

Report Title:	People Overview and Scrutiny Panel: Air Pollution – Revocation of AQMAs and Annual Status Assessment
Contains Confidential or Exempt Information	No - Part I
Cabinet Member:	Councillor Werner Councillor Coe Councillor Davies
Meeting and Date:	Overview and Scrutiny Panel – 18 April 2024
Responsible Officer(s):	Andrew Durrant – Executive Director (Place) Amanda Gregory – Assistant Director (Housing and Public Protection)
Wards affected:	'All'

REPORT SUMMARY

Air quality monitoring is one of RBWM's corporate plan goals – 'Achieve the National Air Quality Objective (AQO) across all Air Quality Management Areas (AQMAs) by 2025'.

There are national air quality objectives for reducing concentrations of emissions relating to relevant pollutants below air quality objective levels. If there is a risk that an air quality objective is or will be exceeded at a relevant location, the local authority must declare an Air Quality Management Area (AQMA). There are currently 5 AQMAs within RBWM. These were declared for exceeding the annual mean for nitrogen dioxide (NO₂), which has a limit of 40 µg/m³ (the concentration of an air pollutant is given in micrograms (one-millionth of a gram) per cubic meter air or µg/m³).

This report provides an update on the work done to improve air quality across the borough and the next steps in relation to the AQMAs.

1. DETAILS OF RECOMMENDATIONS

RECOMMENDATION: That the Overview and Scrutiny Panel notes the report and:

- i) Note the progress made to improve air quality within the 5 AQMAs and the commitment to continue with air quality monitoring by way of an Air Quality Strategy.**
- ii) Note that following the residents' petition in September 2022 requesting an increase in air quality monitoring for Particulate Matter: this monitoring has commenced.**
- iii) Note the proposal to revoke all 5 AQMAs in 2024 with a report to Cabinet.**

2. REASONS FOR RECOMMENDATIONS AND OPTIONS CONSIDERED

- 2.1 There are national air quality objectives¹ for reducing concentrations of emissions relating to relevant pollutants below air quality objective levels. If there is a risk that an air quality objective is or will be exceeded at a relevant location, the local authority must declare an Air Quality Management Area (AQMA).
- 2.2 There are currently 5 AQMAs within RBWM and these are detailed in table 1. These were declared for exceeding the annual mean for nitrogen dioxide (NO₂), which has a limit of 40 µg/m³ (the concentration of an air pollutant is given in micrograms (one-millionth of a gram) per cubic meter air or µg/m³).

Table 1. AQMAs Declared by Royal Borough of Windsor and Maidenhead

AQMA	Description	Date Declared	Date Amended	Date Revoked	Pollutants
Maidenhead AQMA	An enlarged area covering part of Maidenhead Town Centre, extending northwest to where Norfolk Road meets Craufurd Rise and the railway line, southwest to Kingswood Court and Rushington Avenue, southeast to Oldacres and Guards Club Road, and northeast to Ray Mead Road and Lassell Gardens.	01/04/2005	31/07/2009		Nitrogen dioxide NO ₂
Windsor AQMA	The AQMA covers an enlarged area encompassing parts of Windsor	01/04/2005	31/07/2009		Nitrogen dioxide NO ₂

¹ https://uk-air.defra.gov.uk/assets/documents/Air_Quality_Objectives_Update.pdf

AQMA	Description	Date Declared	Date Amended	Date Revoked	Pollutants
	Town Centre, from Oak Lane/Dedworth Road in the west, Althlone Square/Clarence Road/Bexley Road to the east, Imperial Road to the south, and Clewer Court Road and Stovell Road to the north.				
Bray/M4 AQMA	An area encompassing part of Bray around the place where the M4 crosses over the A308 London Road.	31/07/2009			Nitrogen dioxide NO ₂
Imperial/St Leonards Road Junction	The area is linked with Clarence Road roundabout and Windsor AQMA by Imperial Road and is on the route to Legoland. It includes a double junction between B3022 St Leonards Rd and B3175 Imperial Rd there are residential buildings along the roads, in	14/04/2014			Nitrogen dioxide NO ₂

AQMA	Description	Date Declared	Date Amended	Date Revoked	Pollutants
	particular along St Leonards Road and those near the junction are exposed to higher concentrations.				
Wraysbury/M25	The area runs along the B376 and intersects with the M25 near junction 13, in the vicinity of Heathrow Airport. There are residential buildings along the Wraysbury Road and those near the M25 tunnel portal are exposed to higher concentrations.	14/04/2014			Nitrogen dioxide

- 2.3 The current air quality monitoring consists of 6 real-time monitors and 25 diffusion tubes. RBWM are required to submit an Annual Status Report (ASR) to the Secretary of State (DEFRA) reporting progress in achieving reductions in concentrations of emissions relating to relevant pollutants below air quality objective levels and identifying new or changing sources of emissions. The Secretary of State (DEFRA) provide commentary on the report to help RBWM complete the ASR adequately and/or in carrying out future review and assessment work.
- 2.4 The Annual Status Report for 2023 including results from 2018 to 2022 can be found here: https://www.rbwm.gov.uk/sites/default/files/2023-09/eh_air_quality_annual_report.pdf. Defra's appraisal report concluded that: *On the basis of the evidence provided by the local authority the conclusions reached are accepted for all sources and pollutants. Following the completion of this report, Royal Borough of Windsor and Maidenhead should progress with the revocation their compliant AQMAs and submit an Annual Status Report in 2024.*

- 2.5 The revocation of an AQMA should be considered following three consecutive years of compliance with the relevant objective as evidenced through monitoring. Where there have been no exceedances for the past five years, local authorities must proceed with plans to revoke the AQMA.² This is a requirement under Section 3.57 of the Local Air Quality Management Technical Guidance 22.
- 2.6 RBWM can demonstrate no exceedances in all 5 AQMAs for at least 5 consecutive years therefore the Council should proceed with the revocation of all 5 AQMAs.
- 2.7 All five of the RBWMs AQMAs have several consecutive years of compliance and this is detailed in table 2.

Table 2. Summary of compliance of AQMAs

AQMA Location	Year declared	Duration of compliance (years)
Imperial Road/St. Leonards Road Junction	2014	7
Windsor	2009	5
Maidenhead	2009	5
Bray/M4	2009	5
Wraysbury/M25	2014	5

- 2.8 RBWM have validated more than 3 consecutive years of compliant monitoring data with concentrations lower than 36 µg/m³ (i.e., within 10% of the of the annual mean NO₂ objective). Figure 1, show the trends in annual mean concentrations. Results for 2023 shown in Table 3 indicates a continued compliance for 2023 across all 5 AQMAs.

² <https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf>

Figure 1. Trends in NO₂ Concentrations

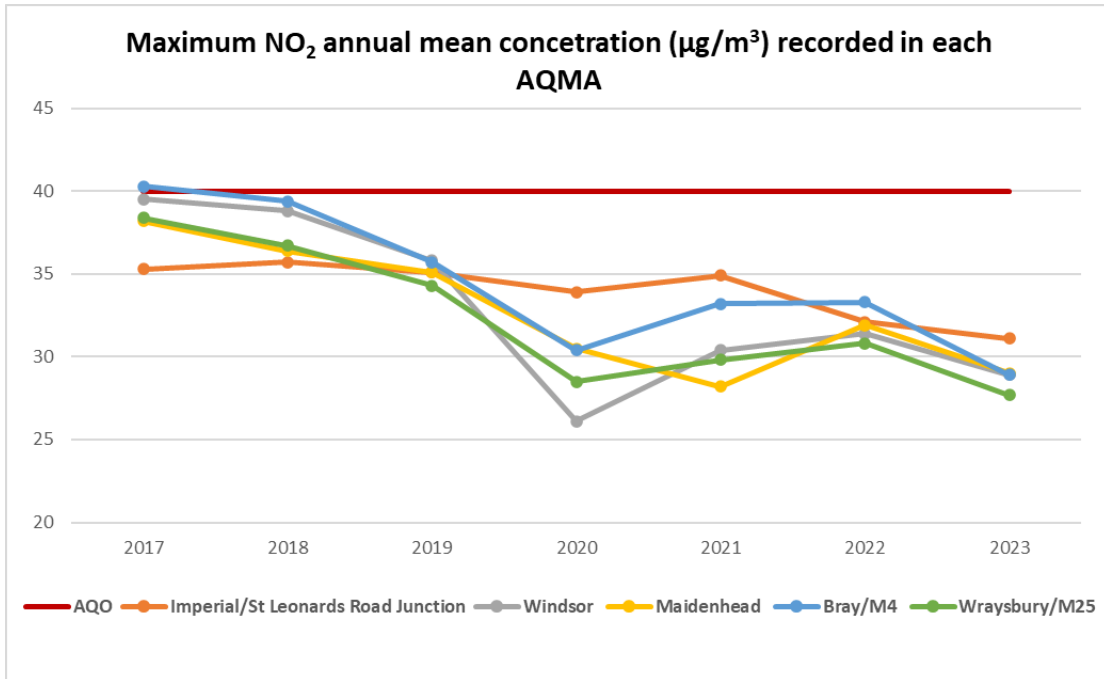


Table 3. 2023 Results (µg/m³)

AQMA Location	Annual Mean 2023
Imperial Road/St. Leonards Road Junction	31.1
Windsor	28.9
Maidenhead	29
Bray/M4	28.9
Wraysbury/M25	27.7

- 2.9 The implementation of the Council’s air quality action plan is helping to improve air quality locally but there is also a national downward trend in NO₂ concentration mainly due to cleaner vehicle technologies and improved/reduced industrial and domestic combustion processes which is projected to continue in the future resulting in a further decline in NO₂ concentrations.
- 2.10 An Air Quality Assessment of RBWM’s Borough Local Plan was completed in 2020. The assessment of NO₂ concentrations was performed across the entire borough including areas that are not assigned as AQMAs. No concentrations were identified above the annual mean objective, or within 10% of the objective. The assessment predicted concentrations identified no relevant locations as being at risk of exceeding the AQOs in 2033.

World Health Organisation (WHO) guidelines

- 2.11 The Committee on the Medical Effects of Air Pollutants (COMEAP) stated they welcome the World Health Organisation's (WHO's) revised Air Quality Guidelines (AQGs), which they regard as suitable long-term targets to inform policy development in the UK.
- 2.12 Air pollution is a major public health risk, ranking alongside cancer, heart disease and obesity. It shortens lives and damages quality of life for many people. Those with respiratory vulnerabilities are known to be susceptible to the effects of poor air quality. Young people and older people are known to be particularly vulnerable to the health impacts of exposure to air pollution.
- 2.13 The WHO guidelines are not binding on any country unless that country chooses to adopt them into its own legislation. To date, the UK have chosen not to adopt the WHO guidelines.
- 2.14 The Council are aware of the new WHO guidelines and will consider what additional actions the Council may take moving forward in accordance with any national guidance that may be issued by central government and/or DEFRA.
- 2.15 The Council are exploring the options available to provide residents with early warning information on air quality. The Council are further committed to continuing with air quality monitoring.

Particulate matter (PM) monitoring

- 2.16 The most important primary air pollutants are particulate matter (PM) and nitrogen dioxide (NO₂).
- 2.17 Around half of UK concentrations of PM comes from human-caused sources in the UK such as wood burning and tyre and brake wear from vehicles.
- 2.18 Domestic combustion is a major source of PM emissions in 2020, accounting for 15 per cent and 25 per cent of PM₁₀ (particulate matter less than 10 micrometres in diameter) and PM_{2.5} (particulate matter less than 2.5 micrometres in diameter), respectively. Most emissions from this source come from burning wood in closed stoves and open fires. The use of wood as a fuel accounted for 70 per cent of PM_{2.5} emissions from domestic combustion in 2020. Emissions of PM_{2.5} from domestic wood burning increased by 35 per cent between 2010 and 2020, to represent 17 per cent of total PM_{2.5} emissions in 2020.
- 2.19 PM_{2.5} is a regional pollutant and many of the sources are outside of local authority control. PM_{2.5} is not part of the Local Air Quality Management framework; however local authorities play a role in contributing to national targets.
- 2.20 Nationally, there are substantial emissions of nitrogen oxides from road transport sources, as most concentrations at the roadside come from local transport sources.

- 2.21 Further air quality sensors have been installed in response to a petition by residents. The sensors monitor the levels of particulate matter in a set area and will help to enhance the existing nitrogen dioxide monitoring network.
- 2.22 The petition, which received more than 2,000 signatures, was launched in 2022. It was then debated at Full Council later that year, where a commitment was made to add the additional monitoring stations for particulate matter.
- 2.23 The five sites where the additional sensors have been installed are:
- Bridge Road, Maidenhead – between Ray Street and Oldfield Road
 - Windsor Road, Bray – between Priors Way and M4 flyover
 - Clarence Road/Goslar Way/Royal Windsor Way Roundabout, Windsor
 - St Leonard's Road, Windsor – near Prince Albert PH
 - Wraysbury Road, Wraysbury – just south east of M25
- 2.24 The sensors have the capacity to be relocated and moved if needed. Residents are able to view the air quality readings at the sensor sites in the Borough [via the Air Quality England website](#). Annual air quality statistics are published each summer.
- 2.25 After a year of monitoring, the Council will review the data. This will help inform the decision to undertake more targeted and accurate monitoring using higher specification equipment.

Air quality impacts from Heathrow Airport

- 2.26 Due to the fuel types that aircraft use, particulate matter is not really a problem associated with aircraft exhaust emissions, however NO_x (nitrogen oxides) could be a consideration.
- 2.27 The dilution effect of increasing the distance between the source and receptor by only a couple of meters has a huge effect on the exposure level of the recipient (i.e., doubling the distance from a car exhaust has a dilution factor of x 2 (hemispherical dispersion).
- 2.28 Dispersion from aircraft, once the aeroplane is a matter of meters above the ground, is spherical which results in a greater dilution factor of x 4 as the distance doubles from the source to receptor. By the time the aeroplane has left the perimeter of the airport area, the effect of the aeroplanes NO_x emissions on the public exposure is negligible.
- 2.29 In terms of air quality concerns within the borough, the main drivers of poor air quality are the volume and congestion of road traffic (NO_x and PM) and wood burners (PM).

Smoke Control Zones

- 2.30 There is a Smoke Control Zone located in Windsor which covers the Dedworth and Clewer New Town area of the Borough that controls the type of fuel which can be burnt in fireplaces or the type of appliance that fuel can be burnt within. This area will be retained if the Air Quality Management Areas are revoked.
- 2.31 Within the area, residents can only burn authorised fuels which do not produce any smoke when using an open fireplace.
- 2.32 Unauthorised fuels can still be burnt in exempt appliances which have been proven to be capable of burning fuel without producing any smoke or substantial quantity of smoke.

Air Quality Action Plan

- 2.33 RBWM currently has an Air Quality Action Plan that is based on the current Air Quality Management Areas.
- 2.34 The Local Air Quality Management Statutory Policy Guidance 2022 states that local authorities that do not have an AQMA should continue to monitor for exceedances and should still have a Local Air Quality Strategy in place to ensure air quality remains a high-profile issue. The objective of a local Air Quality Strategy is to encourage prevention and reduction of polluting activities in preference to only taking steps to reduce air pollution once exceedances have been identified.
- 2.35 Local Air Quality Strategies will not have a set format and authorities will be able to draw on content within their ASRs and local transport plans to produce them. As long as the strategy addresses air quality assessments and policy responsibilities under the LAQM regime, it can be combined with the authority's other relevant plans and strategies if it is logical to do so.
- 2.36 Defra will monitor whether Local Authorities have or are developing a local Air Quality Strategy through the ASR appraisal process.
- 2.37 The Council will explore a cross-department Air Quality Group including Public Health, Planning and Environmental Health.

Options

Table 4. Options arising from this report

Option	Comments
Note the progress made to improve air quality within the 5 AQMAs.	Air quality objectives have been met for at least 5 consecutive years for nitrogen dioxide.
Note that following residents' petition in September 2022 for increased air quality monitoring of particulate matter, this monitoring has commenced.	In response to the residents' petition, since late December 2023, 5 air quality monitoring sensors have been installed to monitor for particulate matter within the current 5 AQMAs.
Note the proposal to revoke all 5 AQMAs in 2024 with a report to Cabinet in May 2024.	Approval will be sought to revoke the 5 AQMAs within RBWM which are no longer required as the measured levels of nitrogen dioxide (NO ₂) are well below the national set health-based air quality objectives. This will ensure RBWM fulfils its obligations under the Environment Act 1985 and statutory guidance.

KEY IMPLICATIONS

2.38 There are no key implications arising from this report.

FINANCIAL DETAILS / VALUE FOR MONEY

4.1 There are no financial implication as a result of this report.

LEGAL IMPLICATIONS

2.39 By revoking the AQMAs RBWM fulfils its obligations under the Environment Act 1995, Section 83 and statutory guidance.

RISK MANAGEMENT

6.1 There are no risk implications as a result of this report.

POTENTIAL IMPACTS

2.40 Equalities. An Equality Impact Assessment is available as Appendix A.

2.41 Climate change/sustainability. **None.** RBWM will continue to monitor and improve air quality.

2.42 Data Protection/GDPR. **None.**

CONSULTATION

- 2.43 This report is for consideration by the Overview and Scrutiny Panel.
- 2.44 Cllr Werner (Leader of the Council), Cllr Richard Coe (Cabinet Member for Household & Regulatory Services) and Cllr Karen Davies (Cabinet Member for Climate Change, Biodiversity and Windsor Town Council) have been consulted on this report.

TIMETABLE FOR IMPLEMENTATION

- 2.45 The full implementation stages are set out in table 5.

Table 5. Implementation timetable

Date	Details
22 May 2024	Proposed Revocation of Air Quality Management Areas – Cabinet Report
30 October 2024	Update on Particulate Matter monitoring – Cabinet Report

APPENDICES

- 2.46 This report is supported by one appendix:
- Appendix A – Equality Impact Assessment

BACKGROUND DOCUMENTS

- 2.47 This report is supported by two background documents:
- Local Air Quality Management Support website – available at <https://laqm.defra.gov.uk/>
 - Local Air Quality Management Technical Guidance (TG22) available at <https://laqm.defra.gov.uk/wp-content/uploads/2022/08/LAQM-TG22-August-22-v1.0.pdf>

CONSULTATION

Name of consultee	Post held	Date sent	Date returned
<i>Mandatory:</i>		<i>Statutory Officer (or deputy)</i>	
Elizabeth Griffiths	Executive Director of Resources & S151 Officer		
Elaine Browne	Deputy Director of Law & Governance & Monitoring Officer	04/04/24	04/04/04
<i>Deputies:</i>			
Julian McGowan	Senior Business Partner & Deputy S151 Officer	09/04/24	09/04/24
Jane Cryer	Principal Lawyer & Deputy Monitoring Officer		
Helena Stevenson	Principal Lawyer & Deputy Monitoring Officer		
<i>Mandatory:</i>		<i>Procurement Manager (or deputy) - if report requests approval to go to tender or award a contract</i>	
Lyn Hitchinson	Procurement Manager		
<i>Mandatory:</i>		<i>Data Protection Officer (or deputy) - if decision will result in processing of personal data; to advise on DPIA</i>	
Samantha Wootton	Data Protection Officer		
<i>Mandatory:</i>		<i>Equalities Officer – to advise on EQiA, or agree an EQiA is not required</i>	
Ellen McManus-Fry	Equalities & Engagement Officer	04/04/24	08/04/24
<i>Mandatory:</i>		<i>Assistant Director HR – to advise if report has potential staffing or workforce implications</i>	
Nikki Craig	Assistant Director of HR, Corporate Projects and IT		
<i>Other consultees:</i>			
<i>Directors (where relevant)</i>			
Stephen Evans	Chief Executive		
Andrew Durrant	Executive Director of Place	04/04/24	05/04/24
Kevin McDaniel	Executive Director of Adult Social Care & Health		
Lin Ferguson	Executive Director of Children's Services & Education		
<i>Assistant Directors (where relevant)</i>			
Amanda Gregory	Assistant Director - Housing and Public Protection	28/03/24	03/04/24
Jonas Thompson-McCormick	Interim Director of Public Health	04/04/24	09/04/24
<i>External (where relevant)</i>			
N/A			

Confirmation relevant Cabinet Member(s) consulted	Cllr Werner (Leader of the Council), Cllr Richard Coe (Cabinet Member for Household & Regulatory Services) and Cllr Karen Davies (Cabinet Member for Climate Change, Biodiversity and Windsor Town Council).	Yes/No
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REPORT HISTORY

Decision type:	Urgency item?	To follow item?
Overview and Scrutiny Panel decision.	No	No

Report Author: Obi Oranu – Environmental Health Service Manager
obi.oranu@rbwm.gov.uk

Appendix A - Equality Impact Assessment

For support in completing this EQIA, please consult the EQIA Guidance Document or contact equality@rbwm.gov.uk

1. Background Information

Title of policy/strategy/plan:	Task and Finish Group – Air Pollution
Service area:	Environmental Health
Directorate:	Place

Provide a brief explanation of the proposal:

- What are its intended outcomes?
- Who will deliver it?
- Is it a new proposal or a change to an existing one?

This report provides an update on air quality monitoring across the borough and the next steps in relation to the current Air Quality Management Areas.

2. Relevance Check

Is this proposal likely to directly impact people, communities or RBWM employees?

- If No, please explain why not, including how you've considered equality issues.
- Will this proposal need a EQIA at a later stage? (for example, for a forthcoming action plan)

Yes.

If 'No', proceed to 'Sign off'. If unsure, please contact equality@rbwm.gov.uk

3. Evidence Gathering and Stakeholder Engagement

<p>Who will be affected by this proposal? For example, users of a particular service, residents of a geographical area, staff</p>
<p>Residents.</p>
<p>Among those affected by the proposal, are protected characteristics (age, sex, disability, race, religion, sexual orientation, gender reassignment, pregnancy/maternity, marriage/civil partnership) disproportionately represented? For example, compared to the general population do a higher proportion have disabilities?</p>
<p>Age, disability, pregnancy/maternity, race,</p>
<p>What engagement/consultation has been undertaken or planned?</p> <ul style="list-style-type: none">• How has/will equality considerations be taken into account?• Where known, what were the outcomes of this engagement?
<p>There has been engagement through the Overview and Scrutiny Panel/Task and Finish Gorup.</p>
<p>What sources of data and evidence have been used in this assessment? Please consult the Equalities Evidence Grid for relevant data. Examples of other possible sources of information are in the Guidance document.</p>

4. Equality Analysis

Please detail, **using supporting evidence**:

- How the protected characteristics below might influence the needs and experiences of individuals, in relation to this proposal.
- How these characteristics might affect the impact of this proposal.

Tick positive/negative impact as appropriate. If there is no impact, or a neutral impact, state 'Not Applicable'

More information on each protected characteristic is provided in the Guidance document.

	Details and supporting evidence	Potential positive impact	Potential negative impact
Age	Young people and older people are known to be particularly vulnerable to the health impacts of exposure to air pollution. The proposals do not result in the cessation of air quality monitoring generally, which will remain. The Air Quality Objective for nitrogen dioxide has been achieved for at least 5 years.	X	
Disability	Those with respiratory vulnerabilities are known to be susceptible to the effects of poor air quality. The proposals do not result in the cessation of air quality monitoring generally, which will remain. The Air Quality Objective for nitrogen dioxide has been achieved for at least 5 years.	X	
Sex	n/a		
Race, ethnicity and religion	There is little evidence of the susceptibility to the health impacts of air pollution between different ethnic groups. However, there is evidence on the differences in exposure. The proposals do not result in the cessation of air quality monitoring generally, which will remain. The Air Quality Objective for nitrogen dioxide has been achieved for at least 5 years.	X	
Sexual orientation and gender reassignment	n/a		
Pregnancy and maternity	There is evidence linking increased exposure to air pollution with increased risk of miscarriage and stillbirth. There is also growing evidence that certain forms of air pollution can pass through the placenta and impact the health of the unborn child in the uterus. The proposals do not result in the cessation of air quality monitoring generally, which will remain. The Air Quality Objective for nitrogen dioxide has been achieved for at least 5 years.	X	

Marriage and civil partnership	n/a		
Armed forces community	n/a		
Socio-economic considerations e.g. low income, poverty	The relationship between exposure to air pollution and income is complex. However, people living in the most deprived neighbourhoods are, on average, more likely to be exposed to high levels of air pollution. As a result, improvements in air quality are likely to disproportionately benefit this group.	X	
Children in care/Care leavers	n/a		

5. Impact Assessment and Monitoring

If you have not identified any disproportionate impacts and the questions below are not applicable, leave them blank and proceed to Sign Off.

<p>What measures have been taken to ensure that groups with protected characteristics are able to benefit from this change, or are not disadvantaged by it? For example, adjustments needed to accommodate the needs of a particular group</p>
<p>No measures are required. There is an annual status report on the RBWM website outlining the status of air quality within the borough.</p>
<p>Where a potential negative impact cannot be avoided, what measures have been put in place to mitigate or minimise this?</p> <ul style="list-style-type: none"> For planned future actions, provide the name of the responsible individual and the target date for implementation.
<p>n/a</p>
<p>How will the equality impacts identified here be monitored and reviewed in the future? See guidance document for examples of appropriate stages to review an EQIA.</p>
<p>An EQIA will be considered when future changes around air quality are proposed.</p>

6. Sign Off

Completed by: Obi Oranu	Date: 7 March 2024
Approved by: Amanda Gregory	Date: 3 April 2024

If this version of the EQIA has been reviewed and/or updated:

Reviewed by:	Date:
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