

Air Quality Update

HEP Committee

19th September 2024



Winchester
City Council

Local Authority Air Quality ‘The Requirement’

National Context - Environment Act 2021

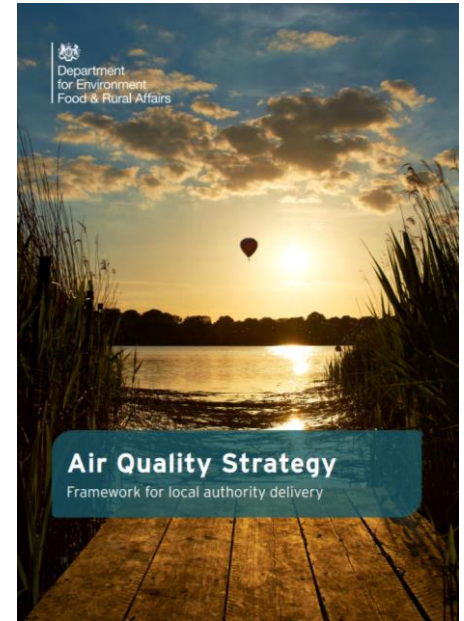
- Places duty on SoS to set by regulation, at least one long term objective and measurable target in each of 4 ‘priority areas’ of water, biodiversity, resource efficiency & waste reduction and **air quality**;
- Specific duty for SoS to set a PM_{2.5} annual mean standard.
- SoS must also prepare an ‘Environmental Improvement Plan’ (> 15 years), to ‘significantly improve the natural environment’
- Sets 10 goals of which Goal 2 – Clean Air



Local Authority Air Quality ‘The Requirement’

National Context - Environment Act 2021

- EA '21 also amends EA '95 – where SoS shall also publish a statement with respect to the ‘assessment and management of the quality of air’ within 12 month of the Act, then reviewed every 5 years.
- SoS duty to provide an annual progress report
- Air Quality Strategy for England – Framework for LA delivery



Local Authority Air Quality ‘The Requirement’

National Context – Regulations

- Air Quality Standards Regulations 2010 & The Environmental Targets (fine particulate matter) (England) Regulations 2023

Pollutant	AQ Objective		By Date
	Concentration	Metric	
NOx	200µg/m ³ - No more than 18 times per annum	1 hr mean	2005
	40µg/m³	Annual Mean	2005
PM10	50µg/m ³ - No more than 35 times per annum	Rolling 24hr mean	2004
	40µg/m ³	Annual Mean	2004
PM _{2.5} *	10µg/m³	Annual Mean	2040
	22%/35% Population Exposure Reduction (2018)		2028/2040

Local Authority Air Quality 'The Requirement'

• PM2.5 Sources

- Widespread Pollutant
- Burning (27% domestic sources)
- Friction (brake & tyre wear)
- Industrial & Agricultural
- Regional & International

Sources of PM2.5 Pollution



Local Authority Air Quality ‘The Requirement’

National Air Quality Strategy – Local Authority Actions

1. LA's **must have regard** to the National Air Quality Strategy when exercising their functions
2. LA's expected to take **proactive action** to improve air quality, whether or not they have an Air Quality Management Area, specifying and quantifying proactive measures they will take.
3. AQS to be informed by **monitoring assessments**, set out steps for air quality improvement, state their enforcement strategies to reduce population exposure and the **DoPH must be involved** in the preparation of the AQS
 - New duty for **‘air quality partners’ to ‘cooperate** and provide such assistance in carrying out the authority's functions as the authority request.
 - Partners are adjacent authorities or agencies in whose area there is a relevant source and who have functions of a public nature in relation to that source i.e. adjacent LA's, Env Agency and National Highways.

Local Authority Air Quality ‘The Requirement’

National Air Quality Strategy – Local Actions

4. LAs should **support national delivery of PM_{2.5} targets**, by reducing emissions within their districts (pending threat of statutory duties, should we fall short)
5. LAs to deliver **high quality easily understandable and accurate AQ information** available to the public
 - Gov’t to work with LAs to improve web-based access to data
6. LAs to **exercise their powers** to improve and maintain air quality i.e. Clean Air Zones
7. LAs to consider whether to declare new **Smoke Control Areas** (authorised fuels and appliances) and enforce ready to burn legislation.
8. LAs to focus on areas of highest exposure from **industrial sources** and take a robust but proportionate approach. (LAPPC)

Local Authority Air Quality ‘The Requirement’

National Air Quality Strategy – Local Actions

9. To include air quality considered in **Transport Plans**, traffic schemes, CAZs, use of cleaner non road mobile machinery and active & sustainable travel (behavioural change). Must consult public! Innovation encouraged i.e. EV and ‘ship to shore’.
10. LAs to encourage reduction in **ammonia emissions from farming** (secondary particulates) by following Code of Practice and to consider ammonia emissions.
- 11. Planning strategies** considering AQ Impacts as a material planning consideration
12. LAs to be familiar with best practice on **indoor air quality** i.e. damp and mould and provide guidance to social landlords and the rental sector.

There is no prescribed format for a AQS so do we stop at the Government’s position when striving to improve air quality?

Current Air Quality in Winchester

Annual Status Report 2024

- Defra requires submission of an Annual Status Report (ASR) each Spring setting out the previous year's air quality performance
- Defra reviews ASR and either accepts or rejects its findings giving reasons
- Current ASR 2024 (relates to 2023) can be found on web pages

[Air Quality Reports for Government - Winchester City Council](#)



The screenshot shows the Winchester City Council website. The main heading is "Air Quality Reports for Government". Below this, there is a paragraph explaining the requirements for Air Quality Management Areas (AQMA) under the Environment Act 1995. A list of documents is provided on the right side of the page, including:

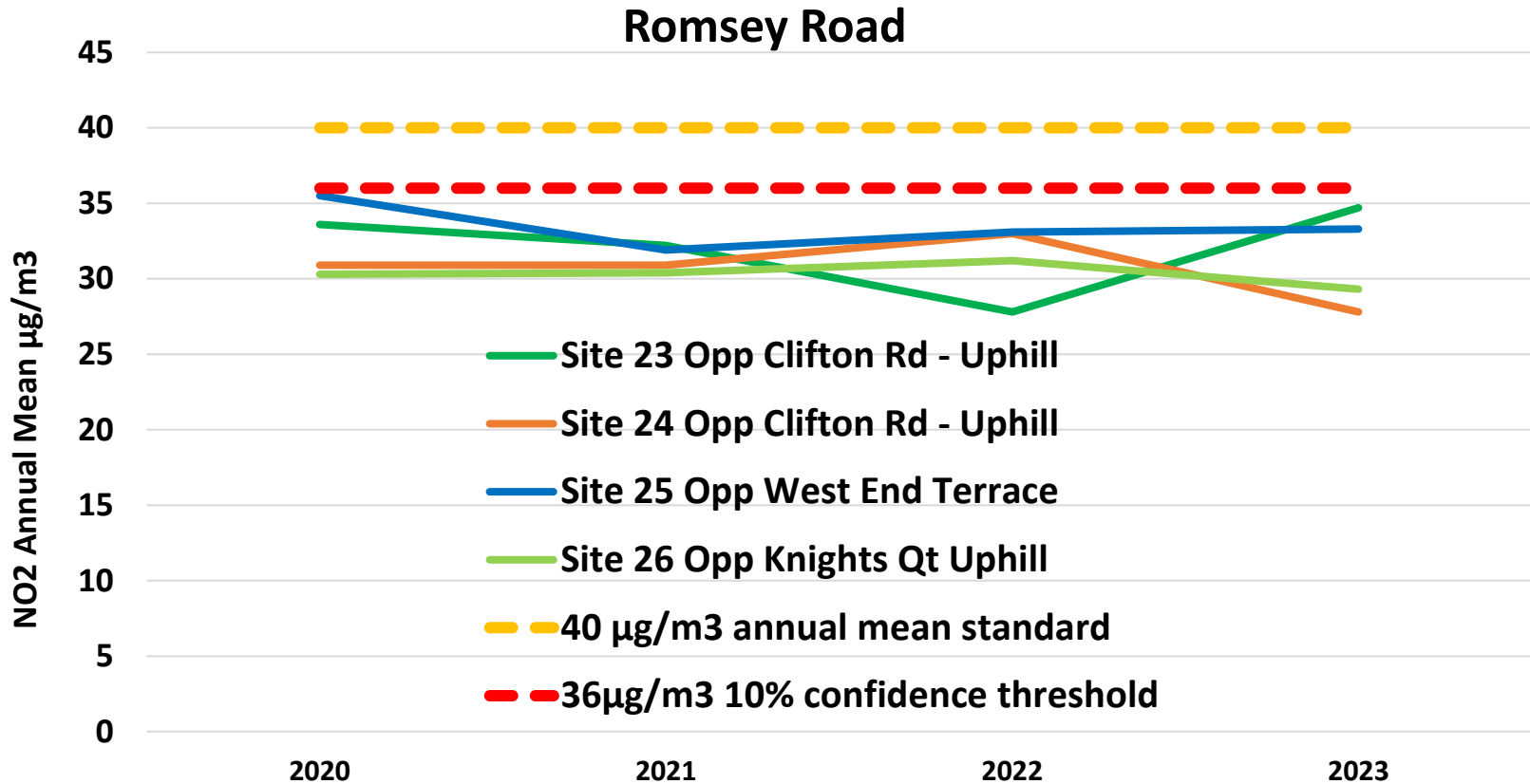
- Air Quality Annual Status Report (ASR) 2014 PDF 106KB
- Air Quality Annual Status Report (ASR) 2015 PDF 176KB
- Air Quality Annual Status Report (ASR) 2016 PDF 146KB
- Air Quality Annual Status Report (ASR) 2017 PDF 146KB
- Air Quality Annual Status Report (ASR) 2018 PDF 146KB
- Air Quality Report 2017 (AQRI) PDF 206KB
- New Air Quality Action Plan 2017 PDF 146KB
- Map of AQMA PDF 206KB
- Stage 1 Report 1998 PDF 146KB

Current Air Quality in Winchester

Annual Status Report 2024

- AQAP seeks to control and report on annual mean Nitrogen Dioxide (NO₂), inside the AQMA.
- 2 static air quality monitoring stations (St Georges St & Romsey Road), monitors NO₂ and Particulates
- 31 NOx tubes in City plus 1 in Kings Worthy
- 1 'low cost' analyser in Twyford - Temporary
- Rural district no longer routinely monitored, as consistent compliance with AQO's for many years
- Results show compliance with AQOs for the last 3 years (2021 – 2023) in all areas, albeit elevated levels remain higher on small uphill section of **Romsey Road**.

Winchester City Council's Current Air Quality



All levels remain below the confidence threshold, can we now revoke the AQMA?

Current Air Quality in Winchester

Annual Status Report 2024

- 2024 ASR submitted in May, however in late August DEFRA responded by **NOT** accepting our submission. **Why?**
- There 3 correction factors used to adjust the raw data obtained from NOx tube data:
 - Annualization (for data return < 9 months)
 - Bias correction (local/national)
 - Distance correction to account for distance between the NOx Tube and receptor façade – Note: only applied IF Annualized and bias corrected date exceeds $36\mu\text{g}/\text{m}^3$
- Despite accepting a local bias correction factor in our ASR submissions for several years, DEFRA have now questioned this approach, favouring the use the national bias correction factor.

Current Air Quality in Winchester

Annual Status Report 2024 – Main Points

- This means WCC *may* be expected to use a national bias correction factor of 0.83 instead of the local bias correction factor 0.77
- For Site 23 the use of the national bias Correction factor changes our return from $34.7\mu\text{g}/\text{m}^3$ NO₂ annual mean to **37.4** $\mu\text{g}/\text{m}^3$ NO₂ annual mean i.e. **above** the confidence threshold level
- Currently conducting our rebuttal in support of using local bias correction factor – likely 2 months to resolve
- **IF** Defra rejects WCC position, then we will be compelled to review the current AQMA and submit a new AQAP

Current Air Quality in Winchester

Annual Status Report 2024



Current AQMA



Potential AQMA

Air Quality Strategy

Local Air Quality Policy Setting

- Steering Group Set proposed policy
- Policy set with regard to **WHO Air Quality Guidelines (AQG)** and existing air quality levels and ‘deliverability’ by **2030**

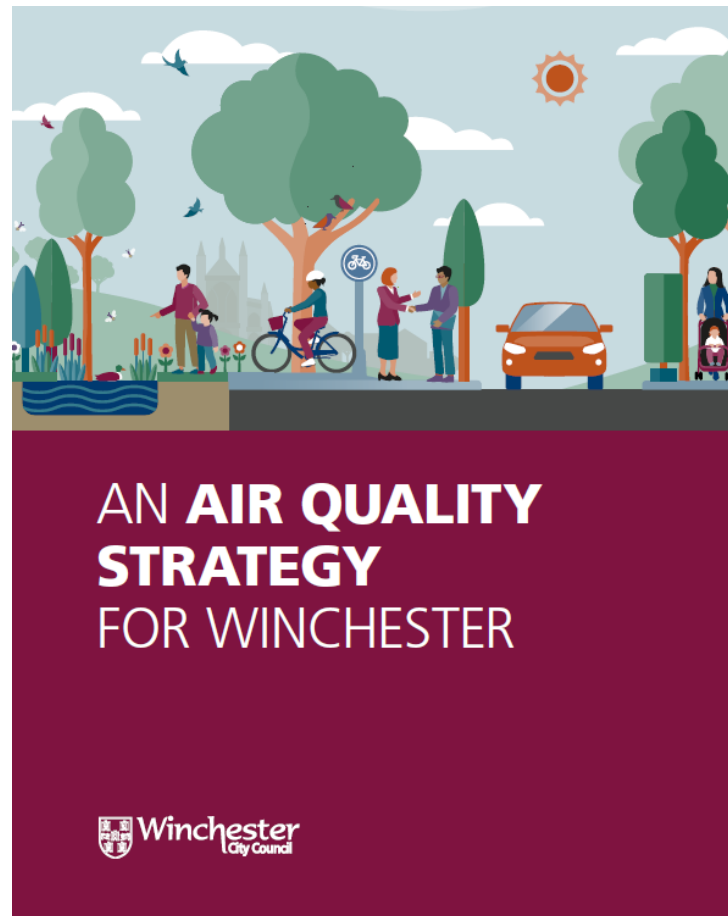
Pollutant	Interim Annual Mean Targets $\mu\text{g}/\text{m}^3$				
	1	2	3	4	AQG
NO₂	40	30	20	-	10
PM₁₀	70	50	30	20	15
PM_{2.5}	35	25	15	10	5

2023 AQ Levels

Pollutant	Annual Mean $\mu\text{g}/\text{m}^3$	
	St Georges Street	Romsey Road
NO₂	28.7	34.7/37.4
PM₁₀	15.1	-
PM_{2.5}	8.8	-

Winchester's Current Position with its Draft Air Quality Strategy

- 2025 – 2030 5 Years Strategy
- Sets out aspirational standards that exceed national targets
- These are:
 - **NO₂ 30µg annual mean by 2030 '30 by 30'**
 - **PM_{2.5} 10µg annual mean by 2030**
- Above standards believed to be deliverable considering current levels.
- How will this be achieved?
- 13 actions areas across 5 themes:
 1. Air Quality monitoring and modelling
 2. Transport
 3. Domestic Heating
 4. Indoor air quality
 5. Construction and new developments



Winchester's Current Position with its Draft Air Quality Strategy

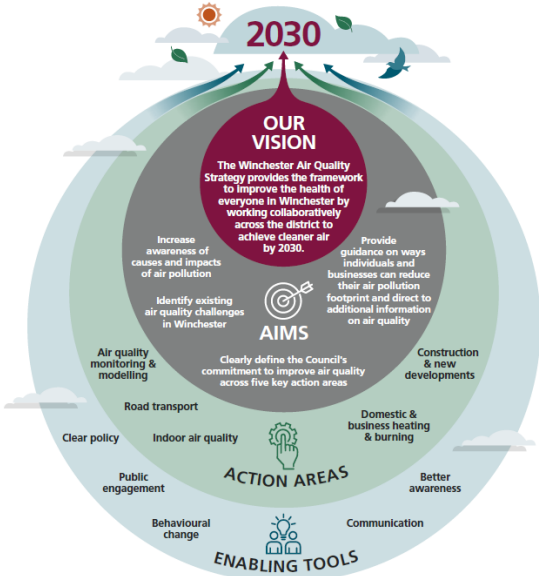
WINCHESTER CITY COUNCIL IS DEDICATED TO GOING ABOVE AND BEYOND THE UK NATIONAL TARGETS FOR AIR QUALITY LEVELS.

The Council commits to the following aspirations for the Winchester district by 2030:

'30 by 30'
Annual average of less than 30 $\mu\text{g}/\text{m}^3$ for nitrogen dioxide

Annual average of less than 10 $\mu\text{g}/\text{m}^3$ for $\text{PM}_{2.5}$

1.2 OUR VISION



- 2024-2025**
 - Source apportionment
 - Domestic and business combustion policy
 - Widen the principles of the current Air Quality SPD
- 2025-2026**
 - Smoke control area and enforcement policy
 - Air quality monitoring network expansion across the district
 - Anti-idling enforcement policy
 - Indoor air quality policy
- 2026-2027**
 - Lobby and identify opportunities to deliver the LCWIP
 - Public transport
- 2027-2028**
 - Regional Air Quality Network
 - Support traffic reduction policies to reduce traffic flows by 10% by 2030
- 2028-2029**
 - Sensitive locations study
- 2029-2030**
 - Enhance the uptake of active travel and sustainable models of travel
- 2030 AIMS**
 - Reduced traffic flows by 10% by 2030
 - '30 by 30' target for NO_2
 - 10 $\mu\text{g}/\text{m}^3$ target for $\text{PM}_{2.5}$

Winchester's Current Position with its Draft Air Quality Strategy

Action Area	Actions
Air quality monitoring and modelling	1 Source inventory study to identify source apportionment influencing district's air quality
	2 Expand air quality monitoring network including increased PM2.5, measurements using sensor measurements, citizen engagement, and indicative monitoring.
	3 Develop a new and active participation in, a multi-disciplinary Regional Air Quality Network .
	4 Conduct a study to identify and deliver measures at sensitive locations, such as schools/nurseries, playgrounds , or areas where air quality previously failed to meet national air quality objectives.
Transport	5 Adopt an anti-idling enforcement policy to educate residents and encourage behavioural change of motorists.
	6 Lobby and identify capabilities to deliver the Local Cycling and Walking Infrastructure Plan (LCWIP) for Winchester City and District.
	7 To support the Hampshire County Council Local Transport Plan, Winchester City Council commit to investigate and support traffic reduction policies to reduce traffic flows by 10% by 2030.
	8 To support Hampshire County Council Local Transport Plan measures that will increase the uptake and use of Public Transport across the district and improve connectivity with the wider region.

Winchester's Current Position with its Draft Air Quality Strategy

Domestic heating and combustion	9	Develop an educational and advisory policy on an effective coordinated response to domestic combustion concerns .
	10	Explore the feasibility of adopting a Smoke Control Area and associated enforcement policy to cover Winchester District.
Indoor air quality	11	Develop an educational and advisory policy on an effective coordinated response to indoor air quality concerns , including mould and bio aerosols.
Construction and new developments	12	Strengthen our developing Local Plan to widen the principles of the current Air Quality Supplementary Planning Document (SPD) as a separate informative Technical Guidance Note.
	13	Investigate how, as part of the subsequent review of the Local Plan, we can improve air quality and enhance the uptake and continued use of active and sustainable modes of travel .

- Actions are intended to set out a framework of delivery
- Several actions will be subject to their own democratic decision making processes
- Draft AQS currently out for public consultation
- Consultation amendments to be agreed through Air Quality Steering Group before cabinet adoption in Q4 2024/25.

Air Quality Strategy - 'The Challenges'

- LA's limited resources & cannot do all of this on their own
- Air Quality Partners **must** help out – Clean Air South Network
- Multiple skill sets required i.e. regulatory, technical, marketing, grant bids and social change
- PM_{2.5} regional therefore cross boundary therefore needs a regional Air Quality Partnership approach
- Cost
- Political
- Behavioural change – very challenging



Questions?



Winchester
City Council