



# Sandwell

Metropolitan Borough Council



## Sandwell Metropolitan Borough Council Air Quality Action Plan 2020 – 2025

In fulfilment of Part IV of the  
Environment Act 1995  
Local Air Quality Management

September 2020

## Sandwell Metropolitan Borough Council

Local Authority Officer	Andy Thorpe
Department	Public Health Directorate
Address	Jack Judge House Halesowen Street Oldbury B69 2AJ
Telephone	0121 569 4261
E-mail	andy_thorpe@sandwell.gov.uk
Report Reference number	PH/AQAP/2020
Date	September 2020

## Executive Summary

This Air Quality Action Plan (AQAP) has been produced as part of our statutory duties required by the Local Air Quality Management framework. It outlines the action we will take to improve air quality in Sandwell between 2020 and 2025

This action plan replaces the previous action plan which ran from 2009 to 2020. Projects delivered through the past action plan included actions in five key areas to reduce air pollution arising from vehicle emissions; these are shown in Table 1 below with examples of actions already implemented.

Table 1 – Actions already undertaken to tackle poor air quality	
Key areas	Actions
1. Promoting health initiatives that support sustainable transport and behavioural change	<ul style="list-style-type: none"> <li>&gt; Walking, cycling and public transport schemes.</li> <li>&gt; Adoption of the West Midlands Cycling Charter to achieve improved walking and cycling uptake across the borough</li> </ul>
2. Traffic management and highway improvements.	<ul style="list-style-type: none"> <li>&gt; Motorway and strategic road network traffic control measures to monitor and coordinate traffic movement and disseminate 'live' travel information.</li> <li>&gt; Improved incident response times.</li> <li>&gt; Motorway active traffic management, to prevent and manage congestion and ramp metering to coordinate traffic joining the motorway.</li> <li>&gt; Red routes on arterial roads to impose strict controls on stopping and parking.</li> </ul>
3. Implementation of guidance and policy, working in partnership with key stakeholders to improve air quality outcomes.	<ul style="list-style-type: none"> <li>&gt; Adoption of policies and guidance to encourage the shift towards sustainable modes of travel and low emission vehicles.</li> <li>&gt; Co-ordinating air quality activities across the West Midlands, through the WMLETCP (West Midlands Low Emission Towns and City Project) and the West Midlands Combined Authority (WCA).</li> </ul>
4. Improving understanding of pollutant behaviour particularly at hot spot locations.	<ul style="list-style-type: none"> <li>&gt; Regional and local source apportionment and technical feasibility studies have been undertaken to investigate and test air pollution dispersion models</li> </ul>
5. Reviewing the council's impact on air quality through an assessment of its vehicle fleets.	<ul style="list-style-type: none"> <li>&gt; The council has organised low emission vehicle trials and employee demonstration days to promote the use of ultra-low emission both private and commercial vehicles.</li> </ul>

## Sandwell Metropolitan Borough Council

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 also often the less affluent areas<sup>1,2</sup>.

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion<sup>3</sup>. Sandwell Council is committed to reducing the exposure of people in Council to poor air quality in order to improve health.

Our priorities are considered under 7 broad headings:

- Developing specific measures in consultation with communities to reduce NO<sub>2</sub> concentrations at “hot spot” locations.
- Promoting public transport, walking, cycling, car sharing and switching to low or zero emission vehicles.
- Reviewing what impact the council has on air quality in its role of as a provider of public services and develop a plan to reduce emissions from its activities. This will include reducing emissions from council fleet and employee vehicles.
- Supporting and encourage taxi and private hire vehicle operators and drivers in reducing emissions from vehicles.
- Applying existing and developing new planning development policies that support air quality improvements.
- Developing information, social media and campaigns to encourage behaviour change around improving physical health and increasing use of low emission vehicles.
- Working in partnership with Birmingham City Council to minimise any negative impacts on Sandwell residents resulting from the implementation of the Clean Air Zone (CAZ).

In this AQAP we outline how we plan to effectively tackle air quality issues within our control. However, we recognise that there are many air quality policy areas that are outside of our influence (such as vehicle emissions standards agreed in Europe), but for which we may have useful evidence, and so we will continue to work with regional

---

<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> Defra. Abatement cost guidance for valuing changes in air quality, May 2013

and central government on policies and issues beyond Sandwell Council's direct influence.

## **Responsibilities and Commitment**

This AQAP was prepared by the Pollution Control Team of the Public Health Directorate of Sandwell Council with the support and agreement of the following officers and departments:

Pollution Control team – Public Health Directorate  
Research and Intelligence team – Public Health Directorate  
Transportation Planning team – Regeneration and Economy Directorate  
Development Management – Regeneration and Economy Directorate  
Licensing – Regulated Services team, Protection and Prevention Directorate  
Fleet Services – Neighbourhoods Directorate

This AQAP has been approved by:

Councillor Yvonne Davies – Leader of the Council  
Councillor Faruk Shaeen - Cabinet Member for Living Healthy Lives  
David Stevens – Chief Executive  
Dr Lisa McNally - Director of Public Health  
Dr Alison Knight Executive Director – Neighbourhoods

This AQAP will be subject to an annual review, appraisal of progress and reporting to the relevant Cabinet Members. Progress each year will be reported in the Annual Status Reports (ASRs) produced as part of our statutory Local Air Quality Management duties.

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

Public Health Directorate  
Sandwell Metropolitan Borough Council  
Jack Judge House  
Oldbury  
B69 2AJ  
Email: [andy\\_thorpe@sandwell.gov.uk](mailto:andy_thorpe@sandwell.gov.uk)

# 1 Table of Contents

<b>Executive Summary .....</b>	<b>1</b>
Responsibilities and Commitment .....	3
<b>1 Table of Contents .....</b>	<b>4</b>
1.1 Introduction .....	5
<b>2 Summary of Current Air Quality in the Metropolitan Borough of Sandwell .....</b>	<b>6</b>
2.1 Sandwell’s Key Priority Zones for 2020 – 2025 .....	8
2.2 Borough screening exercise.....	9
2.3 Birmingham Clean Air Zone .....	11
2.4 Air Quality and Climate Change .....	11
<b>3 Sandwell Council’s Air Quality Priorities .....</b>	<b>12</b>
3.1 Public Health Context.....	12
3.2 Planning and Policy Context.....	13
3.3 Source Apportionment.....	15
3.4 Required Reduction in Emissions.....	17
3.5 Key Priorities .....	18
<b>4 Development and Implementation of Sandwell Council’s AQAP .....</b>	<b>20</b>
4.1 Consultation and Stakeholder Engagement.....	20
4.2 Steering Group.....	21
<b>5 AQAP Measures .....</b>	<b>22</b>
5.1 Table of Air Quality Action Plan Measures (Actions contributing to Climate Change Action Plan highlighted in blue).....	24
<b>Appendix A: Response to Consultation .....</b>	<b>30</b>
<b>Appendix B: Reasons for Not Pursuing Action Plan Measures .....</b>	<b>35</b>
<b>Appendix C: Trends in NO<sub>2</sub> and PM<sub>10</sub> concentrations in Sandwell .....</b>	<b>36</b>
<b>Glossary of Terms .....</b>	<b>38</b>

## List of Tables

Table 2.1 - Areas now compliant with NO <sub>2</sub> annual mean objective	6
Table 2.2 - Priority Zones and Hotspots	9
Table 3.1 - Summary of source apportionment exercises	16
Table 3.2 - Projected annual mean roadside NO <sub>2</sub> concentrations (µgm <sup>-3</sup> ) to 2023	17
Table 3.3 - Prioritised actions for Sandwell’s AQAP 2020 – 2025	18
Table 4.1 - Consultation Undertaken	20
Table 5.1 - Air Quality Action Plan Measures	24

## **Sandwell Metropolitan Borough Council**

This report outlines the actions that Sandwell Council will deliver between 2020 and 2025 in order to reduce concentrations of air pollutants and exposure to air pollution; thereby positively impacting on the health and quality of life of residents and visitors to Sandwell Council's administrative area.

It has been developed in recognition of the legal requirement on the local authority to work towards Air Quality Strategy (AQS) objectives under Part IV of the Environment Act 1995 and relevant regulations made under that part and to meet the requirements of the Local Air Quality Management (LAQM) statutory process.

This Plan will be reviewed every five years at the latest and progress on measures set out within this Plan will be reported on annually within Sandwell Council's Air Quality Annual Screening Report (ASR).

DRAFT

## 2 Summary of Current Air Quality in the Metropolitan Borough of Sandwell

The Borough of Sandwell is characterised by large areas of established industry and a complex road network of major arterial roads, including the M5 and M6 motorways, which are amongst the most utilised and congested roads in Europe. Air pollution has been a longstanding problem in Sandwell and in 2005 the Council declared a borough wide Air Quality Management Area (AQMA). At that time the objective for Nitrogen Dioxide (NO<sub>2</sub>) annual mean was being exceeded in 22 separate locations.

By 2018 the following areas, which had originally exceeded the annual mean NO<sub>2</sub> objective, were found to be compliant.

Table 2.1 Areas now compliant with NO <sub>2</sub> annual mean objective	
Area	Area description
2	Area to North of the M6 – Yew Tree Estate (Inc. Woodruff Way, Snapdragon Drive and Pimpernel Drive)
3	Area to North of M6 Junction 8 – Wilderness Lane and Birmingham Road – Great
4	Area to South of M6 Junction 8 (Inc. Longleat Cl, Rigley Dr and Himley Cl–Great
5	Area to Southeast of M6 Junction 7 (Inc. Scott Rd and Birmingham Rd) - Great
6	Area to Southwest of M6 Junction 7 (Birmingham Road and Hillside Road) –
7	Oldbury Ringway / Birmingham Road (A457), Oldbury
8	Dudley Road East / Roway Lane (A457), Oldbury
9	Area surrounding the M6/M5, Junctions 7- 8 Great Barr and 1-2 West Bromwich
12	Oldbury Road / Birmingham Road, Blackheath
14	Bromford Lane (including the Kelvin Way / Brandon Way Junction), West
16	All Saints Way / Expressway, West Bromwich
17	All Saints Way / Newton Road, West Bromwich
18	Soho Way / Grove Lane / Cranford Street, Smethwick
19	Horseley Heath, Tipton
20	Sedgley Road East /Dudley Port – Tipton
21	Myvod Road / Wood Green Road – Wednesbury
22	Gorsty Hill, Blackheath

The NO<sub>2</sub> levels recorded at the Gorsty Hill levels were only marginally under the annual mean objective in 2018 and will therefore remain a priority area until NO<sub>2</sub> levels are consistently below the objective level. Exceedances were also identified in two locations not originally included in the 22 exceedance areas. These are at Mallin Street, Smethwick and at Burnt Tree Junction/Birmingham New Road, Oldbury. There are currently no relevant receptors at the Burnt Tree Junction monitoring location but there may be in the future. The Council will continue to monitor air quality at key locations to confirm the trends in pollutant concentrations and compliance with published objectives.

In addition to this work, Sandwell was required under a Ministerial Direction issued on the 23 March 2018 to undertake feasibility studies into reducing NO<sub>2</sub> concentration in the shortest practicable time at four locations. The feasibility studies were undertaken by a consultant working jointly with Sandwell Council and the other Black Country Authorities. Bus retrofitting was identified as a solution for the A457 in Oldbury and on the A41 at West Bromwich a combination of bus retrofitting and signal improvements were selected for implementation.

A further Direction was issued in 25 March 2019 for two road links on a section of the A41 between Junction 1 of the M5 motorway. The feasibility studies concluded that there were no physical interventions that could be implemented to ensure compliance with air quality objectives within a short time frame.

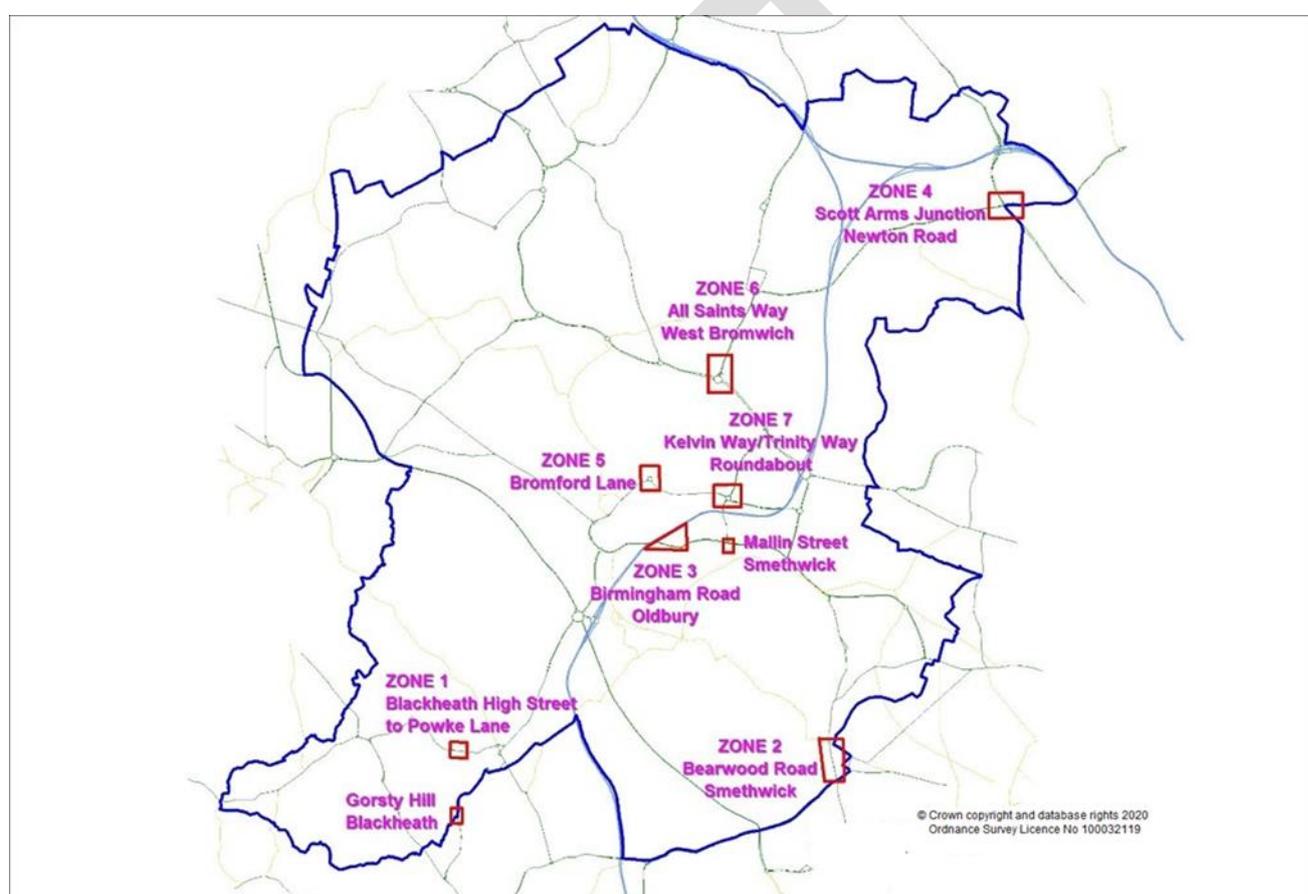
Sandwell maintains an extensive monitoring network and has undertaken 12 months of continuous automatic monitoring at six locations. Figures C1 and C2 (in Appendix C) show the trend in NO<sub>2</sub> and PM<sub>10</sub> concentrations respectively from 2008 to 2018. The council also deployed individual diffusion tubes at 99 locations in 2017 and 103 locations in 2018. In 2019 this increased to a total of 163 diffusion tubes at 123 locations.

Sandwell confirms compliance with the following pollutant objectives: Benzene, 1-3 Butadiene, Sulphur Dioxide, Carbon Monoxide, Particulate Matter (PM<sub>10</sub>) and Lead. National air quality objectives for PM<sub>10</sub> are currently met in Sandwell. It is recognised there is lack of evidence to indicate there is a concentration of particulate matter below which health effects do not occur and therefore our aim is to achieve a reduction in the overall exposure of the population. PM<sub>2.5</sub> is currently monitored in one location.

The latest Annual Status Report produced by Sandwell Council is available at:  
[http://www.sandwell.gov.uk/info/200274/pollution/485/air\\_quality](http://www.sandwell.gov.uk/info/200274/pollution/485/air_quality)

## 2.1 Sandwell's Key Priority Zones for 2020 – 2025

Nitrogen dioxide concentrations at seven of the original 22 exceedance areas continue to exceed the annual mean objective. Exceedances in these seven zones, shown in Figure 2.1, have been persistent, demonstrating no significant evidence of a downward trend during the previous five years.



**Figure 2.1 Key Priority Zones and Individual Hotspots**

Table 2.2 sets out the locations of these areas and the measures that have been taken or are in progress to reduce NO<sub>2</sub> concentrations.

Table 2.2 Priority Zones and Hot Spots	
Location	Actions completed or on-going
<b>Zone 1</b> Blackheath High Street/Powke Lane	<ul style="list-style-type: none"> <li>• Blackheath by pass</li> <li>• Red route scheme</li> <li>• Traffic management scheme to maximise use of bypass</li> </ul>
<b>Zone 2</b> Bearwood Road	<ul style="list-style-type: none"> <li>• Technical feasibility study producing contour map of NO<sub>2</sub> levels and forecast air quality impacts and improvements of low emission strategies and scenarios.</li> <li>• Red route scheme Hagley Road</li> <li>• Traffic signal upgrade at junction of Sandon Road/Bearwood Road to reduce vehicle waiting times and increase efficiency of pedestrian crossing points.</li> </ul>
<b>Zone 3</b> Birmingham Road	<ul style="list-style-type: none"> <li>• A457 Red Route scheme</li> <li>• Lane improvements implemented as part of the Oldbury viaduct works</li> </ul>
<b>Zone 4</b> Scott Arms Great Barr	<ul style="list-style-type: none"> <li>• Bus Route 51 - improvements to traffic flows and reduce queues</li> <li>• Bus showcase and service improvements to improve customer experience and patronage</li> <li>• Red Route scheme</li> <li>• Improved traffic signal timings because of Oldbury Viaduct repairs.</li> </ul>
<b>Zone 5</b> Bromford Lane West Bromwich	<ul style="list-style-type: none"> <li>• Red route scheme</li> <li>• Bus improvements – upgrade to bus infrastructure to improve customer experience and patronage.</li> <li>• 20 mph speed limit West Bromwich Town Centre</li> <li>• Cycle route around Bromford Road roundabout and kelvin Way approach arm.</li> </ul>
<b>Zone 6</b> All Saints Way West Bromwich	<ul style="list-style-type: none"> <li>• New underpass and major roundabout improvements to Express Way (A41 at Cronehills Linkway).</li> <li>• Red Route Scheme</li> <li>• Bus Service Improvements and Bus Showcase – upgrade to bus infrastructure to improve customer experience and patronage.</li> <li>• Segregated cycle route between A41 roundabout and Gladstone Street on both sides of dual carriage way linked by Toucan crossing</li> </ul>
<b>Zone 7</b> Kelvin Way/Trinity Way West Bromwich	<ul style="list-style-type: none"> <li>• Red route scheme</li> <li>• Improvements to roundabout 2018</li> </ul>
<b>Individual hot spot</b> Mallin Street Smethwick	<ul style="list-style-type: none"> <li>• To be determined</li> </ul>
<b>Individual hot spot</b> Gorsty Hill Blackheath	<ul style="list-style-type: none"> <li>• To be determined</li> </ul>

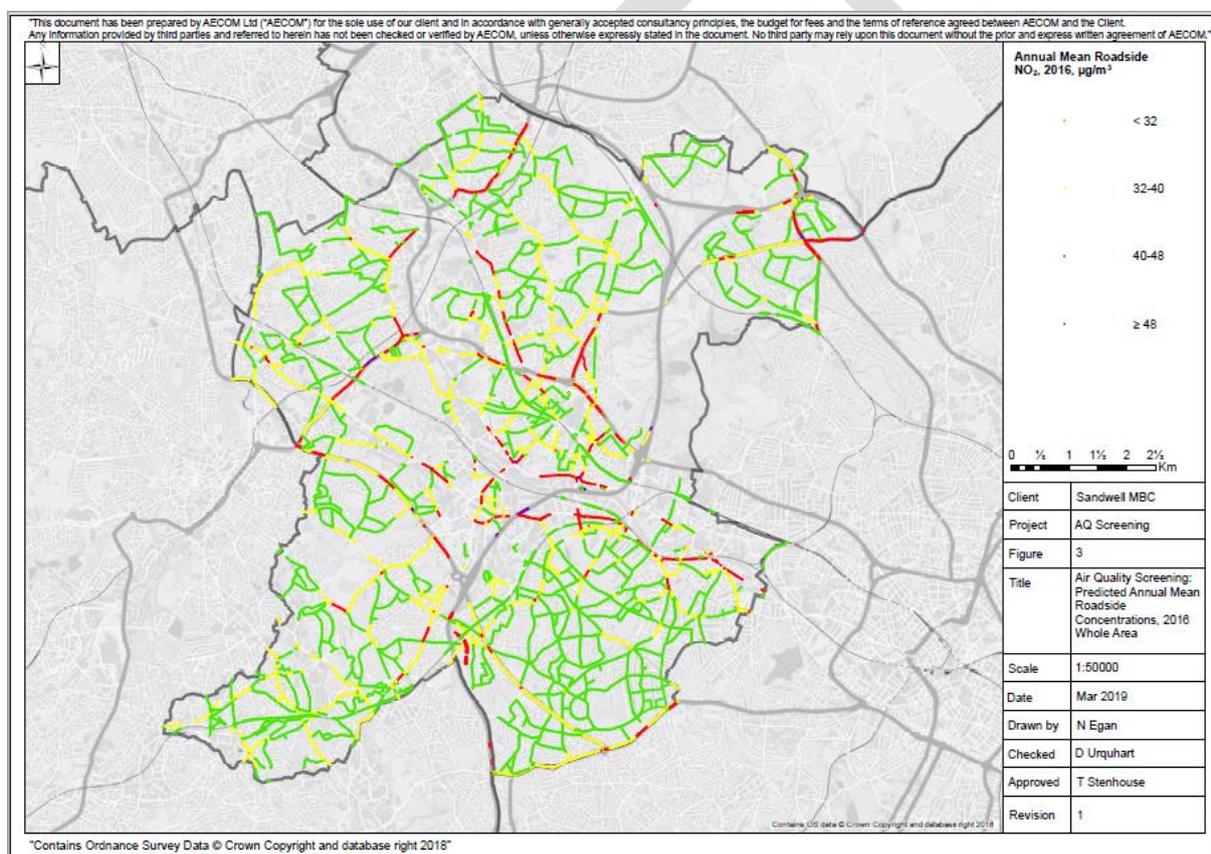
## 2.2 Borough screening exercise

In 2018 additional screening work was undertaken to validate the hot spots already identified and consider whether there are any other areas where NO<sub>2</sub> levels are likely

## Sandwell Metropolitan Borough Council

to exceed the national objective. The screening exercise for NO<sub>2</sub> has identified several areas of 'possible', 'likely', or 'very likely' exceedances in 2016. In many cases a trend can be seen that the possibility for exceedances extends beyond the 'hot spot' locations that had been previously identified.

This is an important consideration that affects not only the interpretation of this data, but also to inform any interventions, as it demonstrates how traffic does not suddenly arise in hotspot locations but tends to follow routes through the Borough subject to the origin and destination and focusing on major thoroughfares. It is likely that the same vehicles will affect more than more hotspot, and it is the 'journey' that should be recognised rather each discrete location.



**Figure 2.2 Predicted annual mean roadside concentrations of NO<sub>2</sub> for 2016**

**Key:** (µg<sup>m-3</sup>) --- < 32 --- 32-40 --- 40-48 --- ≥ 48

It is intended to refine the model outputs by using Automatic Number Plate Recognition data to assign an accurate local fleet and concurrent emissions profile. This may be used to undertake source apportionment and properly understand the most significant emission sources on each link, as this is essential to confidently target potential interventions

## 2.3 Birmingham Clean Air Zone

A Clean Air Zone (CAZ) is an area where targeted action is taken to improve air quality, by discouraging the most polluting vehicles from entering the zone. No vehicle is banned in the zone, but those which do not have clean enough engines will have to pay a daily charge if they travel within the area.

The Government has said that [Birmingham needs a Clean Air Zone](#) and that the council need to reduce levels of NO<sub>2</sub> in the air to a maximum average of 40µg/m<sup>3</sup> as soon as possible. Birmingham's Clean Air Zone will cover all the roads within the A4540 Middleway Ring Road, but not the Middleway itself:

At the time of preparing this AQAP, Birmingham's CAZ had been delayed, initially due to technical difficulties and then the Coronavirus pandemic and was not due to come into operation before 1 January 2021 at the earliest. It will operate 24 hours a day, 365 days a year and the charges will be applied daily. A non-compliant vehicle driving in the CAZ will pay once for the day, but then may drive in the CAZ area without limit on that day.

The Sandwell and West Birmingham partnership has been formed to explore the identify areas of quantify the effects of the implementation of the CAZ on pollution levels in Sandwell and explore mitigation measures that could be employed deal with any displacement of older polluting vehicles. It is also an opportunity to work together on projects which will benefit both parties.

## 2.4 Air Quality and Climate Change

Sandwell Council is in the process of developing a Climate Change Strategy and has set a target of becoming carbon neutral no later than 2041. An integrated approach to tackling air quality and climate change makes sound sense as the emissions that pollute our air and those that warm the planet have common sources: vehicles, buildings, power generation and industry. Given the synergies with air pollution, the consultation on the Climate Change Strategy ran in parallel with the draft Air Quality Action Plan for six weeks from 20 January 2020. For the same reason the former Air Quality Working Group has become the Climate Change Working Group to enable a focus on a wider agenda. Membership has been extended accordingly and specific workstreams established.

## 3 Sandwell Council's Air Quality Priorities

### 3.1 Public Health Context

Air pollution affects mortality, from cardiovascular and respiratory conditions to lung cancer. In its report on "The Mortality Effects of Long-Term Exposure to Particulate Air Pollution in the United Kingdom", published in 2010, the Committee on the Medical Effects of Air Pollutants (COMEAP) estimated the mortality burden of existing levels of air pollution on the population of the UK as being equivalent to 29,000 deaths and an associated loss to the population of 340,000 life-years.

The above findings were updated in February 2016 in a subsequent report "Every breath we take: the lifelong impact of air pollution" published jointly by the Royal College of Paediatrics and Child Health (RCPCH) and the Royal College of Physicians (RCP). Whilst the COMEAP report estimates the health impact of particulate emissions, the more recent report accounts for the additional impact of nitrogen dioxide on health and estimates that the mortality burden of air pollution is closer to 40,000 deaths per year.

Poor air quality can have an impact on vulnerable individuals such as children and the elderly. Poor air quality has been linked with increased infant mortality and can make low birth weight births more likely. It has also been linked with the development and exacerbation of asthma amongst children. Some chemicals in air pollution may also be implicated in the development of obesity because it is known that obese people are more sensitive to air pollution. Elderly individuals are more susceptible to the effects of poor air quality and are at greater risk of diseases such as COPD and pneumonia.

Although air pollution is harmful to everyone, vulnerabilities are heightened among those living, learning and working in the most deprived communities (where higher levels of air pollution can often be found because of proximity to busy roads) due to poor housing and indoor air quality, the stress of living on a low income and limited access to healthy food and/or green spaces. Moving away from an area of high outdoor air pollution may be unaffordable for residents and some people may not want to leave their homes.

The Public Health Outcomes Framework (PHOF) is a Department of Health data tool for England, intended to focus public health action on two high level outcomes:

- increasing healthy life expectancy
- reducing differences in life expectancy and healthy life expectancy between communities.

Deaths where poor air quality is a contributing factor would be included in this indicator, including particulate matter and nitrous oxides. Recognising the significant impact that poor air quality can have on health, the PHOF includes an indicator specifically relating to fine particulate matter (PM<sub>2.5</sub>).

In 2018, 5.8% of all adult deaths in Sandwell were attributable to the particulate matter produced by human activity, which compares poorly with the percentages for England and the West Midlands of 5.2% and 5.0% respectively. Updates can be found [here](#).

The indicator aims to raise awareness of the effect of air pollution on public health. It is intended to encourage promotion of the need for local, regional and national actions to reduce air pollution and to help form a partnership between all delivery partners in pursuit of this goal.

As contained in the Public Health England report “Estimating Local Mortality Burdens associated with Particulate Air Pollution” published in April 2014, the deaths associated with air pollution are 198 for Sandwell and 1460 for the West Midlands as a whole. The data however relates to particulate matter only and not nitrogen dioxide. Using the findings of the “Every breath we take...” report, which states that the national mortality burden due the combination of particulate and nitrogen dioxide air pollution is 40,000 deaths, it could therefore be assumed that Sandwell’s mortality burden due to air pollution is higher than 198 deaths.

## **3.2 Planning and Policy Context**

The Black Country Air Quality Supplementary Planning Document (SPD) has been developed in order to clarify the air quality position within the Black Country Plan following the publication of the Low Emission Towns and Cities Best Practice Planning Guidance for the West Midlands. The SPD was adopted in October 2016 and is in the process of being updated. The principal aim of the SPD is to ensure all new development is sustainable in terms of air quality and where appropriate, secures mitigation measures that should be incorporated into developments. Mitigation requirements range from Electric Vehicle charging points at minor developments to a full Low Emission Strategy (in scale and kind) at ‘Major’ developments. The document

## Sandwell Metropolitan Borough Council

is aimed at demonstrating how easy it can be to adopt sustainable travel choices, taking into account journey time, safety, public transport frequency, quality, and access for disabled people. The document formally addresses a need for developers to review proposed transport related emissions whilst simultaneously seeking reductions in greenhouse gases. It offers on transport assessments and travel Plans whilst providing assistance to the development process, by:

- promoting a professional and transparent approach to planning
- helping to speed up planning application decisions by avoiding delays
- providing information which could assist developers.

Sandwell also produces a schools Sustainable Modes of Travel Strategy (SMOTS) every year, to provide information on how school journeys can be supported through the use of travel plans, set up by schools using the Modeshift STARS online tool, and through support from other agencies and council services.

In 2014 The West Midlands Low Emissions Towns and Cities Programme (WMLETCP) published Good Practice Air Quality Planning Guidance to help regional authorities achieve UK Air Quality Objectives and EU Air Quality Limit. Its aim was to pursue a simplified approach to dealing with air quality within the planning system:

- to avoid and reduce vehicle use and encourage a shift to sustainable transport
- to target emission improvements of vehicle fleets through the accelerated take-up of cleaner fuels and technologies
- to discourage the use of high emission vehicles.

It is a mechanism for planning authorities to work with public and private sectors, and other stakeholders, to implement measures which reduce the impact of emissions from traffic and development on public health and air quality. The WMLETCP Good Practice Air Quality Planning Guidance can be found at the [WMLETCP](#) homepage.

This guidance has been incorporated into the Black Country SPD on Air Quality which set out simplified guidance for dealing with air quality and is aimed at all those involved in the submission and determination of planning applications where air quality needs to be addressed.

Air Quality is not limited to local authority boundaries, rather the associated effects of development can have impacts across wider regional areas. Therefore, to enable a

consistent approach to improving air quality across the Black Country, this joint SPD has been developed to cover all four local authority areas.

The emerging Black Country Ultra Low Emission Strategy and Implementation Plan seeks to bring together and complement a range of existing strategies and policies to promote Ultra Low Emission Vehicles (ULEVs) in the Black Country, with an implementation plan to support their delivery. On behalf of the four Black Country Authorities, the City of Wolverhampton Council, submitted a successful funding application to the BCLEP Local Growth Fund in August 2019, for £130,000 of development funding. The grant funding is required to support development and delivery of the Black Country ULEV Strategy and Implementation Plan and the wider programme of supporting works. The strategy and implementation plan will set out a five-year delivery framework to accelerate the uptake of ULEVs across the Black Country to tackle climate change and local air pollution. It will directly support the delivery of future capital assets within all four Black Country authority administrative areas.

### 3.3 Source Apportionment

The AQAP measures presented in this report are intended to be targeted towards the predominant sources of emissions within Sandwell Council's area.

Source apportionment exercises were carried out by Sandwell in connection with targeted feasibility studies in 2018 and 2019 and in connection with the LETCP during 2015. Although the way this information has been calculated recorded is not consistent between sites, it does serve to demonstrate that vehicle exhaust emissions remain the largest contributor to NO<sub>2</sub> levels in Sandwell.

## Sandwell Metropolitan Borough Council

Roads in exceedance	Petrol Car	Diesel Car	Petrol LGV	Diesel LGV	Rigid HGV	Artic HGV	Bus & Coach	Regional bkgd	Urban bkgd (non traffic)	Urban bkgd (traffic)
A457 Oldbury	4	16	0	15	9	7	7	5	19	23
A41, J1 M5 West Bromwich	5	22	0	17	11	7	7	4	13	13
A41 Black Country Route at Wednesbury	5	22	0	17	11	7	7	4	13	13
A34 Great Barr	5	22	0	15	9	5	4	5	9	24
A41 Black Country Route (W)	6.8	38.0	0.1	28.2	11.3	6.9	8.3	Traffic sources only		
A41 Black Country Route (E)	6.7	37.7	0.1	28.1	11.5	7.0	8.4	Traffic sources only		
Bearwood Road, Smethwick	31		6		8		57	Traffic sources only		

**Table 3.1 Summary of source apportionment exercises**

### 3.4 Required Reduction in Emissions

The annual mean concentration of NO<sub>2</sub> at each monitoring point in the areas that currently exceed the annual mean objective of 40 µgm<sup>-3</sup> has been projected up to 2025 using the year adjustment factors published by Defra at:

<https://laqm.defra.gov.uk/tools-monitoring-data/roadside-no2-projection-factor.html>

The factors have been calculated as the average of modelled concentrations across approximately 1,900 road links in London, and 7,000 links elsewhere, taking into account the changes in traffic activity, and emission factors for NO<sub>x</sub> and primary NO<sub>2</sub>. Table 3.1 applies adjustment factors appropriate for use outside London where Heavy Duty Vehicles (HDVs) make up more than 10% of the traffic. This modelling is based on validated diffusion tube measurements from 2018 and predicts that by 2021 the majority of monitoring points will have achieved compliance with the objective, with the remaining sites reaching compliance by 2022.

	Year	2018	2019	2020	2021	2022	2023
<b>Zone or Hot Spot</b>	Adjustment factor	0.954	0.908	0.859	0.808	0.762	0.723
Area between M5, Birmingham Road and Blakeley Hall Road – Oldbury	BE	47.9	45.6	43.1	40.6	38.3	36.3
	BF	35.2	33.5	31.7	29.8	28.1	26.7
	BDQ	44.5	42.4	40.1	37.7	35.5	33.7
	BD	41.5	39.5	37.4	35.1	33.1	31.5
	BO	41.3	39.3	37.2	35.0	33.0	31.3
	BR	39.5	37.6	35.6	33.5	31.6	29.9
Newton Road / Birmingham Road	ZQ	49.2	46.8	44.3	41.7	39.3	37.3
	ZR	47	44.7	42.3	39.8	37.5	35.6
Bearwood Road, Smethwick	C9D	40.2	38.3	36.2	34.0	32.1	30.5
	C10A	45.6	43.4	41.1	38.6	36.4	34.6
	C10D	47.6	45.3	42.9	40.3	38.0	36.1
High Street / Powke Lane, Blackheath	C12A	40.7	38.7	36.6	34.5	32.5	30.8
	C12D	36.9	35.1	33.2	31.3	29.5	28.0
Bromford Road	N1B	40.2	38.3	36.2	34.0	32.1	30.5
Trinity Way / Kenrick Way, West Bromwich	C4D	43.1	41.0	38.8	36.5	34.4	32.7
	C4E	37.1	35.3	33.4	31.4	29.6	28.1
All Saints Way /	C2A	37.6	35.8	33.9	31.8	30.0	28.5
Mallin Street, Smethwick	MA	42.4	40.4	38.2	35.9	33.9	32.1
Gorsty Hill, Rowley Regis	C15A	39.8	37.9	35.8	33.7	31.8	30.2

**Table 3.2: Projected annual mean roadside NO<sub>2</sub> concentrations (µgm<sup>-3</sup>) to 2023**

The required reduction in NO<sub>2</sub> varies between zones and the figures should be treated with caution. However, the model illustrates the predicted impact on roadside concentrations that improvements in vehicle emission controls and changes in fleet composition may bring.

### 3.5 Key Priorities

The principal source of air pollution in Sandwell is vehicle exhaust emissions, particularly those from diesel engines. Elevated nitrogen dioxide levels are observed at busy junctions, narrow congested streets and in town centres.

The council's aims are:

- To reduce the overall health impacts and burdens of poor air quality
- To achieve the national air quality NO<sub>2</sub> annual mean objective across the borough in the shortest possible timeframe.
- To reduce PM<sub>10</sub> and PM<sub>2.5</sub> concentrations to protect human health

These are supported by the following prioritised actions:

Priority	Action
<b>Priority 1</b>	Developing specific measures in consultation with communities to reduce NO <sub>2</sub> concentrations at “hot spot” locations.
<b>Priority 2</b>	Promoting public transport, walking, cycling and switching to low or zero emission vehicles.
<b>Priority 3</b>	Reviewing what impact the council has on air quality in its role of as a provider of public services and develop a plan to reduce emissions from its activities. This will include reducing emissions from council fleet and employee vehicles.
<b>Priority 4</b>	Supporting and encourage taxi and private hire vehicle operators and drivers in reducing emissions from vehicles.
<b>Priority 5</b>	Applying existing and developing new planning development policies that support air quality improvements.
<b>Priority 6</b>	Developing information, social media and campaigns to encourage behaviour change around improving physical health and increasing use of low emission vehicles.
<b>Priority 7</b>	Working in partnership with Birmingham CC to minimise negative impacts on Sandwell residents resulted from the implementation of the CAZ.

**Table 3.3: Prioritised actions for Sandwell’s AQAP 2020 - 2025**

## Sandwell Metropolitan Borough Council

With regard to Priority 1, specific measures in consultation with communities to reduce NO<sub>2</sub> concentrations at “hot spot” locations, the following options are to be considered for each of the locations:

- Review of signalling
- Speed Management & Enforcement
- Traffic calming
- Bus Retrofit to Euro VI & Route Management
- Alternative walking & cycling routes
- Barrier screening
- Driver training
- Travel planning
- Highway upgrades

Table 5.1 sets out in detail the full range of actions proposed to achieve compliance with the annual mean objective for NO<sub>2</sub> throughout Sandwell.

## 4 Development and Implementation of Sandwell Council's AQAP

### 4.1 Consultation and Stakeholder Engagement

In developing/updating this AQAP, 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 4.1. In addition, we have undertaken the following stakeholder engagement:

- Website
- Articles in local newspaper
- Questionnaires distributed directly to households along major roads
- Consultation with community groups
- Consultation with business stakeholders

Public consultation exercises have been undertaken in each town, to record the views of these groups and test the practicalities of any proposed actions.

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

**Table 4.1 – Consultation Undertaken**

Yes/No	Consultee
No	The Secretary of State
No	The Environment Agency
No	The Highways authority
No	All neighbouring local authorities
No	Other public authorities as appropriate, such as Public Health officials
No	Bodies representing local business interests and other organisations as appropriate

## 4.2 Steering Group

Partners from Public Health and Regeneration & Economy departments of Sandwell MBC meet quarterly to discuss air quality issues and potential air quality improvement measures, along with updating the Air Quality Action Plan when required. Representatives from Highways England, West Midlands Combined Authority and Transport for West Midlands have been members of the Air Quality Working Party.

Air quality improvement in Sandwell is supported policies contained in the Black Country Core Strategy (now the Black Country Plan) and the subsequent Black Country Air Quality Supplementary Planning Document (adopted September 2016)

The link between Public Health and Planning is being strengthened both locally in Sandwell through the Healthy Urban Development Officer and regionally through the West Midlands Health and Planning Group. There is therefore an opportunity to address air quality issues by healthy urban planning through engagement with planning and transportation planning colleagues.

## 5 AQAP Measures

**Error! Reference source not found.** shows the Sandwell Council's AQAP measures.

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 of implementing each action (overall cost and cost to the local authority)
- expected benefit in terms of pollutant emission and/or concentration reduction
- the timescale for implementation
- how progress will be monitored

Annual updates on the implementation of these measures will be reported in future ASRs.

Within Table 5.1 the actions are evaluated in relation to their expected impact on:

- air quality (i.e. reduction in emissions or concentrations);
- cost; and
- implementation timescale.

Those actions which also contribute to the Climate Change Action Plan have been highlighted in blue.

Air quality impacts have been classified to represent 'low' to 'high' impact. For each action, the expected reduction in annual mean NO<sub>2</sub> concentrations has been determined based on professional judgement, drawing, wherever possible, on experience gained from other studies. The following classification scheme has been used:

- **Low:** imperceptible (a step in the right direction). Improvements unlikely to be detected within the uncertainties of monitoring and modelling.
- **Medium:** perceptible (a demonstrable improvement in air quality) improvement of up to 2 µg/m<sup>3</sup> NO<sub>2</sub>, which could be shown by a modelling.

## Sandwell Metropolitan Borough Council

- **High:** A significant improvement, greater than 2 µg/m<sup>3</sup> NO<sub>2</sub>. It can be clearly demonstrated by modelling or monitoring (a significant improvement is likely to be delivered by a package of options rather than by a single intervention).

The implementation of the measures set out in this Action Plan are dependent on securing a sufficient and consistent level of funding both to support any additional staff that may be required, and to deliver the programme. The aim is to provide a broad indication of costs so that the proposed measures can be ranked according to the cost and the expected improvement to air quality. Costs are represented as follows:

- 'Very Low' cost is taken to be £10K and under
- 'Low' cost is taken to be £10 - £50K; 'Medium' cost is £50 - 500K
- 'High' cost is £500K - £2 million
- 'Very High' cost is over £2 million

## 5.1 Table of Air Quality Action Plan Measures (Actions contributing to Climate Change Action Plan highlighted in blue)

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
1	Develop Air Pollution model of Sandwell to identify additional hot spots and how these relate to traffic flowing through Sandwell.	N/A	N/A	SMBC	2020	2020	Completion of model	Not applicable	Screening model produced 2018	2021	
2	Review transport planning and traffic infrastructure at each hot spot location and identify and implement programme of work where practicable to reduce NO <sub>2</sub> concentrations	Traffic Management	Other	SMBC	2020	2021	Annual average NO <sub>2</sub> value	Site specific targets to achieve <40ug/m <sup>3</sup>	On-going	2023	
3	Promote car sharing among residents and businesses in the area	Alternatives to private vehicle use	Personalised Travel Planning	SMBC	Complete	On-going	Total participants using the scheme	Not known	On-going implementation and promotion of the scheme.	On-going	Further promotion of scheme increased the number of registered users. <a href="#">Sandwell Carshare</a>
4	Ensure AQ considerations are included in the new Local Development Framework Ensure policies seek to reduce the need to travel and promote the use of modes other than the car	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	SMBC LETCP WMAs BCCS	Complete	On going	Reduction in vehicle emissions	Medium to high long term	Publication of Procurement and Planning Guidance and implementation intended across the West Midlands Metropolitan Authorities	On going	Procurement policies to influence a reduction in road transport emissions. Guidance published

## Sandwell Metropolitan Borough Council

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
5	Black Country Low Emission Strategy and Implementation Plan.	Policy Guidance and Development Control	Low Emissions Strategy	2017	Sandwell and Black Country Authorities	Sandwell and Black Country Authorities	Increase use of ultra-low emission vehicles.	No target	Funding obtained from Black Country Local Enterprise Partnership to develop plan in 2019	On-going	Promotion of low emission vehicles.
6	Use of S106 agreements where practicable to secure monitoring funding and balancing measures for developments where AQ is an issue	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	SMBC Planning & Public Health	Complete	On-going	Implementation of guidance and appropriate air quality conditions attached to planning permissions.	Medium to High long-term	Planning Guidance / Black Country SPD states all new development will be required to contribute to offsetting emission creep, plus larger contributions if significant new sources are introduced.	On-going	To protect and enhance air quality through development
7	Provide guidance in relation to air quality for developers when submitting planning applications	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	SMBC LETCP WMAs BCCS	Complete	On going	Improve vehicle fleet emission	Medium to High long-term	Publication of Procurement and Planning Guidance and implementation intended across the West Midlands Metropolitan Authorities	On-going	Procurement policies to influence a reduction in road transport emissions Guidance published
8	Continue to consider air quality issues for new planning applications in line with the agreed planning protocol	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	SMBC	Complete	On-going	Planning approvals with appropriate air quality conditions	Medium to High long-term	AQ conditions are applied routinely	On-going	All planning applications assessed against SPD and Planning Guidance

## Sandwell Metropolitan Borough Council

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
9	Review SMBC vehicle profile and formulate strategy for improvements reducing emissions	Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	SMBC	2021	2021	Reduction in number of pre-Euro 5 vehicles	To be determined	Not applicable	2021	New vehicles are Euro 5 / 6 compliant. Monthly fuel reports produced; user group meetings aim to improve efficiency Actions 26 (3), 27 (6) deleted.
10	Review and implementation of electric charging and other low emission refuelling options for SMBC vehicles	Promoting Low Emission Transport	Procuring alternative refuelling infrastructure to promote Low Emission Vehicles, EV recharging, gas fuel recharging	SMBC	2020	2021	Number of electric charging points installed	Low	Not applicable	2025	The Black Country authorities have received £130,000 from the LEP to move the EV agenda forward in the Black Country
11	Review taxi & PHV fleet licenced by SMBC (including fleet make-up, age and emission profiles)	Promoting Low Emission Transport	Other	SMBC	2020	2020	Report findings	To be determined	Not applicable	2021	
12	Determine the most effective ways to influence and improve low and ultra-low emission vehicle use in taxi fleet.	Promoting Low Emission Transport	Taxi emission incentives	SMBC	2020	2020	Number of vehicles that comply with new standard.	To be determined	Not applicable	On going	
13	Engage with council employees to promote low and ultra-low emission vehicle technologies	Promoting Low Emission transport	Company Vehicle Procurement - Prioritising uptake of LEVs	SMBC	2021	2021	Number of employees switching to LEVs	To be determined	Not applicable	On going	

## Sandwell Metropolitan Borough Council

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
14	Promote car club/pool vehicles and sustainable modes of travel to reduce use of SMBC employees' vehicles	Promoting travel alternatives	Workplace Travel Planning	TfWM / SMBC	Being developed	Being developed	Reduced mileage claims by local authority staff	Not known	A report on the feasibility of introducing such a system has been presented to the WMCA's Strategic Transport Officer Group	On going	Organisations adopting this approach have reduced mileage claims by 30% and vehicles have lower emissions
15	Improvement in branding to increase attractiveness of public transport	Promoting Travel Alternatives	Workplace Travel Planning	NEXM TfWM	On-going	On-going	Increased Public Transport patronage	Not known	On-going programme of brand improvement and public awareness, including Safer Network, improved connections signage and ease of access.	On-going	
16	Improving access to information regarding transport options	Promoting Travel Alternatives	Personalised Travel Planning	SMBC TfWM	On-going	On-going	Increased Public Transport patronage	Not known	On-going promotion of branding and services available.	On-going	
17	Promotion of Walking	Promoting Travel Alternatives	Promotion of walking	SMBC	Complete	On-going	Increased uptake of walking for key journeys. Sandwell; travel surveys	Not known	Sandwell MBC Walking Strategy published in 2015	Completed documents, with on-going promotion of walking	Sandwell Travelwise webpage updated to promote alternative travel <a href="#">Travelwise Sandwell</a>

## Sandwell Metropolitan Borough Council

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
18	Promotion of Cycling	Promoting Travel Alternatives	Promotion of cycling	SMBC	Complete	On-going promotion of cycling	Increased uptake of cycling for key journeys. Sandwell Travel surveys	Not known		On-going	Sandwell's Cycling strategy is a several years old and would benefit from updating. On-going promotion of cycling needed
19	Encourage travel plans for employers, schools & hospitals	Promoting Travel Alternatives	Workplace Travel Planning	SMBC NEXM TFWM	Complete	On going	Number of travel plans adopted—including those attached to planning applications.	Low to medium long-term	Travel Plan SPD requires certain developments to implement a Travel Plan. This work is on-going, with the number of travel plans implemented increasing annually. Started using online Modeshift STARS Education and Business tools.	On-going	Travel Plan SPD adopted by Sandwell Council. Considered for all relevant planning applications
20	Provide air quality information and promote sustainable transport in schools	Promoting Travel Alternatives	School travel plans	SMBC	On-going	On-going	Increase in sustainable travel modes in schools	Reduction in NO <sub>2</sub> and PM <sub>10</sub> PM <sub>2.5</sub> concentrations	Limited Progress to date. School Travel Plans are a key element of the planning process, but limited funding available to promote sustainable transport at schools. Started using online Modeshift STARS tool.	On-going	An annually updated Sustainable Modes of Travel Strategy (SMOTS) for schools is required by the Education and Inspections Act (2006) to be produced by all local authorities. <a href="#">SMOTS</a>

## Sandwell Metropolitan Borough Council

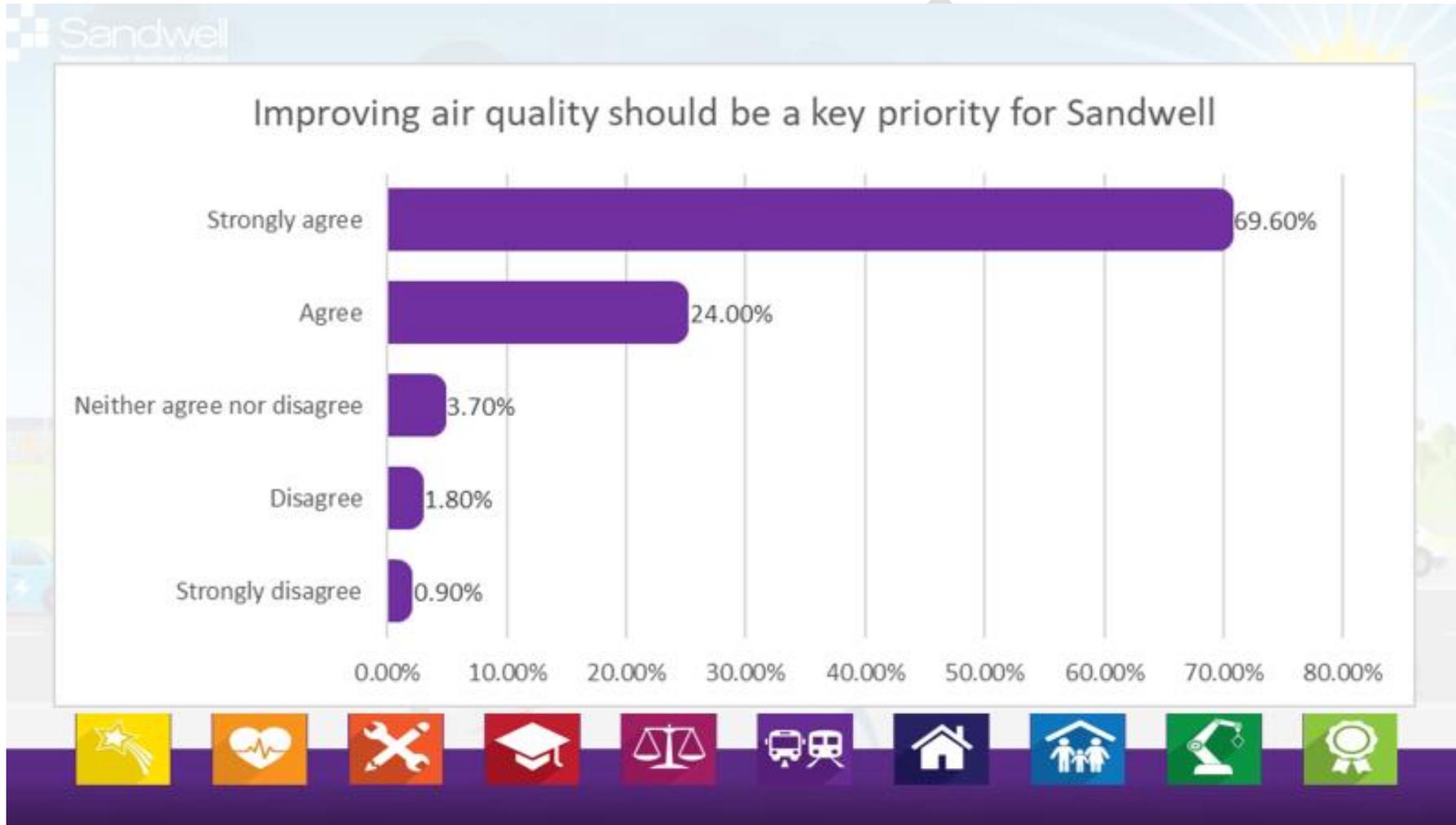
Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
21	Publish Air Quality information website	Public Information	Via the Internet	SMBC	Complete	On-going	On-going	Not applicable	On going	On-going	Real time information system to be developed
22	Major Highway Improvement at Birchley Island (Junction 2 M5)	Traffic Management	Other	SMBC WMCA	Planned	2022		To be determined	Reduced congestion	To be determined	
23	Increased bus lane enforcement (increase number of cameras on buses and static cameras for bus lane enforcement)	Traffic Management	Other	NEX(M) SMBC TFWM	Complete	On-going	Increased enforcement actions	Minor	Bus lanes at Walsall Street, and Hagley Road West. Bus only street at new Street, West Bromwich	On-going	Marginal improvement in emissions due to improved bus journeys.
24	Improvement of Urban Traffic Control Systems designed to reduce congestion	Traffic Management	UTC, Congestion management, traffic reduction	WMCA	On-going	On-going	Reduced Congestion	Low	On-going, use of the Urban Traffic Control. Potential opportunity for further expansion	On-going	Potential reduction at locations where traffic control systems are in place.
25	Midland Metro extension (Wednesbury to Brierley Hill)	Transport planning and infrastructure	Other	WMCA BCEJC	2016	2022/23 Monitor development schedule	Increased Public Transport patronage	Level of reduction	Still in the planning stages to secure funding.	2023/24	
26	Actions to mitigate any negative impact of Birmingham CAZ	Transport planning and infrastructure	Other	SMBC BCC	2019	2021	Changes in NO <sub>2</sub> on routes leading to CAZ	No deterioration as a result of CAZ	Partnership established with BCC	2021	

## Appendix A: Response to Consultation

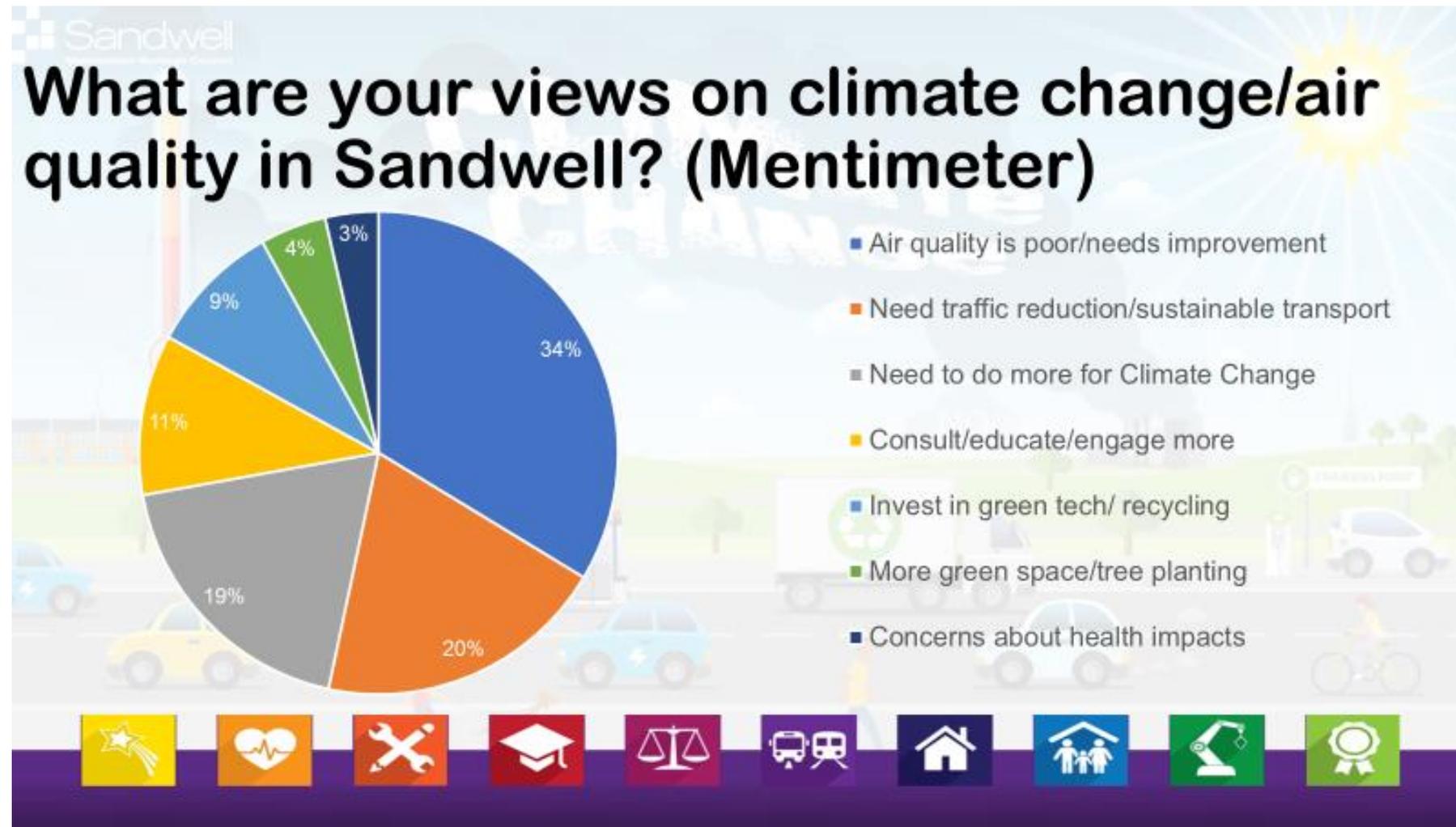
Table A.1 – Summary of Responses to Consultation and Stakeholder Engagement on the AQAP

Consultee	Category	Response
The Secretary of State		No response.
The Environment Agency		No response.
The Highways authority		No response.
All neighbouring local authorities		No response.
Other public authorities as appropriate, such as Public Health officials		No response.
Bodies representing local business interests and other organisations as appropriate		Just under 650 participants attended 15 consultation events. Officers attended council/ councillor meetings to share the survey. Staff, businesses, voluntary sector and residents were targeted. 2000 business cards were distributed. 787 surveys completed. Social media, tabloids and screensavers were used to encourage participation. A summary of the results is presented on the following pages.

Do you agree that improving air quality should be a key priority for Sandwell?

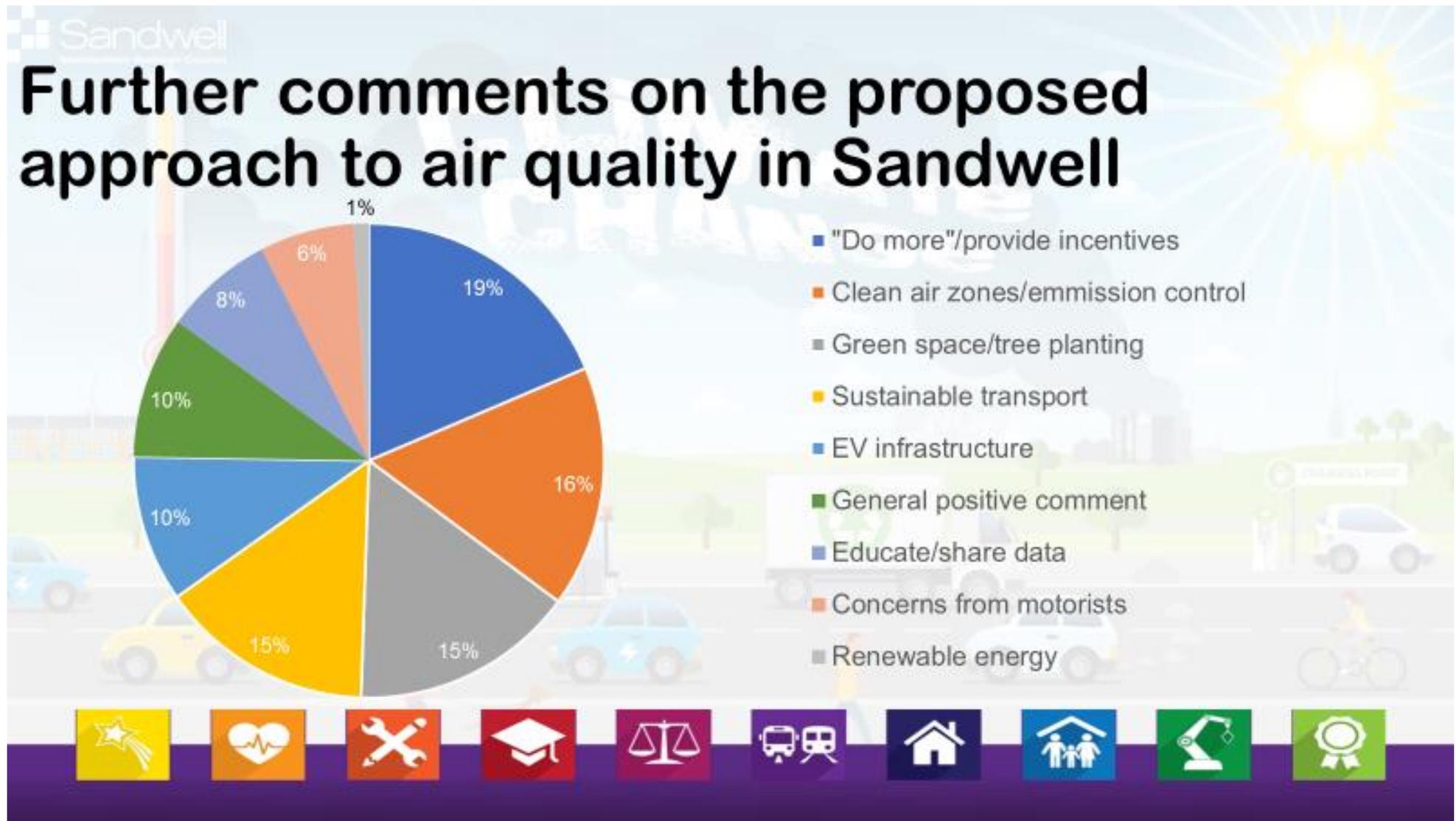


What are your views on climate change/air quality in Sandwell?



The results show that 34% of responses stated that they believed current air quality in Sandwell was poor and needed improvement; in many cases this was linked with the 20% of responses that included references to the need for traffic reduction and use of sustainable transport, as many expressed concerns over the effect of large volumes of traffic on their health.

Do you have any further comments on the proposed approach to air quality in Sandwell?



Commentary on response to the question “Do you have any further comments on the proposed approach to air quality in Sandwell?”

Responses to this question were rather vague and it suffered from being at the end of the main consultation. However the data show a useful snapshot of the key areas of concern for respondents in regards to air quality, as well as an overview of the more popular methods to address these.

- The most popular category (19%) was made up of responses that felt more could be done to tackle air pollution in the borough than that outlined in the Air Quality Action Plan, though it was clear that for several responses that the actual Action Plan had not been read and instead this was a general statement about the air quality in the borough. A further 10% of responses were positive comments, or messages of support.
- The most popular working suggestion was to introduce pollution control or ‘clean air zones’ in the borough to reduce the number of vehicles or polluting industries in residential zones or pollution hotspots. Responses varied from suggesting declaring a borough wide clean air zone, to banning non-delivery/public transport vehicles from town centres or restricting older, more polluting models. Another popular suggestion was to introduce fines for those idling cars outside of schools during pick-ups and drop offs.
- Green space and sustainable transport made up a big proportion of responses and mostly re-stated actions contained in previous questions. Though a number of respondents were supportive of increased tree planting to act as ‘green lungs’ to improve air quality locally. EV infrastructure, education, and renewable energy again made up smaller proportions, though responses were covered previously; though there were still some interesting suggestions, such as having live air quality data maps online, or readouts on LED screens next to busy roads. Only (6%) of responses were from concerned motorists, who felt that introducing anti-car measures would impact on them negatively, and so were opposed to introducing pollution control zones for vehicles.

## 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)

None of the proposed Action Plan Measures will not be pursued following consultation.

## Appendix C: Trends in NO<sub>2</sub> and PM<sub>10</sub> concentrations in Sandwell

Figure C1 – Trends in Annual Mean NO<sub>2</sub> Concentrations

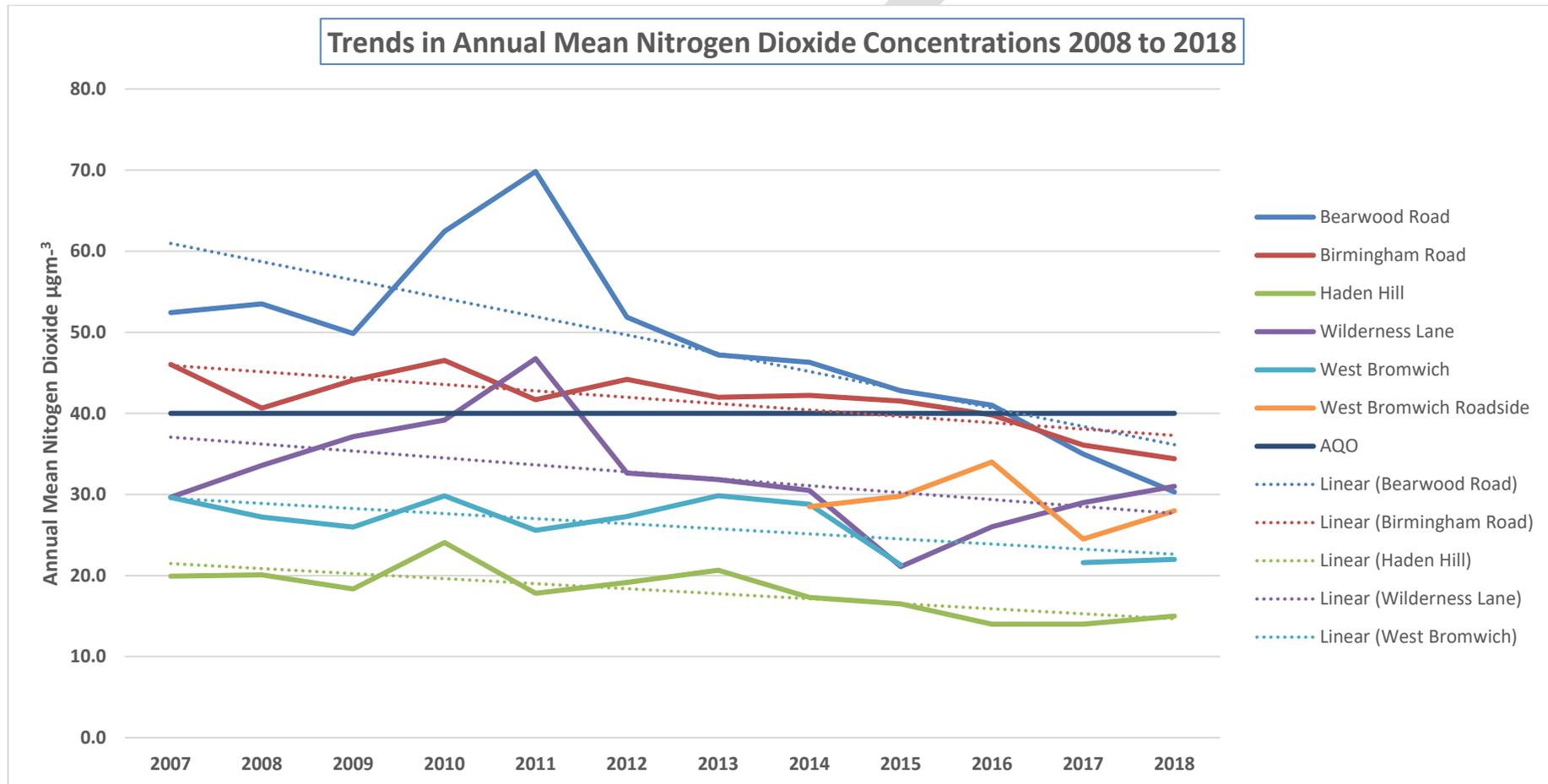
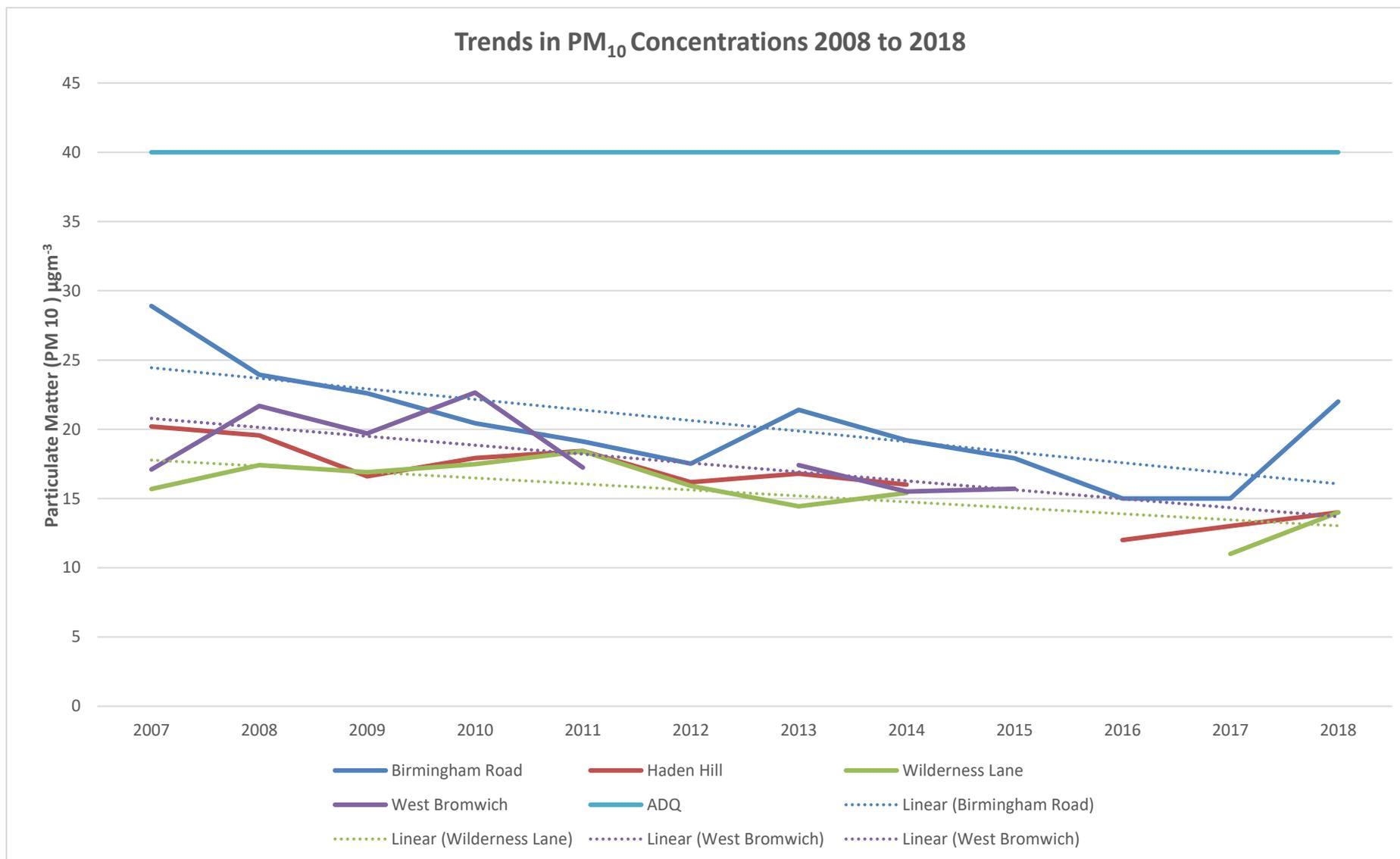


Figure C2 – Trends in Annual Mean PM<sub>10</sub> Concentrations



## Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
AQS	Air Quality Strategy
ASR	Air quality Annual Status Report
CAZ	Clean Air Zone
Defra	Department for Environment, Food and Rural Affairs
EU	European Union
LAQM	Local Air Quality Management
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxides (NO <sub>2</sub> and NO)
PCM	Pollution Climate Model
PM <sub>10</sub>	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
PM <sub>2.5</sub>	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
TfWM	Transport for West Midlands
WMCA	West Midland Combined Authority
WMLETCP	West Midlands Low Emissions Towns and Cities Project