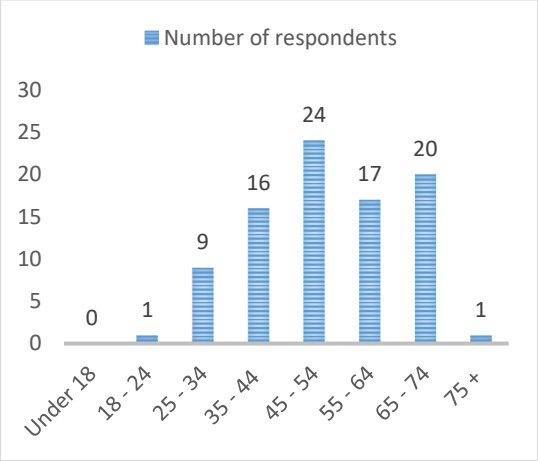
Appendix A: Consultation Analysis

This document summarises the responses to the Council's Air Quality Action Plan consultation. The action plan proposed a number of actions covering distinct areas of policy.

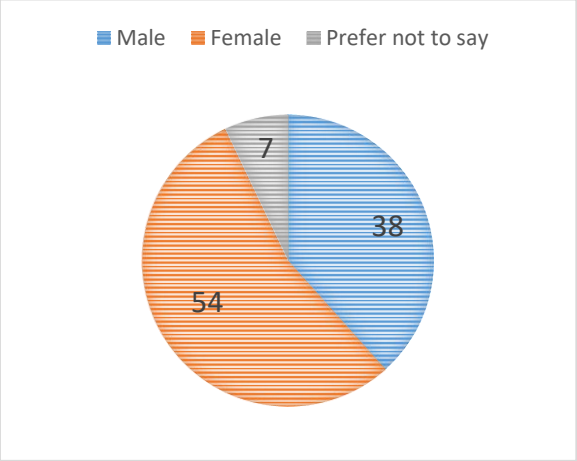
This consultation ran for a period of 6 weeks and resulted in 155 responses.

1. Response demographic

Age Profile

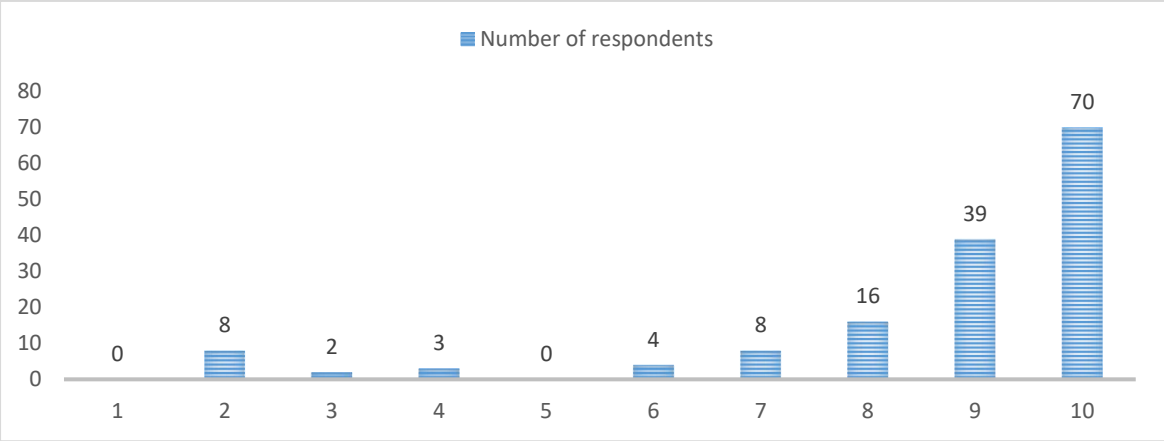


Gender



2. Concern for Air Quality

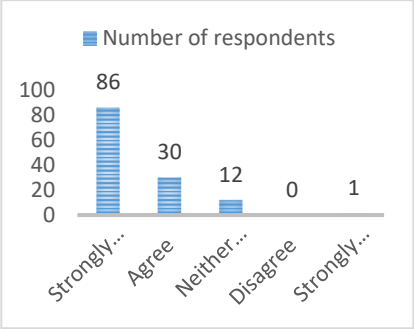
Question; "To what extent are you concerned about air quality in Merton?"



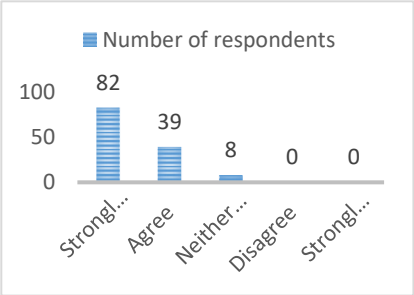
3. The Action Plan proposed measures to tackle poor Air Quality

Question; “To what extent do you agree or disagree with the proposed actions the Council could take?”

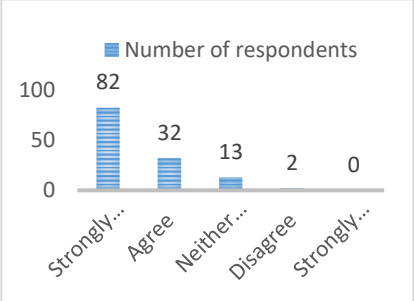
Reducing the impact of new developments on air quality



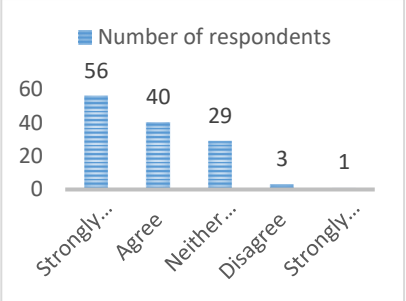
Ensuring enforcement of cleaner construction policies



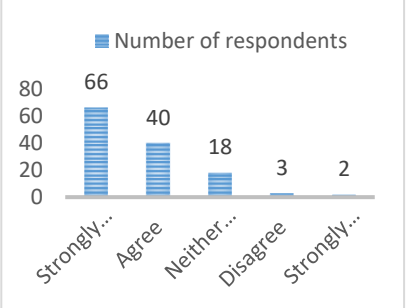
Mapping focus areas and air quality hotspots on planning GIS maps



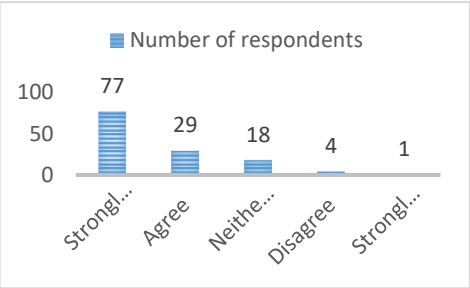
Enforcing CHP and biomass air quality policies



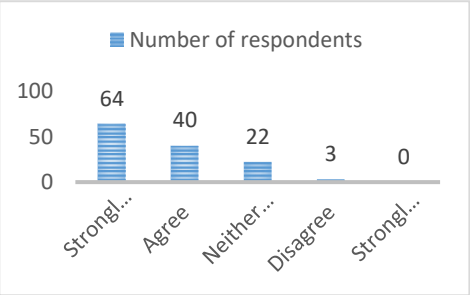
Enforcing air quality neutral policies



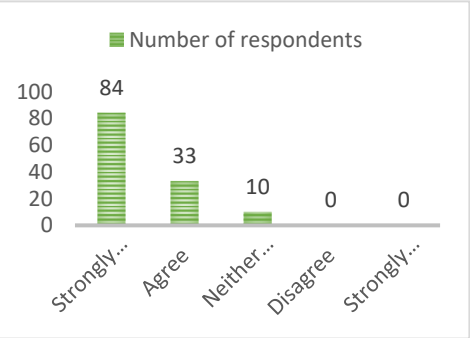
Ensuring that smoke control zones are fully promoted and enforced



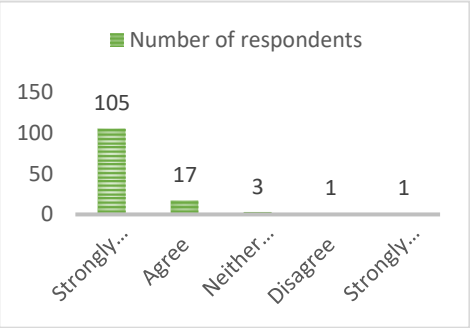
Promoting and delivering energy-efficient retrofitting projects in workplaces and homes



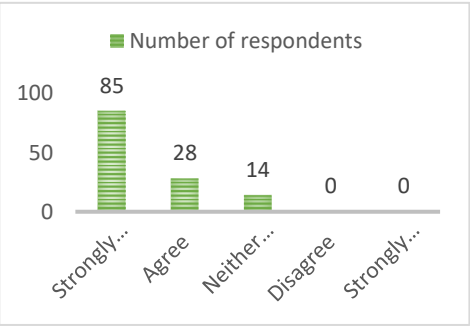
Working more closely with public health colleagues to tackle air quality



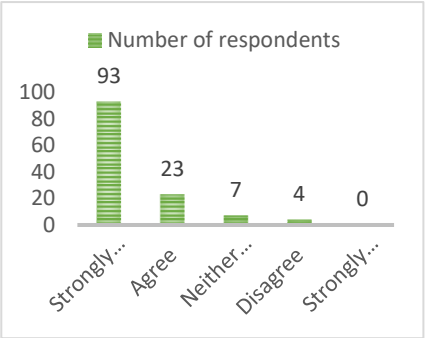
Working more closely with transport colleagues to tackle air quality



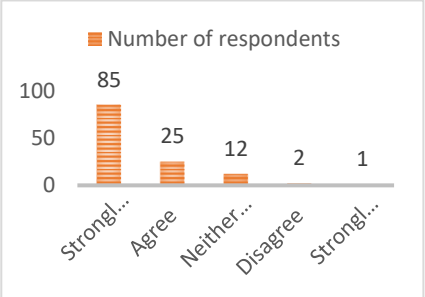
Promoting health and air quality initiatives



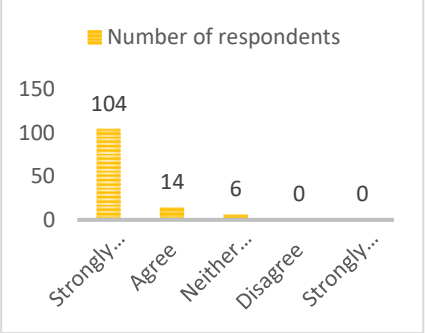
Reviewing air quality at schools by updating school travel plans and reviewing STARS accreditation in line with new initiatives



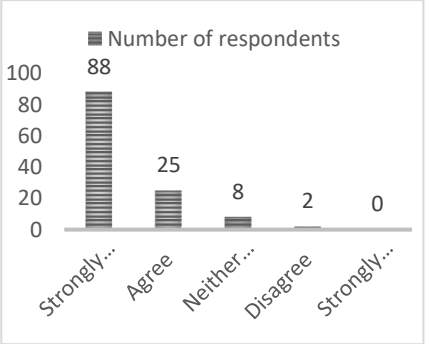
Updating Merton's procurement policies to include a requirement for suppliers with large fleets to have attained silver Fleet Operator Recognition Scheme (FORS) accreditation / EcoStars accreditation scheme



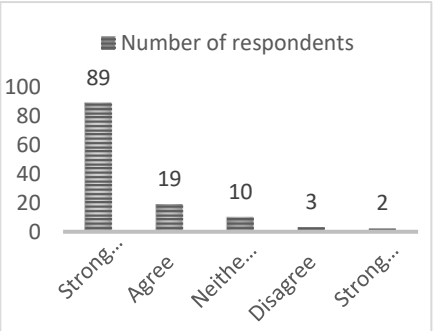
Ensuring Merton's own fleet of vehicles comply with the best possible emissions standards



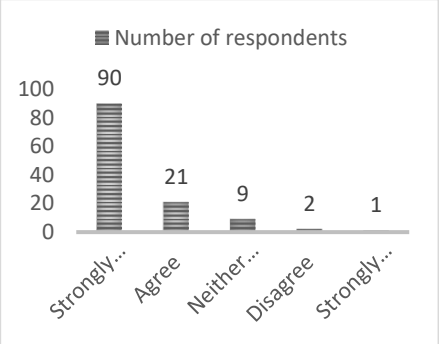
Conducting a detailed assessment of traffic management solutions for air quality focus areas and pollution hotspots



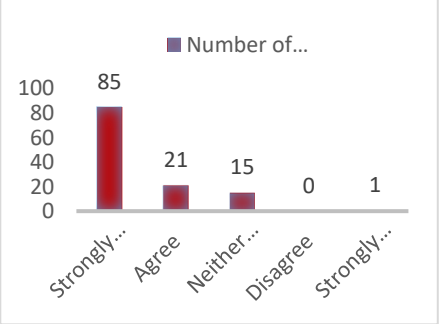
Considering possible implementation of CAZs in parts of the borough



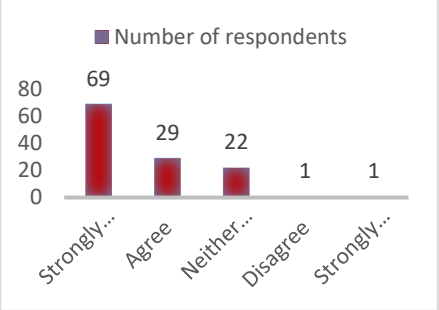
Undertaking audits of air quality in and around Merton schools subject to poor air quality



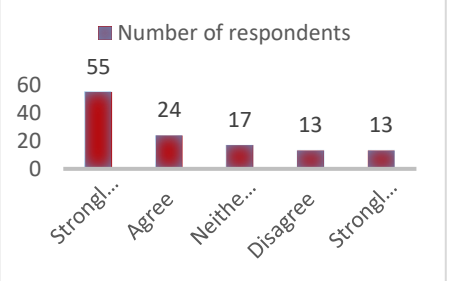
Formalising anti-idling enforcement



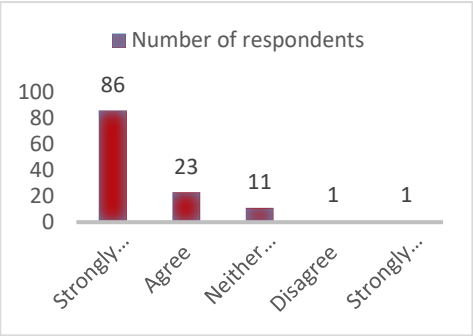
Expand electric vehicle charging infrastructure



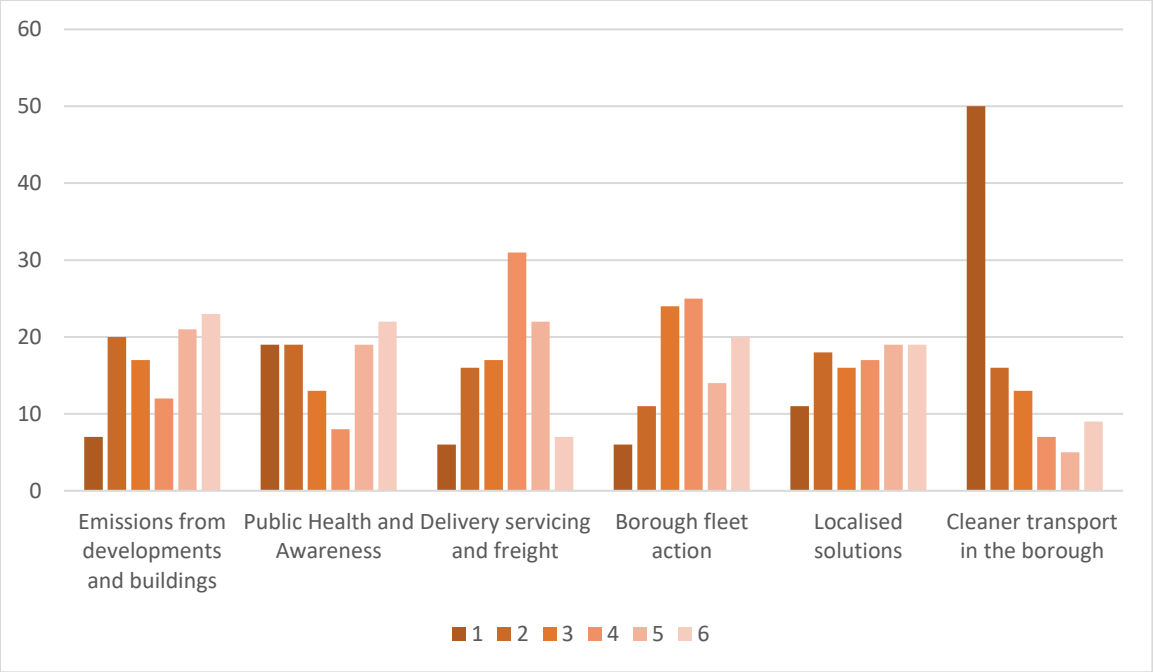
Extending use of an emissions-based parking levy for residential and business permits in Merton



Providing infrastructure to support walking and cycling across the borough



4. Ranking of categories in order of importance (1 being most important and 6 being least),



5. Here's what you said

- ULEZ
  - Expand to outer boroughs, including Merton (x3)
  - Have car-free days in the borough or certain areas
- Schools' air quality
  - Tackle engine idling and driving to school (x10)
  - More education on the subject (x2)
- Speeding
  - More enforcement of speed limits
  - Remove speed bumps
  - 20mph zones (x5)
- Parking
  - De-centralise parking in Wimbledon. Pedestrianise Broadway or only buses (x4)
  - Increase parking charges (x2)

  - Make a borough wide CPZ
  - Don't free parking at Christmas – offer sustainable incentives instead
- Transport
  - Have more electric bus routes (x8)
  - Encourage pedestrianism and cycling, i.e. improve cycling infrastructure etc. (x15)
  - Encourage electric taxis (x2)
  - Tackle engine idling (x9)
  - Traffic light re-timing or removal (x6)
  - Have more EV chargers (x2)
- Monitoring
  - Expand beyond the existing sites
- Planning
  - Stop planning applications with poor air quality implications (x10)
- Smoke
  - Greater enforcement of smoke control areas (x4)
  - Ban bonfires (x3)
- Greenery
  - More trees / hedges / greenspaces (x12)
- Other ideas
  - Encouragement to stop people paving over their front gardens to make driveways (x2)
  - Offer a list of tradespeople who are reliable to help households with energy efficiency
  - Using street lighting for EV charging
  - Provide information to residents in "My Merton" on pollution at different speed limits when driving short distances

6. Group/Organisation responses

[redacted]

Developing more green areas especially near hot spots

[redacted]

ULEZ across borough, not just in hot spots. Strong enforcement of planning conditions on air quality. Strong anti-idling measures which are enforced and tied to a public awareness raising campaign. Widespread tree planting (get community involved) and investment in green infrastructure to improve public spaces and encourage walking. Encourage people not to pave over gardens. Improve cycle ways and walking trails and do so with sensitivity to wildlife and tranquillity e.g. low impact lighting. Clean air is a right for all, not just vulnerable groups. Get diesel vehicles off the roads as quickly as possible. Re-route HGVs around residential neighbourhoods. Walk to school initiatives. Thank you.

[redacted]

1. Lobby the Mayor of London to include all London boroughs in the ULEZ. 2, Promote the installation of EV charging points in all public and private cart parks in the borough. 3, Work with the education department and Merton public health to raise awareness of the dangers of poor air quality to the very old and the very young. 4, Mount a publicity campaign on the issues of idling and publically prosecute offenders. 5, Replace all small LBM vehicles with electric and HGV's with CNG as they fall due for replacement. 6, Expand the Dig Merton programme to support locals in improving the borough's green infrastructure.

[redacted]

We believe that in order for the diesel parking levy to have credibility, it must result in lowering air pollution and not simply be a tax grab. It needs to achieve a meaningful reduction in diesel car use and/or the income must be ring-fenced for air quality initiatives e.g. green infrastructure/ tree planting, enforcement of anti-idling, public awareness raising campaigns. We also want to see action on pollution hot spots given priority e.g. near schools/nurseries/playgrounds/hospitals and air quality requirements as part of planning permission, as well as mitigation measures near hot spots. There should be immediate action taken on traffic congestion hot spots and near schools identified as within 150 m of Merton's most dangerously polluted roads. We believe that a radical and ambitious plan for tackling air pollution as an urgent policy priority is required, given the extent and seriousness of its health and quality of life impacts. This should include: limiting the number of high polluting HGVs travelling in and out of the borough, electric vehicle strategy across London and beyond with appropriate

infrastructure, greener and safer walking and cycling routes, strong and enforceable anti-idling measures with public awareness campaign. The local AQ strategy needs to be implemented as a priority in the shortest possible time frame, which includes working with TfL to switch to clean buses ASAP. Air pollution is a silent killer and needs to be treated by Merton Council as the health emergency that it is. Thank you.

[redacted]

1. As three leading community organisations in Mitcham we welcome Merton's Air Quality Action Plan and the opportunity to propose further measures to improve air quality in the area. Air pollution is an issue which respects no boundaries and requires an area wide approach. We have come together to provide this broad perspective for Mitcham.

2. Both Mitcham Cricket Green Community and Heritage and Mitcham Society have undertaken air quality monitoring in the area in collaboration with Friends of the Earth and Sustainable Merton. The results confirm that Mitcham's air quality is regularly in breach of World Health Organisation limits. The results for Cricket Green are summarised in our air quality blog and the Mitcham Society surveyed the previously pedestrianised stretch of London Road through Fair Green in June/July 2016 to get readings of 32.51 µg/m3, 31.03 µg/m3 and 31.23 µg/m3 at these points. These and other results have been collated on the Merton hotspots map. Mitcham Common, the grounds of The Canons and Park Place and many of Mitcham's Town Greens act as air quality reservoirs providing both areas of relatively low air pollution and trees and other natural methods for reducing particulates.

3. We welcome the intention to address air quality in Merton and the proposals to extend the Ultra Low Emission Zone to Merton. Nevertheless, we believe the draft Air Quality Action Plan lacks the ambition and measures necessary to address the scale of the problem facing the area.

4. We believe further measures are needed and these should include:

- Targets for improving air quality year on year to 2022
- A network of air quality monitoring stations – particulates and NOx – throughout the Mitcham area, including on Mitcham Common as well as along the roads that pass through it, with data made publicly available in a timely manner
- Zero emission or hydrogen buses on all routes through Mitcham Town Centre and its designation as a Low Emission Bus Zone
- A ban on heavy lorries running on Church Road between Lower Green West and Benedict Wharf as part of the measures to address "hot spots"
- Changed traffic flow at Lower Green West to remove the existing "roundabout" configuration and reconnect it to Lower Green East
- Improved pedestrian permeability in Mitcham Town Centre and Cricket Green – including enhanced pedestrian crossings and reduced crossing times
- A requirement in all travel plans for schools and new development to demonstrate how they will contribute to improvements in air quality, and a commitment from Merton Council to monitor and enforce these travel plans
- Investment in a behavioural change programme to raise awareness of individual actions to improve air quality
- Enforcement against idling cars and lorries which extends beyond any plans to act on idling outside schools
- Community consultation over the location of a network of well-designed electric vehicle charging points in Mitcham as an alternative to the current process whereby Merton Council submits planning applications to itself ahead of any community engagement
- Active programme of succession planting of trees and hedges throughout Mitcham to conserve and enhance tree cover, especially along major routes
- Stronger connections between Mitcham and the Wandle Trail and open spaces, including Willow Lane Industrial Estate
- Active promotion of Mitcham Common as a source of health and wellbeing with relatively better air quality including:
    - Promotion of healthy walks
    - Opening up the Ecology Centre as an affordable location for hosting community-led activity promoting health and well being
    - Management and planting along the fringes to filter particulates.

5. We look forward to contributing to monitoring, delivery and review of the Action

Appendix B: Successful projects delivered through Action Plan 2004 -2017

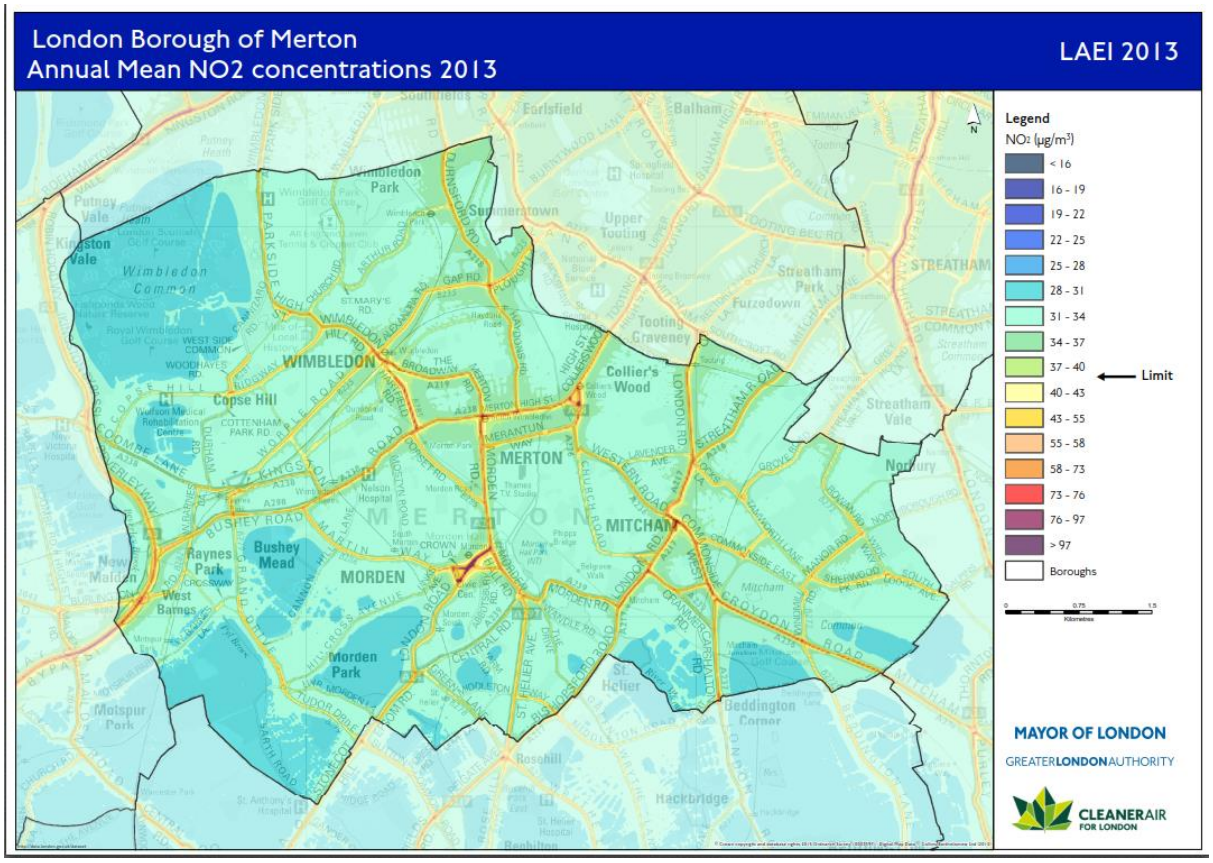
- Introduction of car clubs across borough currently operated by Zipcar and City Car Club (Action No 8)
- Introduction of Controlled Parking Zones including 4 new zones and 73 waiting and loading reviews in 2015/16 (Action No 10)
- Signed up to Walkit.com walking strategy in 2010 (Action No 15)
- Implemented Safer Routes to School/Walking Bus scheme via School Travel Plans (Action No 16)
- Implementation of London Cycle Network (Action No 17)
- Provision of 90 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 C: 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.

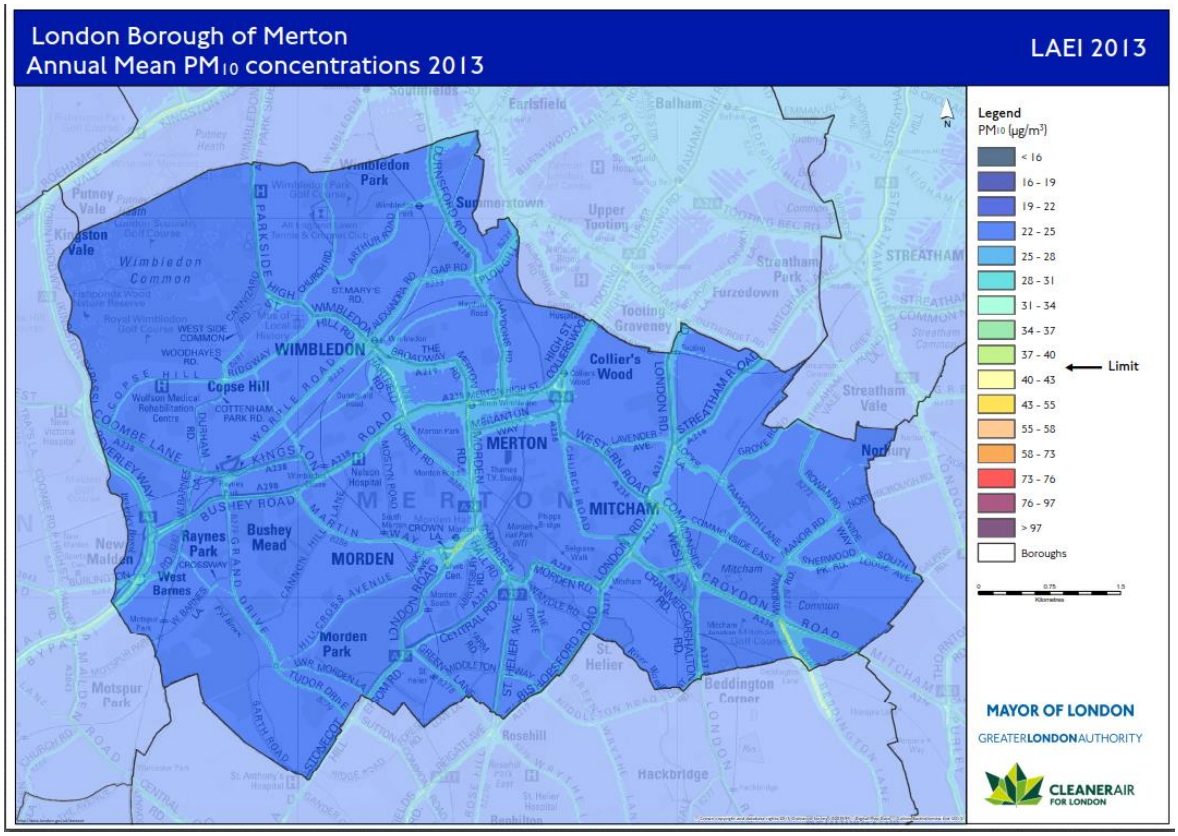
Merton borough is meeting the national AQS objectives for all pollutants other than for Nitrogen Dioxide (NO_2). Based on limited monitoring data Merton is also meeting the current objectives for Particulate Matter (PM_{10} and $PM_{2.5}$), however pollutant dispersion modelling indicates that levels of PM_{10} are likely to be exceeding the annual mean objective at specific locations. As both PM_{10} and $PM_{2.5}$ are damaging to health at any level, this remains a pollutant of concern.

Figure 1: Modelled map of annual mean NO_2 concentrations (from the LAEI *2013)*



The modelled NO_2 concentrations clearly identify the contribution of road traffic emissions with exceedance of the NO_2 annual mean objective closely correlated with the main transit routes and busy junctions within the borough.

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



Exceedance of the PM_{10} 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.

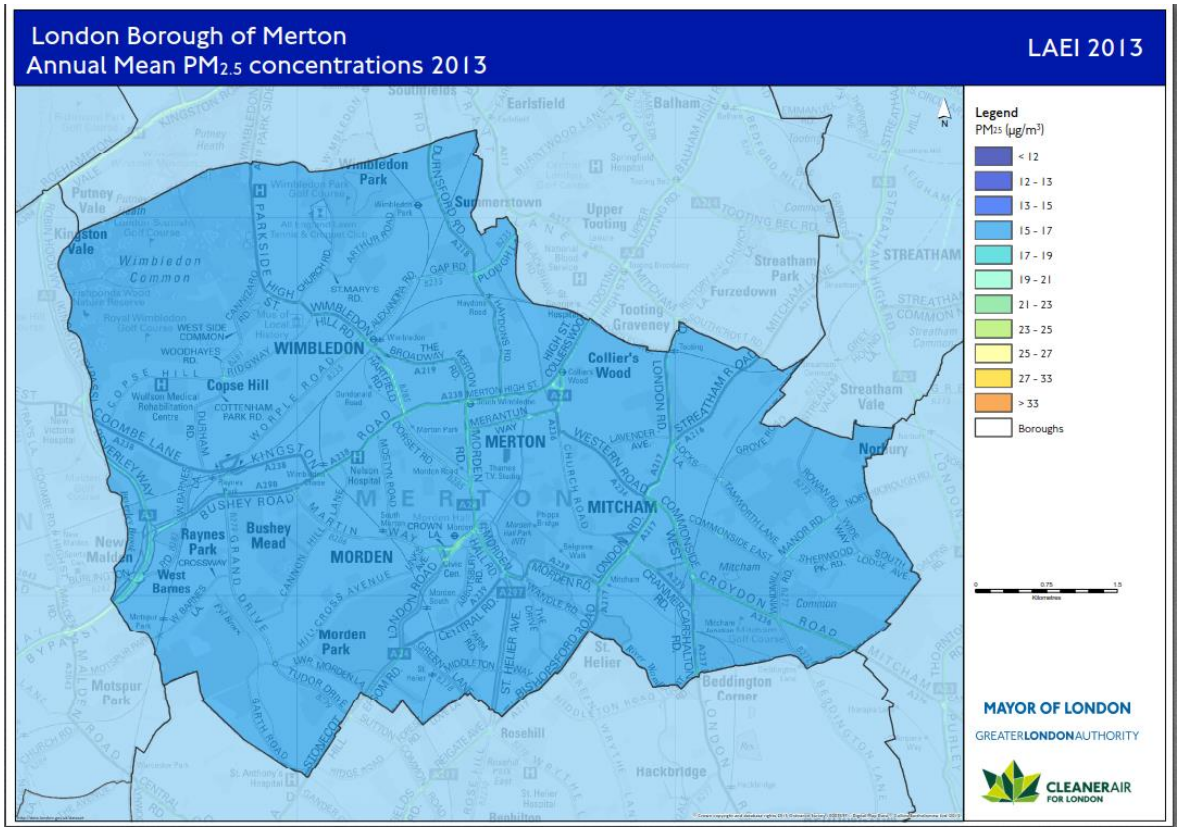


Figure 3: Modelled map of annual mean $PM_{2.5}$ (from the LAEI *2013)*

$PM_{2.5}$ 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/m^3 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 (NO_2) 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/m^3 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/m^3 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 NO_2 being in excess of 60µg/m^3 at some locations within the borough.

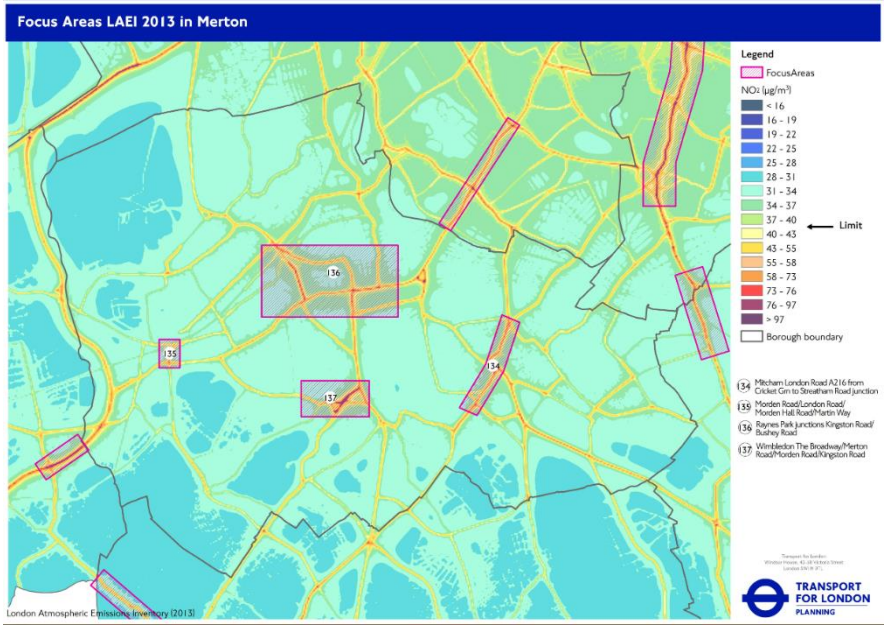
- Particulate Matter (PM_{10}) – whilst monitoring data from the automatic monitoring station at South Wimbledon indicates we are complying with the UK Objectives and EU Limits, the wider modelling data indicates that we are likely to be breaching the 24-hour and annual mean PM_{10} Objectives at a number 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 D: Sources of Pollution in Merton

Pollution in Merton comes from a variety of sources. It includes pollution originating outside 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 *inside* the borough the main sources of NO_2 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 NOx 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 NO_2 and PM_{10} are most closely associated with the main traffic routes and road junctions within the borough.

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

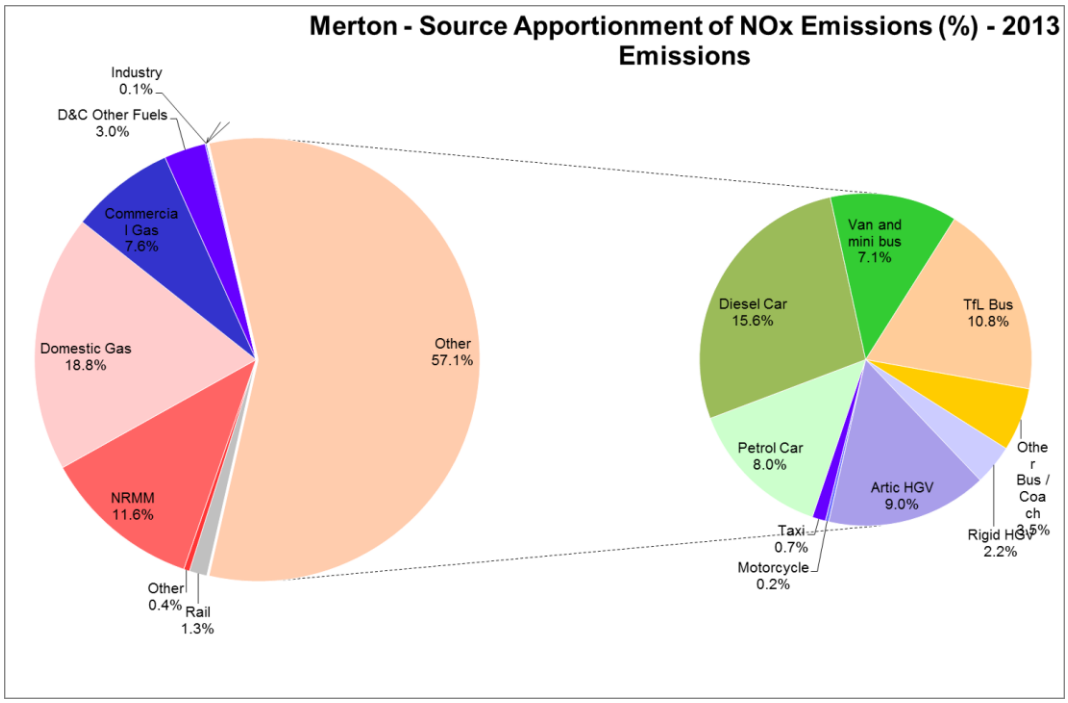


Figure 7: PM10 Emissions by source and vehicle type (from the LAEI DATE?)

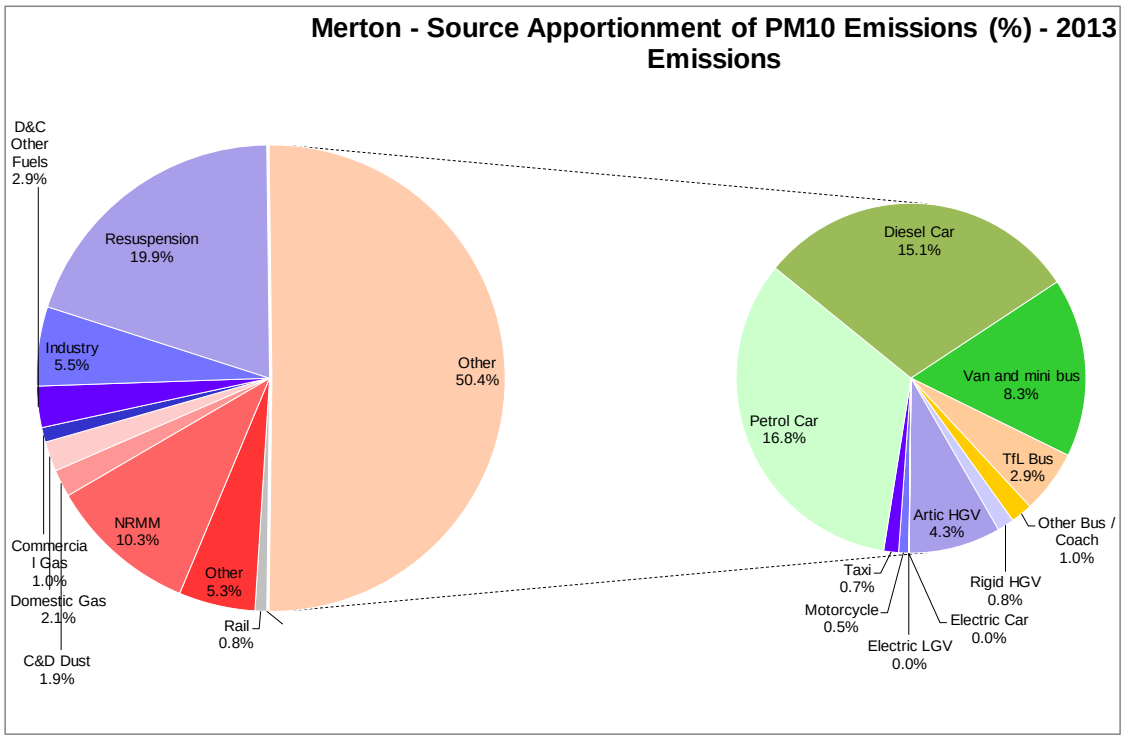
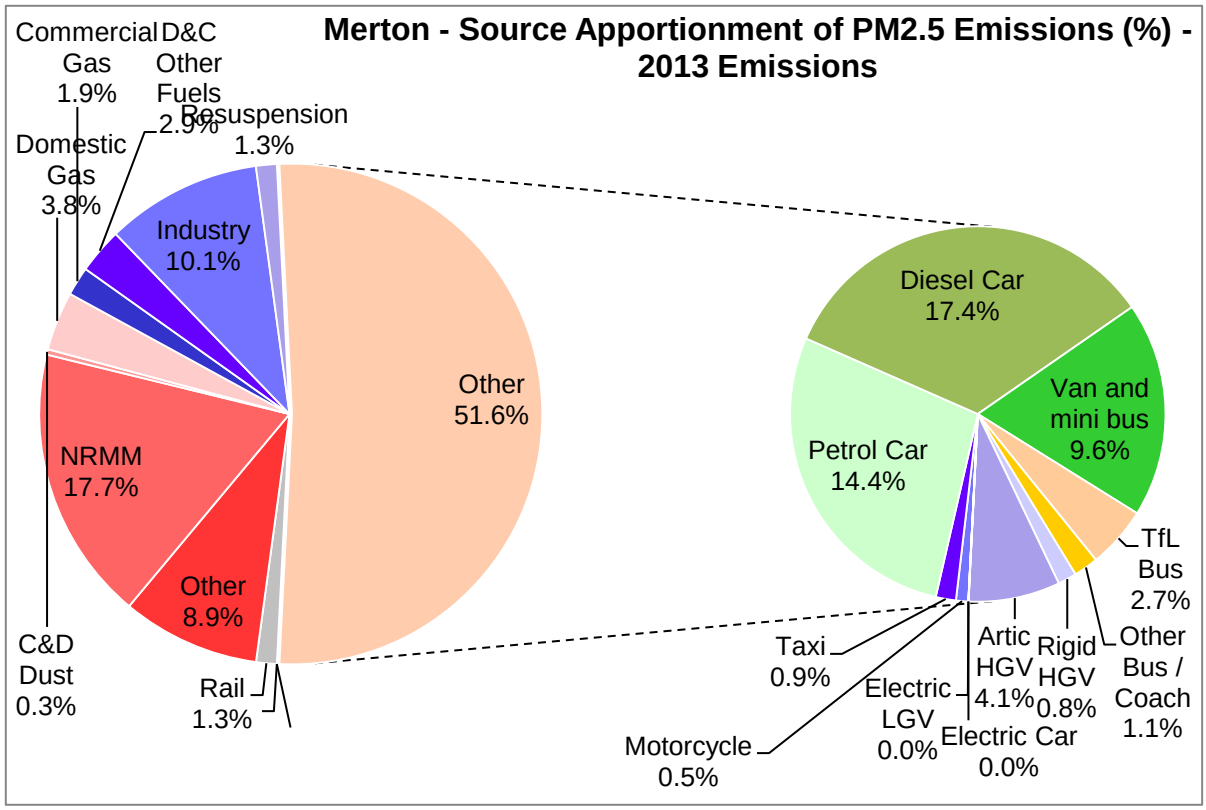


Figure 8: $PM_{2.5}$ Emissions by source and vehicle type (from the LAEI 2013)



Most NO_x from transport sources comes 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 use type but indicates that diesel vehicles across all use types are contributing 92% of the total road-NO_x emitted. This suggests that AQAP 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 the 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 when it comes to 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 an 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 PM_{10} emissions. Measures to address transport sources generally, and to reduce reliance on diesel fuels, will have a positive impact on PM_{10} 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 E: 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:

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

Table 3.1 Consultation Undertaken

Yes/No	Consultee
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

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 the AQ team, Planning, Transport and the 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 F: Acronyms

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

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