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Local Authority:	<b>West Oxfordshire District Council</b>
Reference:	<b>AQAP24-2114</b>
Date of issue	<b>June 2024</b>

## **Air Quality Action Plan Appraisal**

The Action Plan sets out information on air quality obtained by the Council as part of the Local Air Quality Management process required under the Environment Act 1995 (as amended by the Environment Act 2021) and subsequent Regulations.

This Appraisal Report covers the Final Air Quality Action Plan (AQAP) for 2023 – 2028 submitted by West Oxfordshire District Council (WODC). Two distinct AQAPs for each of WODCs Air Quality Management Areas (AQMA) were submitted and appraised at Draft stage (AQAP23-1607 & AQAP23-1608). These have now been consolidated into one Final AQAP covering both AQMAs; the Chipping Norton AQMA and the Witney AQMA, both declared in 2005 for exceedances of the annual mean NO<sub>2</sub> objective.

The AQAP uses the Defra report template and is concise, well presented and clearly formatted, with some minor exceptions. Additional appendices have also been added, summarising the supporting assessment and modelling work that has been undertaken in development of the AQAP.

There were no exceedances of the NO<sub>2</sub> annual mean objective in either 2020 or 2021, although this is potentially in part related to the impacts of COVID-19. 2022 data also indicate no exceedances, so compliance appears to have been maintained coming out of the pandemic. The latest 2023 monitoring data has not been reported within the AQAP. The last exceedance was seen in 2019 at one location within the Chipping Norton AQMA (NAS22), and two locations within Witney AQMA (NAS1 and NAS3). There was also one site within 10% of the objective in 2019, NAS3 in the Witney AQMA. It should however be noted that the elevated annual mean NO<sub>2</sub> concentrations at NAS22 appear to be highly localised, as according to Figure 2-3, a site virtually opposite (NAS21) monitored less than 20 µg/m<sup>3</sup> in the same year.

Additional modelling was undertaken of the AQMAs in support of this AQAP, using 2019 as a baseline year as a conservative assessment. An additional assessment was also made against the new PM<sub>2.5</sub> targets within the AQAP (which used existing AURN monitoring data to conclude that both targets are likely to be met). WODC are now investigating options to install indicative PM monitors.

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The AQAP goes on to set out the public health context, citing the 2019 PHE report. The Public Health Outcomes Framework has also now been referenced in response to appraisal commentary, with the fraction of mortality attributable to particulate air pollution for 2019, 2020 and 2021 cited for West Oxfordshire, and compared to national values, with the local values generally being slightly below the national trends.

Several local, regional and national scale policy documents have been referenced in the Plan. There are minimal significant changes to the policy context submitted at Draft stage, with no new documents having been summarised as compared to the Draft. The discussion of the Connecting Oxfordshire: Local Transport Plan 2015-2031 Cycle Strategy has been removed, it is not clear if the policy is no longer relevant.

The Local Plan is now to be extended to cover until 2041 (previously for 2031), and thus is expected to be adopted a year later in 2025. At a local level, the Local Plan will be integral to the success of the AQAP. There are seven objectives and four policies within the current 2031 Local Plan relevant to air quality, most specifically CO16: Enable improvements in water and air quality. This provides confidence that air quality concerns will be at the forefront of development within the district. There is one key development zone in East Chipping Norton, which will need to be monitored for the impact on air quality, particularly as the impacts will be sensitive to the inclusion of a new link road which is left uncertain within the AQAP. Any details on changes in the 2041 Local Plan remain vague, and it has been stated that impacts cannot be quantified at this time. It will therefore be incumbent on the Local Authority to proactively update the AQAP with this information incorporated at such time as these details have been formalised.

Source apportionment of NO<sub>x</sub> was carried out in early 2023 based on 2019 data, considering both total NO<sub>x</sub> and the sources of road NO<sub>x</sub>. Source apportionment was undertaken for both Witney and Chipping Norton AQMAs.

Within Witney AQMA, rural contributions make up approximately half the average NO<sub>x</sub> concentrations, with roads contributing 22%, as determined from Defra background maps. Domestic and industrial sources are also large contributors. Detailed modelling source apportionment indicates that of the road NO<sub>x</sub>, cars and LGVs are the most significant contributors, at approximately 50 and 20% respectively, though varying slightly at individual sites. Of those categories, diesels are the higher contributors.

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Similarly, at the Chipping Norton AQMA rural contributions make up approximately 60% of the average NO<sub>x</sub> concentrations, with roads contributing 19%, as determined from Defra background maps. Domestic and industrial sources are also large contributors. Detailed modelling source apportionment at Chipping Norton AQMA indicates that of the road NO<sub>x</sub>, LGVs are the most significant contributors, at approximately 40-45% of the total. Cars are also significant contributors, at around 25-30% of the total. Of those categories, diesels are the higher contributors. HGVs are also an important contributor.

Particulate source apportionment at both AQMAs show background is by far the largest component of particulate concentrations. Particulate source apportionment is otherwise generally similar to NO<sub>x</sub> source apportionment in terms of the key contributors, though doesn't exhibit the same weighting toward diesels as emissions are more related to the traffic volume, rather than tailpipe emissions.

In response to the appraisal comments, clearer correlation between the source apportionment and the measures' derivation has been added to the AQAP, which enhances confidence that the key sources are being appropriately targeted. Source apportionment of NO<sub>2</sub> has not however been added, though the Council's comment that NO<sub>x</sub> can generally be used to determine the key contributing sources is considered appropriate in this case.

The required reduction in NO<sub>2</sub> concentrations to achieve compliance, based on 2019 monitoring, was also calculated. A maximum reduction of road NO<sub>x</sub> of 15.2% (at NAS1) and 12.2% (at NAS22) was assessed to have been required at Witney and Chipping Norton AQMAs respectively. Whilst concentrations have reduced since 2019, on that basis, this represents a significant but achievable challenge in achieving compliance with the objective.

Six scenarios for intervention have been modelled, ranging from 5-15% reductions in car traffic, and 5-15% reductions in HGVs. Whilst not explicitly tied to specific AQAP measures, these demonstrate what improvements might be possible if the associated traffic reductions can be achieved through a combination of the AQAP measures. A 15% reduction in car traffic resulted in the largest reductions, with an average percentage concentration change of -2.9% for NO<sub>2</sub>, -1% for PM<sub>10</sub>, and -0.9% for PM<sub>2.5</sub> across all monitoring sites in Chipping Norton in 2019, and of -5.7% for NO<sub>2</sub>, -2% for PM<sub>10</sub>, and -1.8% for PM<sub>2.5</sub> across all monitoring sites in Witney in 2019.

The measures were modelled in this way for the Draft AQAP as transport modelling for the schemes considered under the Local Transport Plans for the respective AQMAs has not yet

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been carried out. This remains unchanged from the Draft AQAP. Again, it will be necessary for WODC to update the AQAP to account for these impacts when the information is available, as these are likely to be important factors in achieving and maintaining compliance for revocation of the AQMAs.

Priorities set in the AQAP for Witney and Chipping Norton AQMAs are similar, namely:

- Bringing the AQMAs into compliance with the NO<sub>2</sub> annual mean Air Quality Objective;
- Managing PM<sub>2.5</sub> exposure; and
- Improving accessibility into and around the AQMAs by alternatives to private car – i.e. walking, cycling and public transport.

On an individual measure basis, a total of 38 measures have been taken forward in the Plan; these have been grouped as 7 measures which are directed to the Witney AQMA, 6 for Chipping Norton AQMA, 20 for both AQMAs, and the remaining 5 more generally applicable to the whole of WODC. No new measures have been added since the Draft version.

The AQAP measures are generally focused on transport. WODC have identified Witney and West Oxfordshire Area Travel Plans, as well as Local Cycling and Walking Infrastructure Plans as priority actions for both AQMAs. Additional key measures flagged by WODC include the Shores Green junction measure (which focuses on re-routing through-traffic out of the Witney AQMA and onto the A40), the development and promotion of a HGV route map for Chipping Norton and improving availability of rapid and ultra-rapid EV charging across Oxfordshire.

Further measures focus primarily on public engagement and awareness. This includes updating information on the Council's website, school travel plans, anti-idling enforcement, air quality planning guidance and the 'Healthy Streets Approach'. Additional measures include looking at domestic burning of fuels.

The target reductions of pollution within the AQMA for all measures remain unspecified, rather a qualitative categorisation of the measures' impacts has been included to indicate which measures are likely to be the most effective. The Council present various reasons for this, primarily related to the early stage of development of some of the concepts. This to an extent more clearly explains the parametrisation approach taken to quantification than was available within the Drafts and is considered appropriate to the NO<sub>2</sub> concentrations reported,

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under the caveat this is revisited when detailed proposals are available for the aforementioned schemes / measures.

Appendix E presents the additional modelling of baseline and scenario testing results, with no changes since the Draft. Impacts on NO<sub>2</sub> incrementally increase in the car reduction scenarios, starting at 1-2% reductions in scenario 1 (5% car reductions) and increasing to 2-3.5% reductions in scenario 3 (15% car reductions). The HGV reduction scenarios show lesser incremental increases, indicating that this vehicle class is a less significant contributor to total concentrations. At least one exceedance is seen in all scenarios, though this is based on 2019 data. A similar story is reflected in the PM calculations, though with no exceedances in any scenarios.

Details of the steering group responsible for the AQAP's development have also been provided, with involvement from several WODC departments, and local (parish) and regional (county) Councils and an independent consultant. Different steering groups have been established for each AQMA as well, including Town Council members for the respective AQMAs. The group appears to have had close involvement with the development of the actions specifically. Detailed minutes of a workshop conducted in early 2023 have been included in Appendix showing the discussions which have fed into the AQAP's production. Future activities of the steering group have been outlined, including the plan for annual meetings at a minimum to report on progress against AQAP measures.

Consultation and stakeholder engagement on the Final AQAP was completed. All relevant stakeholders have been included. A thorough summary of responses is provided in Appendix A, with the results of the survey having been discussed in detail.

The percentage of respondents in favour of individual AQAP measures has been included for both AQMAs. In Witney AQMA, measure 4 (Access to Witney - West-facing slip roads at A40 Shores Green Junction and improvements at B4022 Oxford Hill junction) is the most popular, followed by measure 21 which targets improvements to bus services. However, it should be noted there were 226 'no responses'. Negative responses to measures include for parking management in Witney and introducing charges in Council-owned public parking.

For Chipping Norton AQMA, an HGV route map was the most popular measure, followed by area weight restriction feasibility study. Parking management is unpopular for the Chipping Norton AQMA, as well as domestic fuel burning policies.

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Overall, the AQAP appears well compiled and is considered commensurate with the concentrations monitored most recently in the AQMA. In this context, the justifications around the limitations to the quantification of measures are recognised. The Final AQAP is therefore accepted so that the Council can now focus on implementation, however this is under the caveat that the assessment of impacts is updated with a more detailed analysis at such time as this information is available. This is because under strengthened Environment Act 2021, quantification of the impact of measures is a requirement, along with specifying a date at which air quality objectives can be expected to be achieved, and the two are very much correlated in this case.

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## Commentary

- WODC have responded directly to comments on the Witney AQAP and have consolidated the separate Witney AQAP and Chipping Norton AQAP as recommended in Draft appraisal. The Council's proactive approach to these comments is welcomed.
- Formatting errors, such as red template text and cross-referencing errors, have also been updated.
- There should still be more analysis of the apparently highly localised exceedance at NAS22. According to Figure 2-3, the site virtually opposite (NAS21) is 50% lower. No further discussion on the possible reasons for the differences in annual mean NO<sub>2</sub> concentrations between NAS21 and NAS22. If the AQMA's validity is based on micro-scale concentrations, this could potentially be readily addressed without wider interventions. The sitting of the diffusion tube should be checked, and whether it is aligned with best practice in LAQM.TG(22), for example.
- The public health context section has been updated to include the Public Health Outcomes Framework indicator D01, as advised at Draft, and is considered sufficient to provide local context.
- The appraisal of the Draft AQAPs advised a more detailed assessment of the impacts of the Local Plan development projections to ensure that the currently achieved compliance will be maintained given the large developments anticipated, including the development zone anticipated in East Chipping Norton. The inclusion of a new link road remains uncertain in the Final AQAP. There has not been a significant update in regard to this comment, with WODC responding that it is not possible to assess the impacts of the Local Plan at this stage, as it is currently being reviewed to be updated to cover the period up to 2041. This limitation is acknowledged, though it is considered that a more robust assessment would be essential to ensuring the continued compliance of the AQMA in future, which should be provided as soon as this is possible.
- Whilst source apportionment has been provided for NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>, it would be informative to provide this for NO<sub>2</sub>, given the non-linear relationship between this and NO<sub>x</sub>. This can be done using the methodology in Box 7.5 of LAQM.TG(22), if

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not modelled. It is however not considered a requirement for the AQAP's acceptance in this case given the Council's stated justification.

- NAS16 is included in Figures 3-8 – 3-10, is potentially misleading, given it is showing a different analysis to the other sites. However, it is noted the text suitably justifies the discrepancy in trends, outlining this site did not have sufficient data for the same analysis.
- The required reduction in road NO<sub>x</sub> emissions calculations that have been provided could still be more explicitly referenced in the measures table, though it is noted that this is likely to be conservative given the assessment year used. For example, there is no reference to the 15% and 12% reductions calculated as being required to achieve compliance in Witney and Chipping Norton AQMAs respectively, and which of the measures will directly contribute to this, and by how much.
- The date compliance is expected to be achieved with or without measures has not been estimated and should be included in the published version of the AQAP, and updated when more direct quantification of the measures' impacts is possible.
- The requirement for the quantification of measures was noted in the appraisals of the Draft AQAPs, however this has not been fully addressed in the Final. This makes it challenging to understand the relative merits of particular interventions. As per paragraph 2.85 of LAQM.TG(22), an AQAP should contain quantification of the emission impacts of measures as a minimum.
  - WODC have noted the Shores Green junction re-routing through-traffic out of the AQMA and onto the A40 does lend itself to modelling; modelling of this measure is strongly recommended when the information is available.
  - Various schemes in the Local Transport Plan for Witney are still under consideration by Oxfordshire County Council, and thus WODC have stated they are not suitable for air quality modelling currently. Transport modelling for the scheme considered under the Local Transport Plans for respective AQMAs has not been carried out, and this remains unchanged from the draft AQAP. It is strongly recommended that modelling of these interventions is completed when the information is available.



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- The measures listed are generally more strategic in nature. It is appreciated the Local Transport Plan contains localised measures, and the A40 Shores Green Junction. Further specific, hyper local measures may bring additional benefits to the AQMA, especially given the 2019 monitored and modelled exceedances occur at only one location, particularly NAS22 which appears highly localised.
- WODC have pointed to meeting minutes to demonstrate the consideration of impact on emissions, social benefits, additional health benefits, additional environmental benefits, estimated financial cost, potential burden on the public, potential burden on businesses. It would be beneficial for a formalised cost / benefit analysis, with outcomes for individual measures to clearly display which measures are considered to be most cost effective, relative to the pollutant reductions they would achieve.
- WODC have confirmed the respective Witney and Chipping Norton AQMAs will meet annually at a minimum. These meetings will allow progress to be reported and tracked against KPIs, and ensuring the AQAP is a “live” strategy, and new measures can be introduced if required. These outcomes should be tracked through the AQAP’s implementation.
- Section 4 and Appendix A are now populated in full following the completion of public consultation and stakeholder engagement. Some direct reference to responses have been made in the main document, but it is not immediately clear whether there this has influenced the development and prioritisation of measures within the AQAP.
- Appendix B has also been populated, highlighting measures not taken forward to the AQAP, and the reasons behind these decisions. The main reasons for not taking forward measures are generally a lack of relevance, related to cost or that there was limited feedback on them. WODC have confirmed they intend to revisit the list at Steering Group meetings through the life of the AQAP, to see whether the landscape has changed, and whether they could then be implemented.
- It is noted WODC have taken a conservative approach in using 2019 as a baseline for the AQAP. Given 2023 monitoring data is likely available now, it would be helpful to account for the latest information to demonstrate a more realistic impact, given many won’t be fully implemented until at least 2024 now.

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- It is acknowledged WODC have stated within the AQAP that if the AQMA is revoked within the life cycle of this AQAP, the Council will consider retaining an updated version of this Plan to form the basis of a local air quality strategy for the AQMAs (or the wider district) as per paragraph 4.12 of LAQM.PG(22), which would be a requirement if there were to be no AQMAs across the district.

*This commentary is not designed to deal with every aspect of the Action Plan. It highlights a number of issues that should help the local authority in maintaining the objectives of its Action Plan, namely the improvement of air quality within the AQMA.*

***Issues specifically related to this appraisal can be followed up by returning the attached comment form to Defra, Welsh Government, Scottish Government or DOE, as appropriate***

*For any other queries please contact the Local Air Quality Management Helpdesk:*

*Telephone: 0800 0327 953*

*Email: [LAQMHelpdesk@bureauveritas.com](mailto:LAQMHelpdesk@bureauveritas.com)*

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## Notice for 2024

### Changes to the Local Air Quality Management Framework

Through the Environment Act 2021 and Local Air Quality Management Statutory Policy Guidance 2022, the Local Air Quality Management (LAQM) framework has been considerably strengthened. This page highlights some of the changes for delivery to help you prioritise action for improved air quality:

#### Strengthened Criteria for Air Quality Action Plans (AQAPs)

The requirements and guidance around AQAPs have been strengthened under the Environment Act 2021 and the LAQM Statutory Policy Guidance 2022. Action plans must include:

- an assessment of source apportionment,
- provide the population living within the AQMA (where the data is available),
- specify the concentration emission reductions required,
- set out the measures being taken to secure the achievement and maintenance of air quality standards and objectives,
- specify clear timescales for the implementation of measures,
- specify the date air quality objectives are expected to be achieved,
- include quantification of the impacts of the proposed measures,
- detail how delivery partners will work together to implement the AQAP,
- set out a plan to monitor and evaluate the effectiveness of the plan,

Actions plans must be finalised within 18 months of an AQMA being declared and reviewed every five years thereafter.

### Escalation Process for Reporting

Government is committed to increasing transparency by requiring timely and accurate publication of Annual Status Reports (ASRs) and AQAPs by local authorities, as set out in the Environmental Improvement Plan 2023. These documents are public-facing and serve to keep local communities informed of the steps being taken by their local authority to improve air quality.

To ensure ASRs and AQAPs are delivered on time, Defra introduced a reminder and warning letter system for Local Authorities. This system was set out in the LAQM Statutory Policy Guidance 2022 and started to apply from 30 June 2023.

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If reporting requirements continue to be missed, the matter can be escalated to a Section 85 Secretary of State direction to the relevant Local Authority Chief Executive specifying action. You are advised to ensure all statutory reporting duties for LAQM are met on time.

### **Public Bodies Required to Contribute to Action Plans**

The Environment Act 2021 amended the Environment Act 1995 to increase the number of public bodies that have a duty to co-operate with Local Authorities for LAQM. Air quality partners are certain other public bodies that a Local Authority identifies as having responsibility for a source of emissions contributing to an exceedance of local air quality objectives. This could be a neighbouring authority, National Highways, or the Environment Agency. Once identified, there is a statutory requirement for such public bodies to engage and to contribute actions they will take to secure achievement of the local air quality objective and to maintain achievement thereafter.

All tiers of local Government are also now required by law to collaborate to address exceedances of Air Quality Objectives. County councils, the Mayor of London and combined authorities have similar duties to air quality partners. The difference is that, when requested, they must contribute to an action plan being prepared by a Local Authority, regardless of whether the local authority has identified them as being responsible for a source of emissions.

Under the legislation, you may choose to request the support of another public body in the development of an AQAP and the same may be requested of your organisation.

Please refer to the LAQM Statutory Policy Guidance 2022 for more information. Should you require further assistance, please contact the LAQM Helpdesk:

Web: <http://laqm.defra.gov.uk/helpdesks.html>

FAQs: <http://laqm.defra.gov.uk/laqm-faqs/>

Tel: 0800 032 7953

Email: [laqmhlpdesk@uk.bureauveritas.com](mailto:laqmhlpdesk@uk.bureauveritas.com)

The Air Quality Hub also provides free online information and is a knowledge sharing resource for local authority air quality professionals: <https://www.airqualityhub.co.uk/>

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## **Appraisal Response Comment Form**

Contact Name:	
Contact Telephone number:	
Contact email address:	UKLAQMAppraisals@aecom.com

**Comments on appraisal/Further information:**