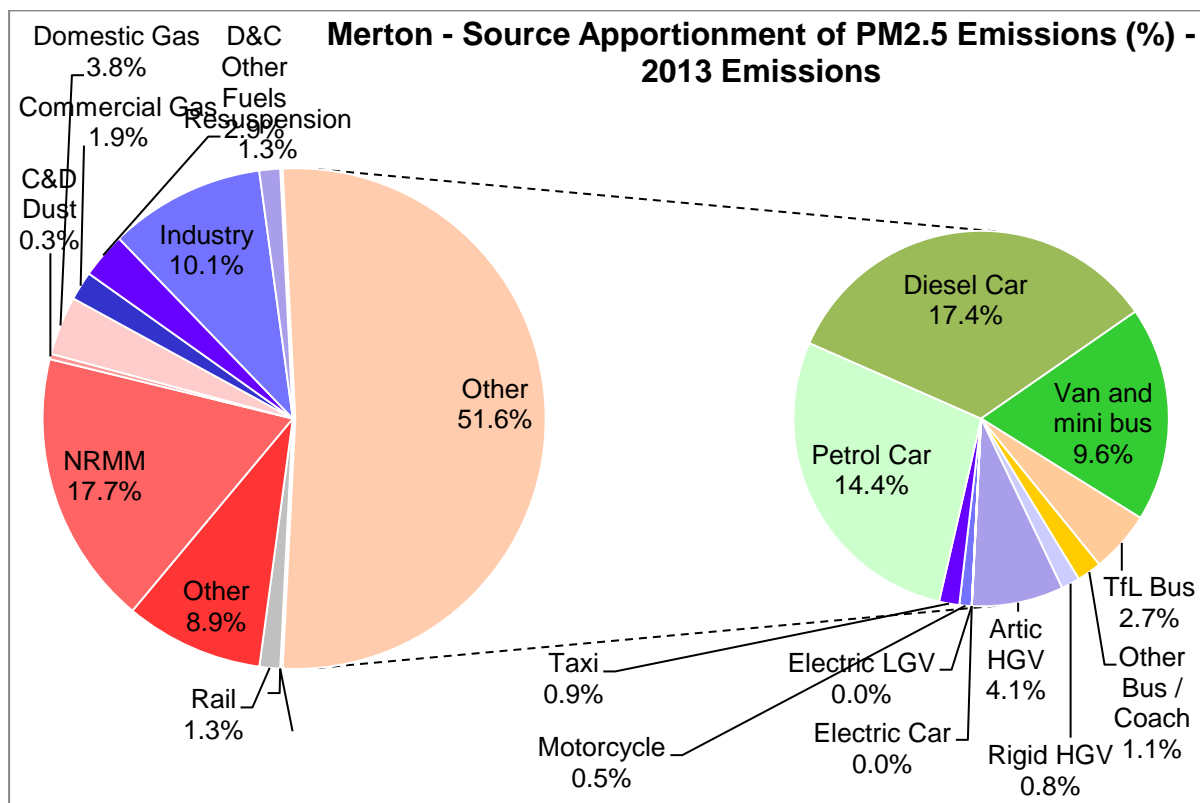


Figure 8: PM_{2.5} Emissions by source and vehicle type (from the LAEI 2013)



The largest source of NO_x from transport sources is derived from diesel cars (15.6%) followed by HGVs (rigid and articulated) with combined emissions of 11.2%, TfL buses (10.8%), petrol cars (8%) and vans/minibuses (7.1%). In terms of targeting particular vehicle types for selection of Action Plan measures, the borough source apportionment data does not identify any clear dominance in terms of vehicle type but indicates that diesel vehicles across all types are contributing 92% of the total road -NO_x emitted. This suggests that AQAP measures actions need to address emissions from all vehicle types but focus on those which are diesel powered. This includes general measures which aim to reduce traffic volume and improve traffic flow but also more specific measures to increase the proportion of low emission vehicles in the general fleet such as increasing number of electric cars and vans; improving emission standards for local bus and taxi fleets and reviewing freight and delivery practices to minimise emissions in areas with poorest air quality.

The predominant source of non-transport related NO_x emissions is commercial and domestic gas which contributes 26.4% of total NO_x emissions, and non-road mobile machinery which contributes 11.6%. Merton is limited in terms of reducing domestic gas NO_x emissions as the council no longer has any housing stock, however the Merton Air Quality Supplementary Planning Guidance document and GLA Air Quality Neutral policy for London boroughs provide some controls on heating appliances for new and redeveloped properties and businesses.

For non-road mobile machinery (NRMM), Merton has jointly commissioned a NRMM emissions study to identify compliant machinery and develop a checklist for contractors which will be used to improve emissions from machinery and equipment operated on development sites.

Similarly for particulate matter, the dominant source of emissions is transport and within that sector diesel powered vehicles collectively contribute more than 80% of PM₁₀ emissions. Measures to address transport sources generally, and to reduce reliance on diesel fuels, will have a positive impact on PM₁₀ and PM_{2.5} emissions. One additional source of particulate matter is the re-suspension of dust from roads and commercial and development sites. For development sites re-suspension of particulate matter is controlled to some extent by use of the Sustainable Design and Construction and Control of Dust and Emissions Supplementary Planning Guidance and for highways sources, existing street cleansing regimes will have some benefit.

Appendix F: Development and Implementation of Merton's AQAP

Consultation and Stakeholder Engagement

In 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:

Update as consultation process progresses.

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

Table A3: Consultation Undertaken

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

Steering Group

An AQAP steering group was convened and a meeting to review the first draft of the updated AQAP held on 5th June 2017. Representatives from the following departments attended:

- Public Health - Merton
- Environmental Health – LB Merton
- Environmental Health – LB Richmond upon Thames – adjoining authority/shared EH service
- Spatial Planning policy
- Future Merton commissioning
- School Travel planning
- Sustainability and Climate change
- Development control
- Strategic policy & research
- Transport planning
- Parking services
- Road safety & smarter travel

A review of the draft AQAP was undertaken with suggested amendments incorporated into a revised document. The steering group were broadly supportive of the identified measures. Securing adequate resources was identified as a key requirement for ensuring successful implementation and completion of measures. Opportunities for increased collaborative working between AQ team, Planning, Transport and Sustainability team were identified and the format for effective liaison discussed. The need to share information effectively was identified in order to ensure that AQ impacts are assessed and

mitigated/reduced where possible. Information on existing and planned projects was shared and the AQAP revised to reflect those areas of work.

Appendix G

Abbreviations

AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
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 ₁₀	Particulate matter less than 10 micron in diameter
PM _{2.5}	Particulate matter less than 2.5 micron in diameter
TEB	Transport Emissions Benchmark
TfL	Transport for London

Responsibilities and Commitments

This AQAP was prepared by Transport Research Laboratory Ltd in conjunction with the Environmental Health Department of Merton Council and with the support and agreement of the following officers and departments:

- *Environmental Health – LB Merton*
- *Environmental Health – LB Richmond upon Thames – adjoining authority/shared EH service*
- *Public Health Merton*
- *Spatial Planning policy*
- *Future Merton commissioning*
- *School Travel planning*
- *Sustainability and Climate change*
- *Development control*
- *Strategic policy & research*
- *Transport planning*
- *Parking services*
- *Road safety & smarter travel*

This AQAP has been approved by:

Councillor Ross Garrod, Cabinet Member for Environment

AQ Measures approved by the Air Quality Scrutiny Panel

This AQAP will be subject to an annual review, appraisal of progress and *reporting to the relevant Council Committee*. Progress each year will be reported in the Annual Status Reports produced by Merton Council, as part of our statutory London Local Air Quality Management duties.

If you have any comments on this AQAP please send them to:

Jason Andrews

EH Pollution Manager

Regulatory Services Partnership

London Boroughs of Merton and Richmond upon Thames

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jason.andrews@merton.gov.uk

