



2020 Air Quality Annual Status Report (ASR)

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

Date (June, 2020)

North West Leicestershire District Council

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Executive Summary: Air Quality in Our Area

Air Quality in North West Leicestershire District 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^{1,2}.

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion³.

There are 4 air quality management area declared within the district details of which are contained in Table 2.1. During 2019 the Coalville AQMA was amended to remove the exceedance of the 1-hour mean air quality standard and the M1 AQMA was revoked.

Actions to Improve Air Quality

- The construction of the Kegworth Bypass as part of the East Midlands Gateway Project <https://slp-emg.com/> was completed
- The construction of the North and South of Park Lane Castle Donington development approved under planning permission 09/01226/OUTM which includes a relief road <https://plans.nwleics.gov.uk/public-access/applicationDetails.do?activeTab=summary&keyVal=KUG0XPLR0DD00> was ongoing.

Conclusions and Priorities

The ASR concludes that

- there are no new areas likely to be exceeding air quality objectives

¹ Environmental equity, air quality, socioeconomic status and respiratory health, 2010

² Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

³ Defra. Abatement cost guidance for valuing changes in air quality, May 2013

In 2020 the council plans to

- Develop, publish and implement AQMA action plans
- Undertake a review of air quality provision within North West Leicestershire

Local Engagement and How to get Involved

The main contributions that our community can make to improving air quality are around minimising emissions from traffic and other sources and limiting exposure at times of poor air quality. Specifically that means avoiding unnecessary car use for short journeys, utilising public transport where possible, buying and maintaining low emissions vehicles and being linked in to the national alert system for predicted episodes of poor air quality.

The public can get further information on Air Quality from the following websites

- North West Leicestershire District Council Air quality website
http://www.nwleics.gov.uk/pages/air_quality
- DEFRA's UK-AIR: Air information Resource website
<https://uk-air.defra.gov.uk/>
- DEFRA's Local Air Quality Management (LAQM) Support website
<http://laqm.defra.gov.uk/>
- Environmental Protection UK Air Pollution website
<http://www.environmental-protection.org.uk/policy-areas/air-quality/about-air-pollution/>

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1 Local Air Quality Management

This report provides an overview of air quality in North West Leicestershire District Council during 2019. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995) and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by North West Leicestershire District Council to improve air quality and any progress that has been made.

The statutory air quality objectives applicable to LAQM in England can be found in Table E.1 in Appendix E.

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority must prepare an Air Quality Action Plan (AQAP) within 12-18 months setting out measures it intends to put in place in pursuit of compliance with the objectives.

A summary of AQMAs declared by North West Leicestershire District Council can be found in Table 2.1. Further information related to declared or revoked AQMAs, including maps of AQMA boundaries are available online at https://uk-air.defra.gov.uk/aqma/local-authorities?la_id=184 . Alternatively, see Appendix D: Map(s) of Monitoring Locations and AQMAs, which provides for a map of air quality monitoring locations in relation to the AQMA(s).

Table 2.1 – Declared Air Quality Management Areas

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	City / Town	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	Level of Exceedance (maximum monitored/modelled concentration at a location of relevant exposure)				Action Plan		
						At Declaration		Now		Name	Date of Publication	Link
Kegworth	26/07/2004	NO2 Annual Mean	Kegworth	Busy trunk road fronted by residential properties	NO				µgm-3			
Castle Donington	09/01/2008	NO2 Annual Mean	Castle Donington	An area encompassing the High Street and Bondgate area of Castle Donington.	NO	47.83	µgm-3		µgm-3			
Coalville	09/01/2008	NO2 Annual Mean	Coalville	An area encompassing parts of Stephenson Way, Broom Leys Road in Coalville.	NO							
Copt oak	30/07/2009	NO2 Annual Mean	Copt Oak	An area of the village of Copt Oak that lies within the boundaries of NW Leicestershire District Council.	YES							

North West Leicestershire District Council confirm the information on UK-Air regarding their AQMA(s) is up to date

2.2 Progress and Impact of Measures to address Air Quality in North West Leicestershire District Council

Defra's appraisal of last year's ASR concluded

1. Whilst a comparison of results to the air quality objectives is provided, trends in concentrations are not presented and discussed.
 - Trends have been included in Appendix A1
2. The diffusion tube and AQMA mapping demonstrates the monitoring network.
3. The template provided on <https://laqm.defra.gov.uk/review-and-assessment/report-templates.html> should be followed to format the report.
4. The Council is proposing to amend the Coalville AQMA to only cover the NO₂ annual mean following sustained compliance of the 1-hour mean. This is supported and an update on progress should be included in the 2020 ASR.
 - the Coalville AQMA was amended in 2019.
5. Bias adjustment of the non-automatic network was carried out using a national bias adjustment factor of 0.92 to adjust the raw results.
6. The methodology used for annualisation of the diffusion tubes was updated to match that outlined in TG16 Box 7.10, which is welcomed.
7. Some sites were distance corrected unnecessarily. Distance correction should be applied when concentrations are above or within 10% of the objective and sites are not representative of relevant exposure.
 - sites have only been distance corrected where necessary
8. It is recommended that the Council review their monitoring site locations, and the council should subsequently ensure that all diffusion tubes are sited in line with TG16 ('NO₂ by Diffusion Tubes', section 7-52). This thorough review should be implemented and reported upon within the next ASR.
 - A review of the diffusion tube locations was undertaken,
 - 54n has been relocated following guidance from the LAQM helpdesk

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- 39N does not comply with the guidance on the location of diffusion tubes as the location has a high potential of being obscured by vegetation, however the tube location is between the M1 and the nearest property, there are no appropriate locations in the area.
9. The report included measures to address PM_{2.5} and links to the Public Health Outcomes Frameworks. This is welcomed and encouraged to be continued in future ASRs.
- This has again been included in section 1.4.
10. Priorities for 2019 were identified, which is welcomed. Progress made on these priorities should be reported on in next year's report.
- The priorities from the 2019 ASR were
 - Develop, publish and implement AQMA action plans. This has been commissioned and is currently being drafted by Air Quality Consultants
 - Amend the declaration of the Coalville AQMA to remove the exceedence of the 1 hour-mean air quality standard this has been completed
 - Revoke the M1 AQMA this has been completed
11. Comments from the previous appraisal were not included, this is recommended to be included in future reports.

A number of direct measures during the current reporting year of 2019 in pursuit of improving local air quality.

- The construction of the Kegworth bypass as part of the East Midlands Gateway project was completed <https://slp-emg.com/>
- The construction of the Castle Donington Relief road as part of the North and South of park lane development is ongoing. Approved under planning permission 09/01226/OUTM which includes a relief road <https://plans.nwleics.gov.uk/public-access/applicationDetails.do?activeTab=summary&keyVal=KUG0XPLR0DD00> was started

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North West Leicestershire District Council expects the following measures to be completed over the course of the next reporting year:

- The construction of the Castle Donington Relief road as part of the North and South of Park Lane development is completed

North West Leicestershire District Council's priorities for the coming year are:

- Complete the review of air quality provision within North West Leicestershire
- Complete and publish the action plans for the AQMAs.

2.3 PM_{2.5} – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG16 (Chapter 7), local authorities are expected to work towards reducing emissions and/or concentrations of PM_{2.5} (particulate matter with an aerodynamic diameter of 2.5µm or less). There is clear evidence that PM_{2.5} has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

The Public Health Outcomes Framework (PHOF) (<http://www.phoutcomes.info/>) is a Department of Health data tool for England, intended to focus public health action on increasing healthy life expectancy and reducing differences in life expectancy between communities. The tool uses indicators to assess improvements.

Recognising the significant impact that poor air quality can have on health, the PHOF includes an indicator relating to fine particulate matter (PM_{2.5}).

The indicator in the PHOF reports the estimates fraction of all-cause adult mortality attributable to anthropogenic particulate air pollution (measured as fine particulate matter).

Based on the latest available figures the position in North West Leicestershire district can be compared to the situation across the rest of England, East Midlands and nearby districts. North West Leicestershire has:

- the joint lowest fraction of attributable deaths to particulate air pollution in Leicestershire;
- slightly lower fraction of attributable deaths to particulate air pollution than the mean for Leicestershire; and

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- slightly lower fraction of attributable deaths to particulate air pollution than the mean for England.

PM_{2.5} background air quality data published by DEFRA shows the district has background concentrations between 8.5µg.m⁻³ and 12.3µg.m⁻³ with a mean of 9.3 µg.m⁻³.

North West Leicestershire are working in collaboration with Leicestershire County Council to produce action plans that accompany the air quality and health chapter of the Joint Strategic Needs Assessment which will cover tackling PM_{2.5}.

3 Air Quality Monitoring Data and Comparison with Air Quality Objectives and National Compliance

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

The authority did not undertake any automatic monitoring during 2019

3.1.2 Non-Automatic Monitoring Sites

North West Leicestershire District Council undertook non- automatic (passive) monitoring of NO₂ at 30 sites during 2019. Table A.2 in Appendix A shows the details of the sites.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on Quality Assurance/Quality Control (QA/QC) for the diffusion tubes, including bias adjustments and any other adjustments applied (e.g. “annualisation” and/or distance correction), are included in Appendix C.

3.2 Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for bias⁴, “annualisation” (where the data capture falls below 75%), and distance correction⁵. Further details on adjustments are provided in Appendix C.

3.2.1 Nitrogen Dioxide (NO₂)

Table A.3 in Appendix A compares the ratified and adjusted monitored NO₂ annual mean concentrations for the past 5 years with the air quality objective of 40µg/m³. Note that the concentration data presented in Table A.3 represents the concentration at the location of the monitoring site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

⁴ <https://laqm.defra.gov.uk/bias-adjustment-factors/bias-adjustment.html>

⁵ Fall-off with distance correction criteria is provided in paragraph 7.77, LAQM.TG(16)

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For diffusion tubes, the full 2019 dataset of monthly mean values is provided in Appendix B. Note that the concentration data presented in Table B.1 includes distance corrected values, only where relevant.

The national Bias adjustment factor for Gradko 50% TEA in acetone has been used to correct the data.

Coalville AQMA

There are 4 monitoring locations within the AQMA all locations were substantially below the annual mean air quality objective for Nitrogen dioxide

Castle donington AQMA

The monitoring location 34n exceeded the annual mean air quality objective for nitrogen dioxide

Monitoring location 41n was $36.16\mu\text{g.m}^{-3}$ as it is within 10% of the annual mean air quality objective for nitrogen dioxide façade correction to the nearest receptor is $28.7\mu\text{g.m}^{-3}$

Kegworth AQMA

All locations were below the air the annual mean air quality objective for nitrogen dioxide

Copt Oak AQMA

All receptor locations were substantially lower than the air quality standard.

A location on the kerb of the M1 exceeded however there are no relevant receptors linked to this location

Other Locations

No locations outside of AQMAs exceeded the air quality standards

Appendix A: Monitoring Results

Table A.1 - Details of Automatic Monitoring Sites

North West Leicestershire does not have any automatic monitors

Table A.2 – Details of Non-Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube collocated with a Continuous Analyser?	Height (m)
06N	TUBE BROOMLEYS junc (1) coalville	Roadside	443660	314002	NO ₂	Yes Coalville	5.8	2	NO	1.8
08N	End Cottage Copt Oak	Rural	448138	313012	NO ₂	No	0	N/A	NO	1.8
12N	AEROPARK	Other	444013	326288	NO ₂	No	N	N/A	NO	1.8
14N	CD 69 HIGH st	Roadside	444211	326781	NO ₂	No	0	2.9	NO	1.8
16N	Bondgate CD crossroads	Roadside	444451	327233	NO ₂	No	7.5	1	NO	1.8
17N	13 BondGate CD	Roadside	444512	327335	NO ₂	Yes Castle Donington	2	2.5	NO	2.2
18N	34 bondgate CD	Roadside	444580	327410	NO ₂	Yes Castle Donington	0	2.3	NO	1.8
19N	94 Bondgate CD	Roadside	444705	327602	NO ₂	Yes Castle Donington	0.8	1.4	NO	3
20N	DERBY RD (Bennys Hill) Kegworth	Roadside	448523	326885	NO ₂	Yes Kegworth	3.2	1	NO	1.8
22N	Keg A6 2	Roadside	448783	326656	NO ₂	Yes Kegworth	0	2.3	NO	1.8

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Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube collocated with a Continuous Analyser?	Height (m)
23N	120 whatton road Kegworth	Suburban	448103	326275	NO ₂	No	n	n/a	NO	1.8
31N	SINOPE	Roadside	440167	315264	NO ₂	No	7.8	3.2	NO	1.8
32N	M1 Bridge Copt Oak	Other	448082	313100	NO ₂	No	N	N/A	NO	1.8
39N	M1 Long Whatton	Other	446950	323750	NO ₂	Yes	N	N/A	NO	1.8
40N	35 high street castle donington	Roadside	444323	326975	NO ₂	No	3	0.9	NO	1.8
41N	18 highstreet castle donington	Roadside	444414	327171	NO ₂	No	4	1	NO	1.8
43N	Direction Sign Bardon Rd/A511 RBT Coalville	Roadside	443675	313642	NO ₂	No	2.4	3	NO	1.8
45N	outside corner farm copt oak	Roadside	448119	312920	NO ₂	No	27	4.3	NO	1.8
46N	Dog Groomers Derby Road Kegworth	Roadside	448724	326702	NO ₂	Yes Kegworth	0	1.3	NO	1.8
47N	12 Derby Rd Kegworth	Roadside	448639	326805	NO ₂	Yes Kegworth	4.7	2.5	NO	1.8
48N	28 london road kegworth	Roadside	448792	326533	NO ₂	Yes Kegworth	0.8	1.5	NO	1.8
49N	Hugglescote crossroads	Roadside	442562	312823	NO ₂	No	4.1	2.5	NO	1.8

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Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube collocated with a Continuous Analyser?	Height (m)
50N	10 central road hugglescote	Roadside	442578	312871	NO ₂	No	5.4	1	NO	1.8
51N	40mph sign N of petrol station Kegworth	Roadside	448361	326997	NO ₂	Yes Kegworth	9.6	3.2	NO	1.8
52N	lamppost 65 Derby Road kegworth	Roadside	448436	326931	NO ₂	Yes Kegworth	5.9	2.5	NO	1.8
53N	20mph sign outside 10 greenhill road Coalville	Roadside	448436	326931	NO ₂	N	5.9	2.5	NO	1.8
54N	parkign restrictions sign adj drive 12 & 20 park lane CD	Roadside	444331	327257	NO ₂	N	8.8	2.0	NO	1.8
56N	lamppost adjacent 27 Broomleys road Coalville	Roadside	443649	314040	NO ₂	Yes Coalville	1.8	1.2	NO	1.8
57N	lamppost outside 21 Broomleys road Coalville	Roadside	443630	314028	NO ₂	Yes Coalville	4.7	3	NO	1.8
58N	cycle route sign outside 34 broomleys road Coalville	Roadside	443634	313996	NO ₂	Yes Coalville	12	5	NO	1.8

Notes:

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

(2) N/A if not applicable.

Table A.3 – Annual Mean NO₂ Monitoring Results

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2019 (%) ⁽²⁾	NO ₂ Annual Mean Concentration (µg/m ³) ^{(3) (4)}				
							2015	2016	2017	2018	2019
06N	443660	314002	Roadside	Diffusion Tube	100%	100%	35.32	35.53	36.16	34.05	32.47
08N	448138	313012	Rural	Diffusion Tube	92%	92%	23.67	25.85	24.79	23.39	22.37
12N	444013	326288	Other	Diffusion Tube	75%	75%	18.06	19.01	18.48	19.14	18.86
14N	444211	326781	Roadside	Diffusion Tube	83%	83%	21.18	22.96	22.16	23.93	20.68
16N	444451	327233	Roadside	Diffusion Tube	92%	92%	31.64	34.19	34.39	35.86	31.51
17N	444512	327335	Roadside	Diffusion Tube	83%	83%	31.58	31.07	32.42	36.97	30.88
18N	444580	327410	Roadside	Diffusion Tube	83%	83%	45.66	49.77	47.81	51.93	42.05
19N	444705	327602	Roadside	Diffusion Tube	83%	83%	25.93	32.56	28.59	30.67	27.29
20N	448523	326885	Roadside	Diffusion Tube	100%	100%	27.32	29.13	29.91	25.37	21.81
22N	448783	326656	Roadside	Diffusion Tube	75%	75%	28.66	33.5	29.23	28.43	23.35
23N	448103	326275	Suburban	Diffusion Tube	100%	100%	14.48	20.84	20.54	19.81	20.49
31N	440167	315264	Roadside	Diffusion Tube	100%	100%	20.31	30.75	27.61	22.31	22.62
32N	448082	313100	Other	Diffusion Tube	100%	100%	56.49	55.02	58.09	59.47	53.91
39N	446950	323750	Other	Diffusion Tube	100%	100%	26.03	27.28	19.76	24.38	20.91
40N	444323	326975	Roadside	Diffusion Tube	100%	100%	22.18	23.51	34.8	25.72	22.94
41N	444414	327171	Roadside	Diffusion Tube	100%	100%	35.64	38.43	39.85	42.67	36.16
43N	443675	313642	Roadside	Diffusion Tube	100%	100%	23.77	29.09	28.72	28.76	25.84
45N	448119	312920	Roadside	Diffusion Tube	100%	100%	29.67	33.51	31.29	30.71	26.66
46N	448724	326702	Roadside	Diffusion Tube	100%	100%	32.09	36.72	31.95	31.59	24.56
47N	448639	326805	Roadside	Diffusion Tube	92%	92%	31.48	35.73	34.44	29.58	24.50
48N	448792	326533	Roadside	Diffusion Tube	92%	92%	33.37	35.19	33.56	34.07	26.29

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Monitoring Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2019 (%) ⁽²⁾	NO ₂ Annual Mean Concentration (µg/m ³) ^{(3) (4)}				
							2015	2016	2017	2018	2019
49N	442562	312823	Roadside	Diffusion Tube	83%	83%	32.13	34.39	33.66	36.52	30.94
50N	442578	312871	Roadside	Diffusion Tube	100%	100%	29.29	35.06	36.97	33.06	33.22
51N	448361	326997	Roadside	Diffusion Tube	100%	100%	30.6	30.67	32.66	26.46	22.40
52N	448436	326931	Roadside	Diffusion Tube	92%	92%	30.58	32.16	32.12	28.85	23.29
53N	448436	326931	Roadside	Diffusion Tube	92%	92%	18.75	21.87	22.48	21.89	19.79
54N	444331	327257	Roadside	Diffusion Tube	83%	83%	22.7	22.82	23.69	27.39	24.74
56N	443649	314040	Roadside	Diffusion Tube	100%	100%	36.75	35.88	35.74	36.58	34.23
57N	443630	314028	Roadside	Diffusion Tube	100%	100%	-	-	-	-	32.02
58N	443634	313996	Roadside	Diffusion Tube	92%	92%	-	-	-	-	23.08

Diffusion tube data has been bias corrected

Annualisation has been conducted where data capture is <75%

Reported concentrations are those at the location of the monitoring site (bias adjusted and annualised, as required), i.e. prior to any fall-off with distance adjustment

Notes:

Exceedances of the NO₂ annual mean objective of 40µg/m³ are shown in **bold**.

NO₂ annual means exceeding 60µg/m³, indicating a potential exceedance of the NO₂ 1-hour mean objective are shown in **bold and underlined**.

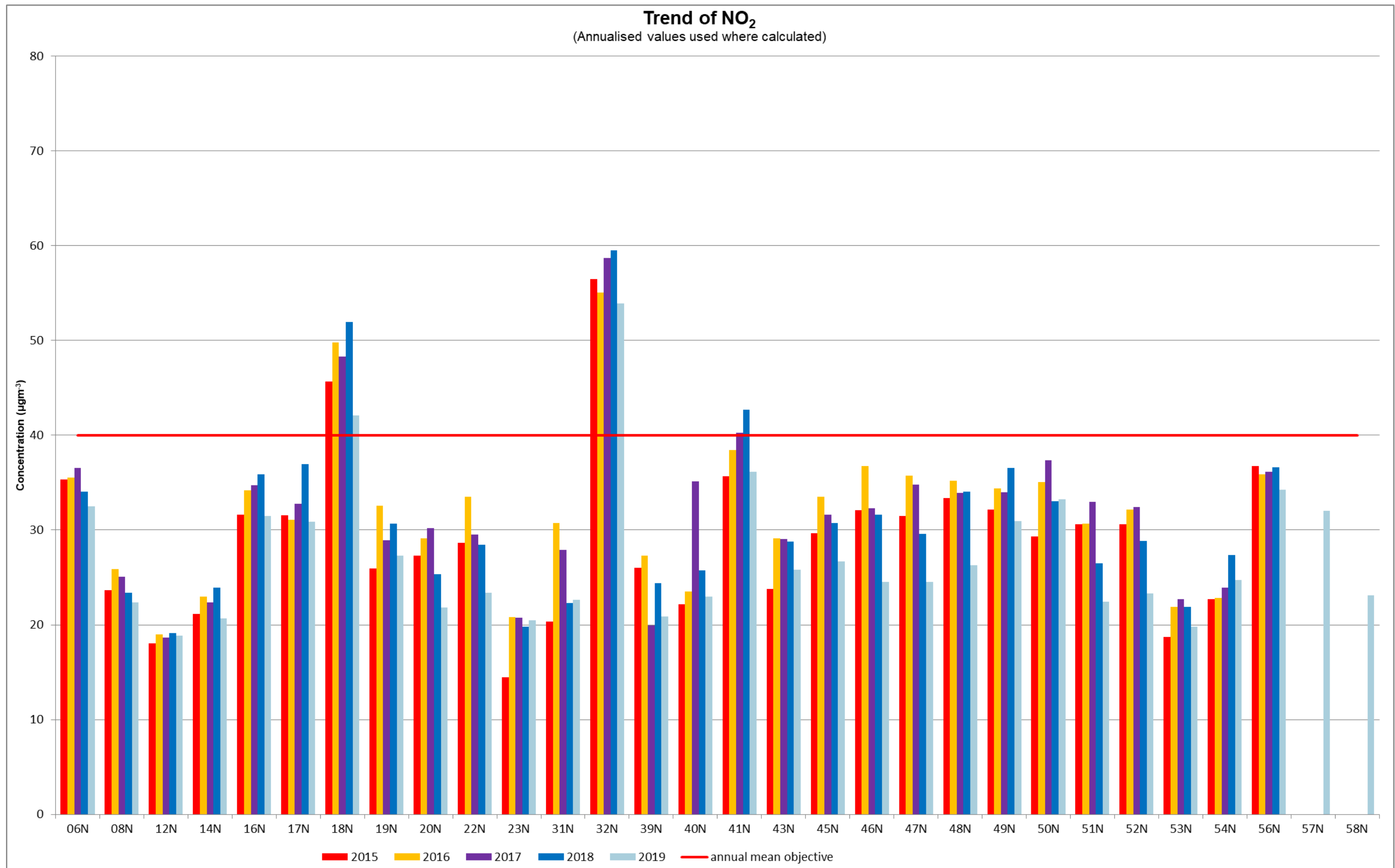
(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

(3) Means for diffusion tubes have been corrected for bias. All means have been “annualised” as per Boxes 7.9 and 7.10 in LAQM.TG16 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

(4) Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

Figure A.1 – Trends in Annual Mean NO₂ Concentrations



Appendix B: Full Monthly Diffusion Tube Results for 2019

Table B.1 - NO₂ Monthly Diffusion Tube Results - 2019

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	NO ₂ Mean Concentrations (µg/m ³)															Annual Mean		
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Raw Data	Bias Adjusted (0.87) and Annualised ⁽¹⁾	Distance Corrected to Nearest Exposure ⁽²⁾			
06N	443660	314002	46	55	36	28	29	30	31	33	38	37	43	41	37.3	32.5				
08N	448138	313012	27	38	28	24	24	22	20	20	22	25	31		25.7	22.4				
12N	444013	326288	24	35			15	15	15		22	24	25	20	21.7	18.9				
14N	444211	326781	26	36	18	28	19	23	20	18	25			24	23.8	20.7				
16N	444451	327233	38	47	34	36	39	34	33	30	33	37	39		36.2	31.5				
17N	444512	327335	40	49	36	36	32	26	28			34	36	36	35.5	30.9				
18N	444580	327410	53	59	42	48	42	45	45	34		56	59		48.3	42.0				
19N	444705	327602	35	44	27	35	28	25	25			33	35	28	31.4	27.3				
20N	448523	326885	33	38	24	20	20	19	20	13	21	30	35	26	25.1	21.8				
22N	448783	326656	31	36	23		23		20	21		27	34	28	26.8	23.4				
23N	448103	326275	34	33	25	16	17	23	17	16	24	21	35	22	23.6	20.5				
31N	440167	315264	32	39	25	20	23	21	20	20	25	24	35	26	26.0	22.6				
32N	448082	313100	59	81	66	54	60	60	66	55	56	59	59	69	62.0	53.9				
39N	446950	323750	30	30	26	17	23	20	19	21	23	25	30	24	24.03	20.9				
40N	444323	326975	32	40	22	25	21	22	18	19	24	27	38	28	26.37	22.9				

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41N	444414	327171	56	49	44	42	39	34	41	31	40	38	49	38	41.57	36.2	28.7
43N	443675	313642	36	43	26	30	25	23	23	20	31	30	40	29	29.70	25.8	
45N	448119	312920	37	54	32	30	24	32	30	27	33	35	11	24	30.64	26.7	
46N	448724	326702	35	41	25	28	22	24	22	19	28	31	41	24	28.23	24.6	
47N	448639	326805	39	37	29	21	22	21		20	27	29	38	27	28.16	24.5	
48N	448792	326533	40	40	30		25	25	25	24	32	29	37	26	30.22	26.3	
49N	442562	312823	41	50	31	44	26	30			35	39	42	44	38.19	33.2	
50N	442578	312871	35	50	38	34	32	33	36	31	32	33	38	34	35.56	30.9	
51N	448361	326997	36	37	28	19	18	20	19	17	25	27	33	29	25.75	22.4	
52N	448436	326931	33	42	32	18	22	19	23	22	22	29	34		26.77	23.3	
53N	448436	326931	27	31	19	25	21	20	17	17	21	21	31		22.74	19.8	
54N	444331	327257	31	40	25	35	21	21	22		27	29	33		28.44	24.7	
56N	443649	314040	49	58	41	28	28	34	35	29	38	45	47	39	39.35	34.2	
57N	443630	314028	42	33	35	38	36	36	35	34	41	41	51	21	36.80	32.0	
58N	443634	313996	28	50	19	28	26	19	19	15	25	23	39		26.52	23.1	

Local bias adjustment factor used

National bias adjustment factor used

Annualisation has been conducted where data capture is <75%

Where applicable, data has been distance corrected for relevant exposure in the final column

Notes:

Exceedances of the NO₂ annual mean objective of 40µg/m³ are shown in **bold**.

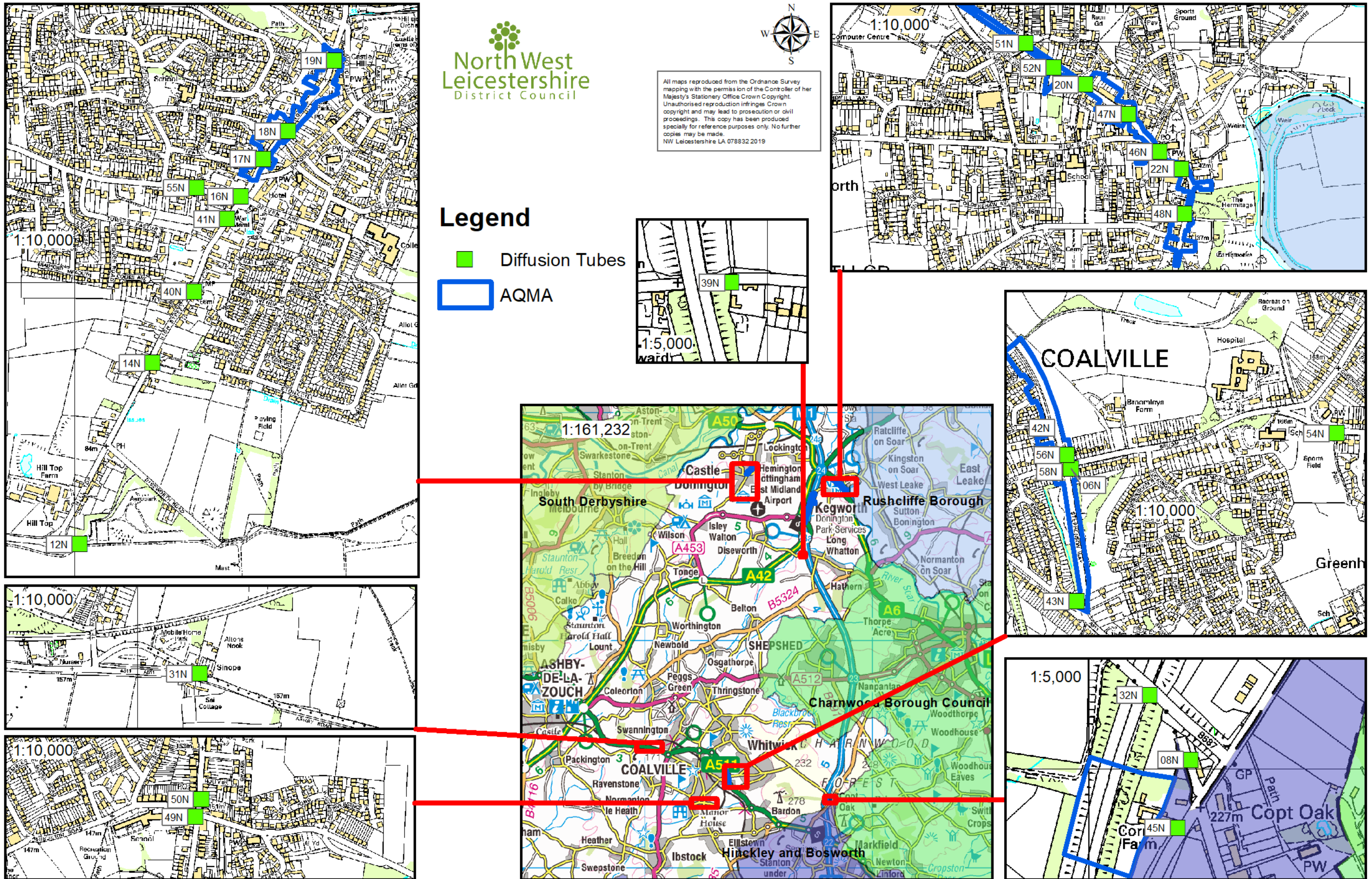
NO₂ annual means exceeding 60µg/m³, indicating a potential exceedance of the NO₂ 1-hour mean objective are shown in **bold and underlined**.

(1) See Appendix C for details on bias adjustment and annualisation.

(2) Distance corrected to nearest relevant public exposure.

Appendix C: Supporting Technical Information / Air Quality
Monitoring Data QA/QC

Appendix D: Map(s) of Monitoring Locations and AQMAs



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England

Pollutant	Air Quality Objective ⁶	
	Concentration	Measured as
Nitrogen Dioxide (NO ₂)	200 µg/m ³ not to be exceeded more than 18 times a year	1-hour mean
	40 µg/m ³	Annual mean
Particulate Matter (PM ₁₀)	50 µg/m ³ , not to be exceeded more than 35 times a year	24-hour mean
	40 µg/m ³	Annual mean
Sulphur Dioxide (SO ₂)	350 µg/m ³ , not to be exceeded more than 24 times a year	1-hour mean
	125 µg/m ³ , not to be exceeded more than 3 times a year	24-hour mean
	266 µg/m ³ , not to be exceeded more than 35 times a year	15-minute mean

⁶ The units are in microgrammes of pollutant per cubic metre of air (µg/m³).

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
ASR	Air quality Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by Highways England
EU	European Union
FDMS	Filter Dynamics Measurement System
LAQM	Local Air Quality Management
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
PM ₁₀	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
PM _{2.5}	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO ₂	Sulphur Dioxide

References

Add references here.