2024 Air Quality Annual Status Report (ASR)

In fulfilment of Part IV of the Environment Act 1995 Local Air Quality Management, as amended by the Environment Act 2021

Date: 21st June 2024

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Executive Summary: Air Quality in Our Area

This report fulfils the requirements of the Local Air Quality Management process as set out in Part IV of the Environment Act (1995), the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 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 the air quality objectives are likely to be achieved. Where exceedances are considered likely the local authority must then 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.

Ribble Valley Council's main pollutant of concern is Nitrogen Dioxide (NO_2); Ribble Valley monitors Nitrogen Dioxide through passive diffusion tubes measuring NO_2 in the air.

Ribble Valley extended the number of NO2 tubes as of March 2022 by an extra six tubes so that 14 tubes are currently monitored. The previous monitoring programme was deemed to be too Clitheroe centric. The diffusion tube network was extended to incorporate the township of Longridge and the Village of Whalley. DT8 outside the Feildens Arms Mellor was discontinued, and the monitoring in the Mellor area was moved to a nearby location which will see more passing traffic - DT10. The reason for extending the programme to Longridge as there has been significant residential development, both in the town and in the surrounding area. The road network outside of Longridge to the west has had changes in the nearby Preston area. The village of Whalley was selected for monitoring which is a busy village with housing development and tourism, Whalley's nighttime economy is particularly strong.

The results for 2023 show no exceedances of the National Objective for the annual bias adjusted figures for NO_2; the highest and lowest site measurements in the Authority area being 27.6 µg/m³ and 8.5 µg/m³ respectively.

Levels of NO_2 over the last few years have been reducing, the monitoring period of 2023 has higher levels at DT9 up 1.5 µg/m³ a 6% increase, DT10 up 0.7 µg/m³ a 6% increase, DT12 up 0.8 µg/m³ a 3% increase and DT13 up 2.6 µg/m³ an 11% increase, compared to the 2022 levels. All other 10 locations have reduced values compared to the 2022 levels.

Although the increases are not ideal, the levels of increase on each location are well below the air quality objective for NO_2 for an annual bias adjusted mean. At DT9 in Read there

had been roadworks in the area where the tube is located. DT10 is near BAE where there is development in and around the BAE site and DT12 and DT13 are both in Longridge where there has been road works in the local area on Derby Road so the increases may be due to local drivers finding an alternative traffic route. All levels of NO_2 compared to the 2021 dataset are reduced except for DT9. The 2020 dataset has not been considered being an anomaly due to the Covid pandemic.

Ribble Valley is an area where tourism is significant and of key importance to the local economy and there could have been a traffic increase as we move back to normality post Covid. On a positive note, all levels are lower than the pre-pandemic year of 2019, suggesting that improvements to vehicles on the road such as more petrol cars over diesel models, more hybrid cars and the move to electric vehicles are reducing the levels in accordance with the National trend.

Figure A.1 shows the graph representation of the levels from 2019 to 2023 using the data from Table A.4.

Ribble Valley has one Air Quality Management Area, declared in 2010 for exceedance of NO_2. Within the reporting year the concentration of NO_2 is below the objective for the concentration of NO_2.

There have been no noteworthy sources of increasing levels of NO_2 in the Borough during 2023. The major source of the pollutant NO_2 in the Ribble Valley Borough Council area is from traffic.

The Officer responsible for air quality in Ribble Valley is in a local air quality group with their counterpart Officers from several Lancashire authorities, the purpose of the group is to keep updated on current developments in pollution control, share good practice, workshop air quality problems and liaise on cross boundary air pollution issues. The Lancashire group has responded to consultations at national level on guidelines for activities affecting air quality.

The Officer also maintains close working relations with the Environment Agency; Lancashire County Council, DEFRA, Planning, and consultancies to facilitate a coordinated approach to improve air quality.

The Officer is a member of the Air Quality Hub which allows networking and sharing best practices amongst peers across the country, sharing experiences on different air quality issues, contributing to case studies on measures addressing air pollution and sharing best practice or lessons learned in air quality issues.

Lancashire County Council are pursuing several strategies to improve air quality throughout the County, a summary of which is included in this report.

Air Quality in Ribble Valley Borough Council

Breathing in polluted air affects our health and costs the NHS and our society billions of pounds each year. Air pollution is recognised as a contributing factor in the onset of heart disease and cancer and can cause a range of health impacts, including effects on lung function, exacerbation of asthma, increases in hospital admissions and mortality. In the UK, it is estimated that the reduction in healthy life expectancy caused by air pollution is equivalent to 29,000 to 43,000 deaths a year[1].

Air pollution particularly affects the most vulnerable in society, children, the elderly, and those with existing heart and lung conditions. Additionally, people living in less affluent areas are most exposed to dangerous levels of air pollution[2].

Table ES 1 provides a brief explanation of the key pollutants relevant to Local Air Quality Management and the kind of activities they might arise from.

Table ES 1 - Description of Key Pollutants

Pollutant	Description
Nitrogen Dioxide (NO_2)	Nitrogen dioxide is a gas which is generally emitted from high-temperature combustion processes such as road transport or energy generation.
Sulphur Dioxide (SO_2)	Sulphur dioxide (SO_2) is a corrosive gas which is predominantly produced from the combustion of coal or crude oil.
Particulate Matter (PM_{10} and $PM_{2.5}$)	Particulate matter is everything in the air that is not a gas. Particles can come from natural sources such as pollen, as well as human made sources such as smoke from fires, emissions from industry and dust from tyres and brakes. PM_{10} refers to particles under 10 micrometres. Fine particulate matter or $PM_{2.5}$ are particles under 2.5 micrometres.

[1] UK Health Security Agency. Chemical Hazards and Poisons Report, Issue 28, 2022.

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

The UK Health Security Agency Public Health Outcomes Framework collated by the Office for Health Inequalities and Disparities provides the best evidence on the impact of air pollution on Ribble Valley's population, the website has a health protection indicator that considers the fraction of mortality in each area attributable to particulate air pollution. The 2022 results (the most recent published) revealed that the mortality rate for England was 5.8%. The value for Ribble Valley was lower than the national level at 4.9% and lower than the Northwest Region of 5.6%. The information demonstrates that particulate air pollution is an important public health issue for the Ribble Valley population. Air pollution: fine particulate matter (new method - concentrations of total PM2.5) shows that the value for Ribble Valley 6.5µg/m³ is lower than the Northwest region of 7.5 µg/m³ and the England Average 7.8µg/m³

The results of the estimated background maps from the UK air website have been considered for both $PM_{2.5}$ and PM_{10} within the Ribble Valley area. No exceedance of the current air quality objective has occurred in Ribble Valley for both types of these particulates in 2023.

Currently Ribble Valley Borough Council Monitors Nitrogen Dioxide (NO_2) as this is a local air quality issue, associated with traffic; this is our primary monitoring focus.

Ribble Valley has added additional NO_2 tubes in the monitoring year of 2022. The previous monitoring programme was deemed to be too Clitheroe centric. The diffusion tube network was extended to incorporate the township of Longridge and the Village of Whalley. DT8 outside the Feildens Arms Mellor has been discontinued, and the monitoring in the Mellor area was moved to a nearby location which will see more passing traffic - DT10. Overall, a further 6 locations were added, meaning that the total number of monitoring locations totals 14 sites. New sites were chosen in Longridge as there has been significant residential development, both in the town and in the surrounding area. The road network outside of Longridge to the west has had changes in the nearby Preston area. The village of Whalley was selected for monitoring which is a busy village with considerable housing development and tourism, Whalley's nighttime economy is particularly strong. The NO_2 results for 2023 show no exceedances of the National Objective for the annual bias adjusted figures throughout the area, the highest and lowest site measurements being 27.6 µg/m³ and 8.5 µg/m³ respectively.

Levels of NO_2 over the last few years have been reducing, the monitoring period of 2023 has higher levels at DT9 up 1.5 µg/m³ a 6% increase, DT10 up 0.7 µg/m³ a 6% increase, DT12 up 0.8 µg/m³ a 3% increase and DT13 up 2.6 µg/m³ an 11% increase, compared to the 2022 levels. All other 10 locations have reduced values compared to the 2022 levels.

Although the increases are not ideal, the levels of increase on each location are well below the air quality objective for NO_2 for an annual bias adjusted mean. At DT9 in Read there had been roadworks in the area where the tube is located. DT10 is near BAE where there is planning development in and around the BAE site and DT12 and DT13 are both in Longridge where there has been road works in the local area on Derby Road so the increases may be due to local drivers finding an alternative traffic route. All levels of NO_2 compared to the 2021 dataset are reduced except for DT9. The 2020 dataset has not been considered being an anomaly due to the Covid pandemic.

Ribble Valley is an area where tourism is significant and of key importance to the local economy and there could have been a traffic increase as we move back to normality post Covid. On a positive note, all levels are lower than the pre-pandemic year of 2019, suggesting that improvements to vehicles on the road such as more petrol cars over diesel models, more hybrid cars and the move to electric vehicles are reducing the levels in accordance with the National trend.

Figure A.1 shows the graph representation of the levels from 2019 to 2023 using the data from Table A.4.

Ribble Valley has one Air Quality Management Area [AQMA] within the borough, located in Clitheroe, this is known as Whalley Road Clitheroe Number 1 declared in 2010 for exceedance of NO_2. Within the reporting year the concentration of NO_2 is below the objective for the concentration of NO_2.

It is important that work continues to maintain and improve the air quality within the Ribble Valley, given:

- The evidence on the harmful effects of both Particulate Matter and Nitrogen Dioxide.
- The Council's Ambition 3 *To help make people's lives safer and healthier* and Ambition 4 *To protect and enhance the existing environmental quality of our area* (Corporate Strategy 2019-2023).
- The Council's duties under the Local Air Quality Management regime.
- The significant housing and business development within the area.

To that end, Ribble Valley Borough Council will continue to identify measures to improve and maintain the air quality within the Borough, including ensuring developments do not adversely affect or significantly contribute to pollutant levels.

There have been no new major roads or industrial processes constructed within the reporting year that will have a significant impact on air quality within the Borough. There have been no noteworthy sources of increasing levels of NO_2 in the Borough. The major source of the pollutant NO_2 in the Ribble Valley Borough Council area is from traffic.

Sulphur Dioxide (SO_2) is not monitored by Ribble Valley as it was screened out historically as there is nothing in the local area which will elevate SO_2 levels over the objective.

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The Officer also maintains close working relations with the Environment Agency; Lancashire County Council, DEFRA, Planning, and consultancies to facilitate a coordinated approach to improve air quality.

Lancashire County Council are pursuing several strategies to improve air quality throughout the County, a summary of which is included in this report.

Actions to Improve Air Quality

Whilst air quality has improved significantly in recent decades, there are some areas where local action is needed to protect people and the environment from the effects of air pollution.

The Environmental Improvement Plan[3] sets out actions that will drive continued improvements to air quality and to meet the new national interim and long-term targets for fine particulate matter ($PM_{2.5}$), the pollutant of most harmful to human health. The Air

[3] Defra. Environmental Improvement Plan 2023, January 2023

Quality Strategy[4] provides more information on local authorities' responsibilities to work towards these new targets and reduce fine particulate matter in their areas.

The Road to Zero[5] details the Government's approach to reduce exhaust emissions from road transport through a number of mechanisms, in balance with the needs of the local community. This is extremely important given that cars are the most popular mode of personal travel, and most Air Quality Management Areas (AQMAs) are designated due to elevated concentrations heavily influenced by transport emissions.

Key actions the Council will be looking at over the next year include:

- Continuing with the now extended diffusion tube monitoring programme, including those within the AQMA.
- Continue to consider air quality for all relevant planning applications.
- Explore the requirements of a detailed assessment and undertake such measures with a view to revoke the AQMA which has not exceeded levels since 2016.
- Encourage greater use of public transport and alternative forms of travel, including the provision of electric vehicle recharging points through the planning system.
- We will continue to conduct the inspections and enforcement of permitted premises within the Borough under the Environmental Permitting Regulations.
- Continue to collaborate with partners in Public Health Lancashire, and across the Lancashire District authorities in the development and publication of the Lancashire Air Quality Documents.

- Undertake a detailed assessment of the AQMA with revocation in mind.
- The Council produced an Air Quality Action Plan as required by the Borough having an AQMA this work was undertaken and completed December 2023.
- Other actions the Council is taking, and the Lancashire County Council is reported in Table 2.2

[4] Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

[5] DfT. The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018

Conclusions and Priorities

The results from the 2023 monitoring programme and review of the government data have identified no areas of exceedances of the national objective values for any of the pollutants of concern inside or outside of the declared AQMA.

Levels of NO_2 over the last few years have been reducing in the Ribble Valley Area, the monitoring period of 2023 has higher levels at DT9 up 1.5 µg/m³ a 6% increase, DT10 up 0.7 µg/m³ a 6% increase, DT12 up 0.8 µg/m³ a 3% increase and DT13 up 2.6 µg/m³ an 11% increase, compared to the 2022 levels. All other 10 monitoring locations have reduced values compared to the 2022 levels.

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Ribble Valley is an area where tourism is significant and of key importance to the local economy and there could have been a traffic increase as we move back to normality post Covid. On a positive note, all levels are lower than the pre-pandemic year of 2019, suggesting that improvements to vehicles on the road such as more petrol cars over diesel models, more hybrid cars and the move to electric vehicles are reducing the levels in accordance with the National trend.

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Ribble Valley has one Air Quality Management Area, declared in 2010 for exceedance of NO_2. Within the reporting year the concentration of NO_2 is below the objective for the concentration of NO_2.

There have been no noteworthy sources of increasing levels of NO_2 in the Borough during 2023. The major source of the pollutant NO_2 in the Ribble Valley Borough Council area is from traffic.

Ribble Valley submitted an Air Quality Action Plan in December 2023.

The Council knows of no developments which should have an impact on air quality.

Local Engagement and How to get Involved

The public can get involved by helping to make informed choices about their method of transport. By choosing to make shorter journeys on foot or using cycling and public transport you can reduce your own emissions. Consider car sharing, getting a lift with others is a sociable way to save money and emissions, you can register on sites such as Lift share (https://liftshare.com/uk) to find others in your area.

Working from home reduces the need to travel into work and thus reduces emissions into town centres.

For longer journeys the bus or train can be a more economical and eco-friendly option.

When buying a new car think about fuel consumption and emissions data, the Vehicle Certification Agency (VCA) can help with this.

http://www.dft.gov.uk/vca/fcb/index.asp. You could consider a lower emission vehicle, for example an electric car or hybrid. Even choosing a Petrol car over a Diesel car will save emissions and help to improve air quality. The Council aims to support electric car use by provision of charging points in the area.

When driving there are certain smarter driving techniques that you can use to reduce your fuel consumption. For further eco driving tips the AA is a helpful source http://www.theaa.com/motoring_advice/fuels-and-environment/drive-smart.html

There is a Boiler upgrade scheme from the Energy saving trust which is a government grant for people in England and Wales who want to install a heat pump or biomass boiler.

Boiler Upgrade Scheme explained - Energy Saving Trust

These measures will improve air quality over a standard boiler system.

If you would like to get involved in the work being undertaken to tackle air pollution within Ribble Valley; or you would like more information on how you can help reduce your personal emissions then please contact the Environmental Health Department at Ribble Valley Borough Council via e-mail at environmental.health@ribblevalley.gov.uk

Please see Appendix F for ideas about how personal choices can help to improve air quality.

Local Responsibilities and Commitment

This ASR was prepared by the Environmental Health Department of Ribble Valley Borough Council with the support and agreement of the following officers and departments:

Mrs Nicola Berry – Environmental Health Officer

This ASR has been approved by:

Mr Andrew Dent Head of Environmental Health

This ASR has not been signed off by a Director of Public Health.

If you have any comments on this ASR, please send them to Environmental Health at:

Ribble Valley Council, Council Offices, Church Walk, Clitheroe BB7 2RA.

Telephone - 01200 425111

Email - EnvironmentalHealth@ribblevalley.gov.uk

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Figures

Tables

1 Local Air Quality Management

This report provides an overview of air quality in Ribble Valley Borough Council during 2023. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), 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 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 order to achieve and maintain the objectives and the dates by which each measure will be carried out. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by Ribble Valley Borough Council to improve air quality and any progress that has been made.

The statutory air quality objectives applicable to LAQM in England are presented in Table E.1.

2 Actions to Improve Air Quality

Whilst air quality has improved significantly in recent decades and will continue to improve due to national policy decisions, there are areas where local action is needed to improve air quality further.

The 2019 Clean Air Strategy[6] sets out the case for action, with goals even more ambitious than EU requirements to reduce exposure to harmful pollutants. The Road to Zero[7] sets out the approach to reduce exhaust emissions from road transport through several mechanisms; this is extremely important given that most Air Quality Management Areas (AQMAs) are designated due to elevated concentrations heavily influenced by transport emissions.

[6] Defra. Clean Air Strategy, 2019

[7] DfT. The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018

Key actions the Council will be looking at over the next year include:

- Continuing with the now extended diffusion tube monitoring programme, including those within the AQMA.
- Continue to consider air quality for all relevant planning applications.
- Explore the requirements of a detailed assessment and undertake such measures with a view to revoke the AQMA which has not exceeded levels since 2016.
- Encourage greater use of public transport and alternative forms of travel, including the provision of electric vehicle recharging points through the planning system.
- We will continue to conduct the inspections and enforcement of permitted premises within the Borough under the Environmental Permitting Regulations.
- Continue to collaborate with partners in Public Health Lancashire, and across the Lancashire District authorities in the development and publication of the Lancashire Air Quality Documents.

- Undertake a detailed assessment of the AQMA with revocation in mind.
- The Council need to work towards the Air Quality Action Plan December 2023.

Other actions the Council is taking, and the Lancashire County Council is reported in Table 2.2.

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or exceedance of an air quality objective. After declaration, the authority should prepare an Air Quality Action Plan (AQAP) within 18 months. The AQAP should specify how air quality targets will be achieved and maintained and provide dates by which measures will be conducted.

A summary of AQMAs declared by Ribble Valley Borough Council can be found in Table 2.1. The table presents a description of the one AQMA that is currently designated within Ribble Valley Borough Council.

Appendix D: Map(s) of Monitoring Locations and AQMAs provides maps of the AQMA and the air quality monitoring locations in relation to the AQMA. The air quality objectives pertinent to the current AQMA designation are as follows:

- NO_2 annual mean.

Ribble Valley Borough Council propose to revoke Whalley Road Clitheroe Number 1 as there have been no annual exceedances since 2016.

Table 2.1 – Declared Air Quality Management Areas

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	Level of Exceedance: Declaration	Level of Exceedance: Current Year	Number of Years Compliant with Air Quality Objective	Name and Date of AQAP Publication	Web Link to AQAP
Whalley Road Clitheroe Number 1	31st May 2010	NO2 Annual Mean	An area encompassing a number of residential properties at the junction of Whalley Road and Greenacre Street.	NO	45	Highest level 27.6 No exceedance	6 years	N/A	N/A

☒ **Ribble Valley Borough Council confirm the information on UK-Air regarding their AQMA(s) is up to date.**

☒ **Ribble Valley Borough Council confirm that all current AQAPs have been submitted to Defra.**

2.2 Progress and Impact of Measures to address Air Quality in Ribble Valley Borough Council

Defra's appraisal of last year's ASR concluded as follows:

Commentary

The report is well structured, detailed, and provides the information specified in the Guidance. The following comments are designed to help inform future reports:

1. The following formatting errors should be addressed:
    a. All text in Table A.4 should be given in black.
    b. Concentrations given in Table A.4 should be to the same number of decimal places, preferably one decimal place. Some values are shown to two decimal places, and others are whole numbers.
    c. No year of declaration has been provided in Table 2.1.
2. The Council have demonstrated their committed to ensuring good air quality within the Borough by expanding their network to cover multiple areas. The Council should continue reviewing and expanding their network to highlight any potential hotspots of poor air quality.
3. Useful figures have been provided for all diffusion tubes, and an additional figure has been given showing the whole monitoring network. Individual figure labels, a north arrow and scale bar could be provided on each figure for reference. The figure for DT13 may also benefit from being shown at a slightly larger scale.
4. Good discussion has been provided with regards to particulate matter. This includes using Defra modelled background concentrations to make assumptions on whether particulate matter concentrations are above the relevant objectives, and a discussion on the fraction of mortality attributable to particulate air pollution. The Council should continue these discussions in future ASRs to ensure that particulate matter does not become a concern in the future.
5. Clear trend graphs have been provided. It may be useful to highlight the level of exceedance on the trend graphs to further highlight compliance across the Borough.

Considering the appraisal from DEFRA the response to comments 1-5 are included below:

1a. All text in tables is in black for the 2024 submission.

1b. All values in tables have one decimal place for the 2024 submission.

1c. The year of declaration is present in Table 2.1 of the 2024 submission.

2. The Council is considering future areas of investigation for new monitoring locations in the Borough.

3. The diffusion tube maps have all been set at a scale of 1:500 for consistency a scale and North arrow has been included on each map. DT13 is at the same scale as other tubes for uniformity.

4. Particulate matter has been evaluated in this year's ASR

5. Trend Graphs- There has not been any exceedance of the maximum air quality objective the objective line has been incorporated into Figure 1 to highlight compliance in the Borough.

Ribble Valley Borough Council has taken forward a number of direct measures during the current reporting year of 2023 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2. 11 measures are included within Table 2.2, with the type of measure and the progress Ribble Valley Borough Council have made during the reporting year of 2023 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.2.

More detail on these measures can be found in their respective Action Plans Ribble Valley Borough Council Air Quality Action Plan 2023. Key completed measures are:

- Continuing with the now extended diffusion tube monitoring programme, including those within the AQMA.
- Continue to consider air quality for all relevant planning applications.
- Encourage greater use of public transport and alternative forms of travel, including the provision of electric vehicle recharging points through the planning system.
- We will continue to conduct the inspections and enforcement of permitted premises within the Borough under the Environmental Permitting Regulations.
- Continue to collaborate with partners in Public Health Lancashire, and

across the Lancashire District authorities in the development and publication of the Lancashire Air Quality Documents.

- Require Electric Vehicle Recharge points on all relevant planning applications.
- Raise awareness with Members, and the General public.
- Require cycle storage on all appropriate planning applications.
- Develop Lancashire wide Planning Guidance on Air Quality and Implement
- Travel initiative for schools.
- Encouraging the use of sustainable forms of travel
- Supporting the transition to Low emission vehicles
- Creating cleaner healthier road networks
- Embedding Air Quality into Local Policy
- Raising Awareness of Air Quality and increasing engagement

Ribble Valley Borough Council's priorities for the coming year are:

- Explore the requirements of a detailed assessment and undertake such measures with a view to revoke the AQMA which has not exceeded levels since 2016.

Ribble Valley Borough Council worked to implement these measures in partnership with the following stakeholders during 2023:

- Neighbouring Local Authorities
- Lancashire Highways
- Lancashire County Council Public Health
- Environment Agency
- DEFRA
- Planning Development control and Local Plans

The principal challenges and barriers to implementation that Ribble Valley Borough Council anticipates facing are lack of resources both within the Local Authority and partner organisations.

Progress on the following measures has been slower than expected due to:

- Brief time between report 2022 ASR and 2023 ASR, requirement to submit an AQAP in December 2023
- Lack of staff in the Department

Ribble Valley Borough Council anticipates that the measures stated above and in Table 2.2 will achieve compliance in Whalley Road Clitheroe Number 1. The AQMA needs to be revoked due to compliance for several years the delay in revocation being the Covid pandemic affecting the results of the monitoring, as 2020 and 2021 were anomalous data for NO_2.

Table 2.2 – Progress on Measures to Improve Air Quality

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
1	Require EVR points on all appropriate planning applications	Promoting Travel Alternatives	Other	2016	2032	Local Authority Environmental Health, Local Authority Planning Dept. Developers	Developers & highway infrastructure funding	YES	Partially Funded	£100k - £500k	Implementation	N/K	N/A	Ongoing	Lengthy Timescale
2	Raise awareness with Members, and public	Public Information	Via the Internet	2017	2032	Local Authority Environmental Health Department.	Local Authority	NO	Not Funded	< £10k	Implementation	N/K	N/K	Implementation on-going	Funding
3	Require cycle storage on all appropriate planning applications	Promoting Travel Alternatives	Other	2016	2032	Local Authority Environmental Health, Local Authority Planning Dept. Developers	Developers	NO	Not Funded	< £10k	Implementation	Reduced vehicle emissions	N/K	Implementation on-going	Financial
4	Develop Lancashire wide Planning Guidance on Air Quality and Implement	Policy Guidance and Development Control	Regional Groups Co-ordinating programmes to develop Area wide Strategies to reduce emissions and improve air quality	2016	2032	Policy Guidance and Environmental Health	Local Authority	NO	Not Funded	< £10k	Implementation	Improved Air Quality	N/K	Implementation on-going	Local Planning Department, government policy on Planning
5	Travel initiative for schools	Other	Other	2020	2022	Lancashire County Council.	Lancashire County Council	NO	Not Funded	< £10k	Implementation	Reduced vehicle emissions	N/K	Implementation on-going	Lengthy Timescale
6	Encouraging the use of sustainable forms of travel	Promoting Travel Alternatives	Promotion of cycling	2022	2028	Lancashire County Council.	Lancashire County Council	NO	Not Funded		Implementation	Reduced AQ Emissions	N/K	Implementation on-going	Lengthy Timescale
7	Supporting the transition to Low emission vehicles	Promoting Low Emission Transport	Other	2022	2032	Lancashire County Council.	Lancashire County Council	NO	Funded	£1 million - £10 million	Implementation	Reduced AQ emissions	N/K	Implementation on-going	Trial period with new technology
8	Creating cleaner healthier road networks	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	2022	2022	Lancashire County Council.	Lancashire County Council	NO	Not Funded		Planning	Reduced AQ Emissions	N/K	Planning	Lengthy Timescale

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9	Embedding Air Quality into Policy	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2022	2022	Lancashire County Council.	Lancashire County Council	NO	Not Funded		Planning	Reduced AQ Emissions	N/K	Planning	Lengthy Timescale
10	Raising Awareness and increasing engagement	Public Information	Via the Internet	2022	2022	Lancashire County Council.	Lancashire County Council	NO	Not Funded		Implementation	Reduced AQ Emissions	N/K	Implementation on-going	Public Awareness of site
11	Increase monitoring points for NO2 in LA	Public Information	Other	2022	2032	Local Authority Environmental Health	Local Authority Environmental Health	NO	Not Funded	< £10k	Planning	Reduced AQ Emissions	N/K	Implementation on-going	Staff resources

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

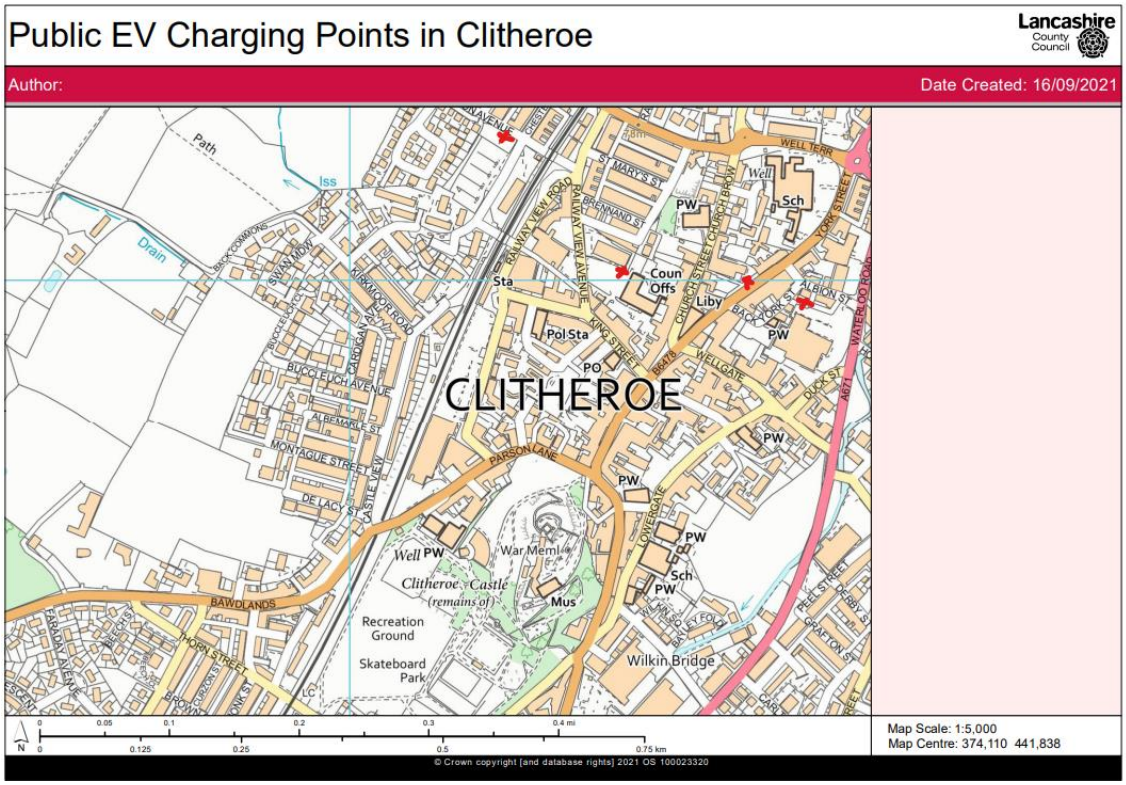
As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy[8], local authorities are expected to work towards reducing emissions and/or concentrations of fine particulate matter ($PM_{2.5}$)). There is clear evidence that $PM_{2.5}$ (particulate matter smaller 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

Ribble Valley Borough Council is taking the following measures to address $PM_{2.5}$:

- The inclusion of $PM_{2.5}$ assessment within Air Quality Assessments conducted through the planning process.
- Encouraging the use of alternative travel options e.g., cycling, walking, and use of public transport.
- Provision of Electric Vehicle Recharging points on appropriate new developments.
- The provision of EVR points on Council car parks: 10 bays capable of 11kW at the Chester Avenue long-stay car park and 4 bays capable of 22kW at the Railway View Avenue short-stay car park. These are in addition to the charging points provided by Lancashire CC in York Street and the points for customer use in the Tesco car park.
- The Officer involved in authoring this report has attended recent workshops with Defra regarding amendments and creation of new Smoke Control areas, increasing the size and number of smoke control areas in the Borough is an area of evaluation for the Environmental Health team.
- DEFRA's Air Quality Strategy 2023 discusses actions for Local Authorities Domestic burning of solid fuels accounted for 27% of PM2.5 in 2021. When smoke complaints come in consideration and appropriate advice is made to homeowners on lighting their appliance, maintaining their flue, and using appropriate ready to burn fuel. About HETAS: Our Schemes, Accreditation & Training - HETAS

[8] Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

- Raise awareness of the harmful effects of $PM_{2.5}$ using the Public Health Indicators which demonstrate that Ribble Valley suffers from an adult mortality attributed to particulate matter of 4.9%.



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

This section sets out the monitoring undertaken within 2023 by Ribble Valley Borough Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2019 and 2023 to allow monitoring trends to be identified and discussed.

A review of the area has been undertaken to assess any changes that have occurred over the last 12 months and the potential for these to impact either negatively or positively on-air quality.

Significant residential development has been granted planning permission in some areas of the borough. Air quality reports have been prepared for most of these larger developments with most indicating a negligible impact. Monitoring of the Borough using 14 diffusion tubes was undertaken during 2023 and the results are detailed below.

There have been no major road improvements or new roads or significant changes in traffic flow over the last year, with no significant changes to the railway network throughout the borough. There are no bus depots or significant ports within the borough. The airport at BAE systems Samlesbury is no longer used due to significant construction.

No new industrial sources, including biomass plants have been identified which are likely to make a significant contribution to pollutant emissions.

3.1 Summary of Monitoring Undertaken

3.1.1 Non-Automatic Monitoring Sites

Ribble Valley Borough Council undertook non-automatic (i.e. passive) monitoring of NO_2 at 14 sites during 2023.

Table A.1 in Appendix A presents the details of the non-automatic 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 bias, annualisation (where the annual mean data capture is below 75% and greater than 25%), and distance correction. Further details on adjustments are provided in Appendix C.

3.2.1 Nitrogen Dioxide (NO_2)

Error! Reference source not found. and Table A.2 in Appendix A compare the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40µg/m^3. Note that the concentration data presented 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).

For diffusion tubes, the full 2023 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.

Error! Reference source not found. in Appendix A compares the ratified continuous monitored NO_2 hourly mean concentrations for the past five years with the air quality objective of 200µg/m^3, not to be exceeded more than 18 times per year.

There are no exceedances of the Air Quality Objective for NO2 for the Ribble Valley nor has there been since 2016.

3.2.2 Particulate Matter (PM_{10})

Ribble Valley Borough Council does not monitor PM_{10} levels. However. a check of the Defra background maps indicates no likely exceedances of the objective levels for PM10.

3.2.3 Particulate Matter ($PM_{2.5}$)

Ribble Valley Borough Council does not monitor $PM_{2.5}$ levels. However, an evaluation of the Defra background maps has been undertaken when authoring this report for $PM_{2.5}$ levels.

3.2.4 Sulphur Dioxide (SO_2)

Ribble Valley Borough Council does not monitor SO_2 levels.

Appendix A: Monitoring Results

Table A.1 – Details of Non-Automatic Monitoring Sites

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
DT1	31 Bolland Prospect	Urban Background	374789	441513	NO_2	No	0	6.8	No	2.0
DT2	Royal British Legion 1	Roadside	374234	441291	NO_2	Yes AQMA 1	0	1.8	No	2.0
DT3	Royal British Legion 2	Roadside	374234	441291	NO_2	Yes AQMA 1	0	1.8	No	2.0
DT4	Greenacre Street	Roadside	374222	441315	NO_2	Yes AQMA 1	0	1.5	No	2.0
DT5	49 Whalley Road	Roadside	374219	441256	NO_2	Yes AQMA 1	0	1.6	No	2.0
DT6	85 Whalley Road	Roadside	374175	441153	NO_2	No	0	1.6	No	2.0
DT7	Entrance at John Wall Court	Roadside	373910	441501	NO_2	No	10	4.1	No	2.0
DT9	7/9 Whalley Road Read	Roadside	364027	431179	NO_2	No	13.6	1.0	No	2.0
DT10	Mellor Brook	Roadside	376878	434509	NO_2	No	0	2.3	No	2.0
DT11	1 Derby Road Longridge	Roadside	363907	431271	NO_2	No	15.1	2.1	No	2.0
DT12	1 Preston Road Longridge	Roadside	360165	437576	NO_2	No	0	1.5	No	2.0
DT13	22 Market Place Longridge	Roadside	360109	437110	NO_2	No	0	2.5	No	2.0
DT14	2 Clitheroe Road Whalley	Roadside	360627	437217	NO_2	No	0.7	2.7	No	2.0

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
DT15	1-3 Accrington Road Whalley	Roadside	373376	436455	NO_2	No	13.5	3.6	No	2.0

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.2 – Annual Mean NO_2 Monitoring Results: Non-Automatic Monitoring (µg/m^3)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2023 (%) [2]	2019	2020	2021	2022	2023
DT1	374789	441513	Urban Background	100.0	100.0	10.0	9.1	8.5	9.1	8.5
DT2	374234	441291	Roadside	100.0	100.0	33.6	25.9	27.6	28.1	27.6
DT3	374234	441291	Roadside	100.0	100.0	34.5	26.6	28.1	26.2	26.1
DT4	374222	441315	Roadside	100.0	100.0	25	18.8	21.2	21.1	20.2
DT5	374219	441256	Roadside	100.0	100.0	32.8	25.5	26.7	27.1	25.6
DT6	374175	441153	Roadside	100.0	100.0	26.5	21.4	22.5	21.9	21.8
DT7	373910	441501	Roadside	100.0	100.0	16.0	13.9	15.3	14.9	14.5
DT9	376878	434509	Roadside	91.7	91.7	-	-	22.5	23.6	25.1
DT10	363907	431271	Roadside	100.0	100.0	-	-	-	10.9	11.6
DT11	360165	437576	Roadside	100.0	100.0	-	-	-	20.3	19.6
DT12	360109	437110	Roadside	100.0	100.0	-	-	-	23.1	23.9
DT13	360627	437217	Roadside	91.7	91.7	-	-	-	21.2	23.8
DT14	373376	436455	Roadside	100.0	100.0	-	-	-	19.9	19.4
DT15	373353	436158	Roadside	100.0	100.0	-	-	-	23.9	23.7

☐ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.**

☒ **Diffusion tube data has been bias adjusted.**

☒ **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 correction.**

Notes:

The annual mean concentrations are presented as µg/m^3.

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

NO_2 annual means exceeding 60µg/m^3, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined**.

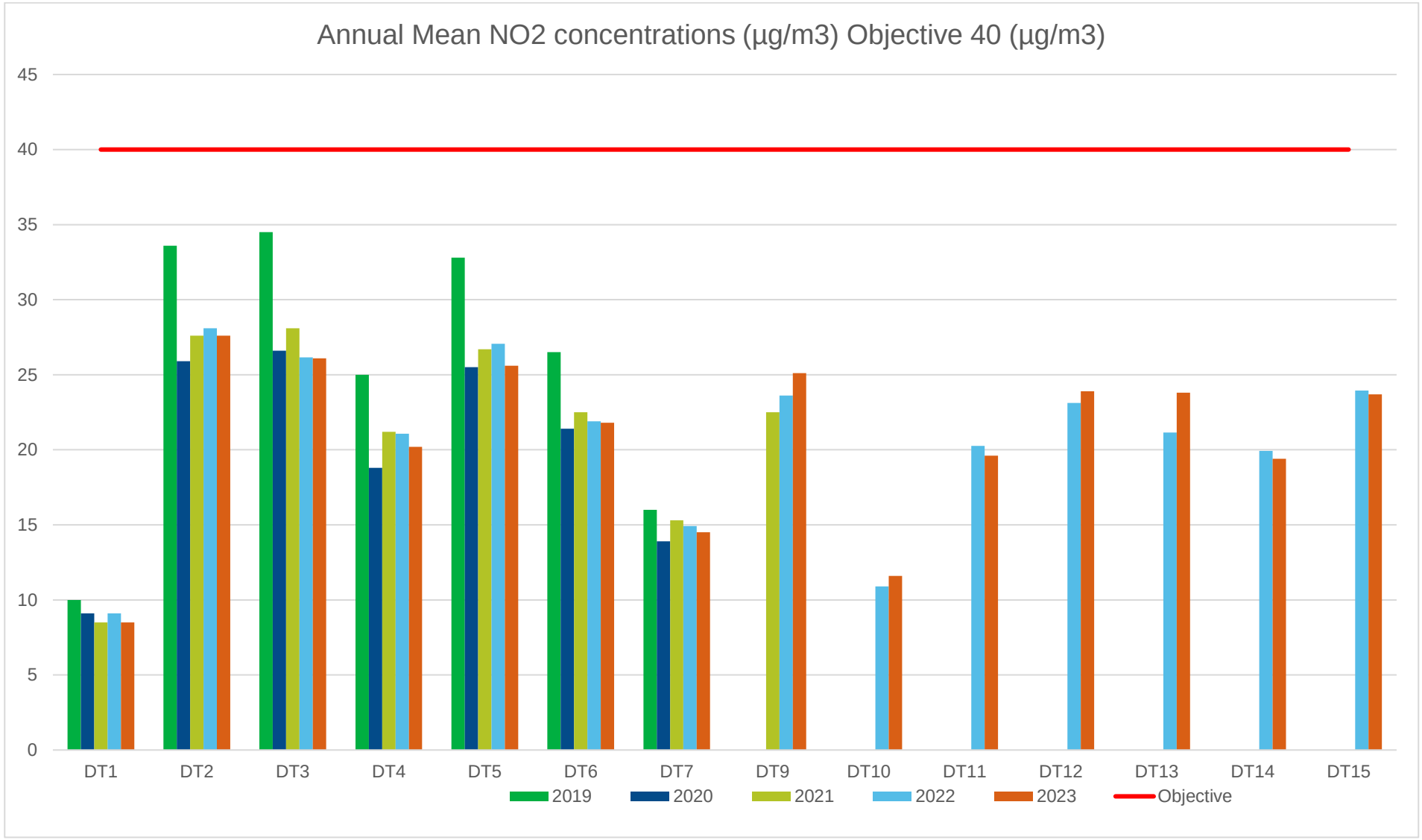
Means for diffusion tubes have been corrected for bias. All means have been "annualised" as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

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

(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%).

Figure A.1 – Trends in Annual Mean NO_2 Concentrations



Appendix B: Full Monthly Diffusion Tube Results for 2023

Table B.1 – NO_2 2023 Diffusion Tube Results ($\mu g/m^3$)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.83)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT1	374789	441513	16.4	14.3	11.0	9.8	6.5	6.4	6.4	6.1	9.1	10.4	12.9	12.6	10.2	8.5	N/A	
DT2	374234	441291	30.7	39.6	37.3	39.1	28.9	33.7	25.0	27.9	36.0	31.3	39.6	31.0	33.3	27.6	N/A	
DT3	374234	441291	35.7	37.5	32.6	36.3	29.6	31.5	23.3	26.4	32.1	30.0	33.1	28.5	31.4	26.1	N/A	
DT4	374222	441315	28.8	28.8	25.9	24.2	20.3	19.9	18.0	19.9	25.8	25.4	30.8	24.1	24.3	20.2	N/A	
DT5	374219	441256	35.4	36.3	34.5	31.5	26.0	29.0	24.7	24.9	33.7	27.8	35.8	31.4	30.9	25.6	N/A	
DT6	374175	441153	28.8	32.4	29.7	30.0	21.7	24.6	20.1	20.5	27.3	27.0	33.1	20.6	26.3	21.8	N/A	
DT7	373910	441501	23.0	22.5	18.1	18.4	12.8	11.6	13.3	13.5	17.3	18.0	23.2	18.4	17.5	14.5	N/A	
DT9	376878	434509	36.9	34.4	30.7	27.2	22.9	22.1	24.9	23.5	-	**50.6**	31.8	27.4	30.2	25.1	N/A	
DT10	363907	431271	13.4	20.0	14.3	14.5	13.1	12.0	9.5	11.6	12.3	15.0	15.9	16.5	14.0	11.6	N/A	
DT11	360165	437576	28.9	27.3	23.1	25.8	20.5	21.4	19.5	20.2	22.9	24.5	24.7	24.2	23.6	19.6	N/A	
DT12	360109	437110	34.3	29.8	32.8	30.7	25.3	31.8	23.9	21.9	30.2	28.9	30.4	25.2	28.8	23.9	N/A	
DT13	360627	437217	32.4	33.7	28.5	25.3	25.8	24.2	24.3	-	29.8	27.1	35.4	29.1	28.7	23.8	N/A	
DT14	373376	436455	35.5	31.7	25.3	21.2	17.4	15.5	18.0	16.5	21.4	20.7	29.9	27.8	23.4	19.4	N/A	
DT15	373353	436158	30.5	35.7	27.8	29.3	29.1	30.1	23.0	24.4	28.0	28.3	29.4	26.6	28.5	23.7	N/A	

☒ **All erroneous data has been removed from the NO_2 diffusion tube dataset presented in Table B.1.**

☒ **Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22.**

☐ **Local bias adjustment factor used.**

☒ **National bias adjustment factor used.**

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

☒ **Ribble Valley Borough Council confirm that all 2023 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.**

Notes:

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in **bold**.

NO_2 annual means exceeding 60µg/m^3, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined**.

See Appendix C for details on bias adjustment and annualisation.

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

New or Changed Sources Identified Within Ribble Valley Borough Council During 2023

Ribble Valley Borough Council has increased the monitoring programme within the reporting year of 2023.

Additional Air Quality Works Undertaken by Ribble Valley Borough Council During 2023

Ribble Valley Borough Council have produced an AQAP December 2023

The Officer involved in authoring this report has attended recent workshops with Defra regarding amendments and creation of new Smoke Control areas, increasing the size and number of smoke control areas in the Borough. Smoke control areas is an area of evaluation and review for the Environmental Health team.

QA/QC of Diffusion Tube Monitoring

50% TEA in acetone NO_2 passive diffusion tubes are obtained from Gradko Environmental, St Martins House, 77 Wales Street, Winchester, and Hampshire, SO23 0RH with no change in supplier throughout the monitoring period.

Nitrogen Dioxide diffusion tubes are exposed monthly in accordance with the annual calendar of exposure periods provided by Defra.

A national bias adjustment factor was applied to the annual mean for the diffusion tubes results. The bias used was from the National Diffusion Tubes spreadsheet version number 03/24 an adjustment factor of 0.83 was applied to the 2022 data.

Diffusion Tube Annualisation

All diffusion tube monitoring locations within Ribble Valley Borough Council recorded data capture of 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2023 ASR have been corrected for bias using an adjustment factor. Bias represents the overall tendency of the diffusion tubes to under or over-read relative to the reference chemiluminescence analyser. LAQM.TG22 provides guidance regarding the application of a bias adjustment factor to correct diffusion tube monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tube results with data taken from NO_x/NO_2 continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

Ribble Valley Borough Council have applied a national bias adjustment factor of 0.83 to the 2023 monitoring data. A summary of bias adjustment factors used by Ribble Valley Borough Council over the past five years is presented in

Table C.1.

Table C.1 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	National	03/24	0.83
2022	National	06/23	0.82
2021	National	09/22	0.82
2020	National	09/22	0.84
2019	National	09/22	0.89

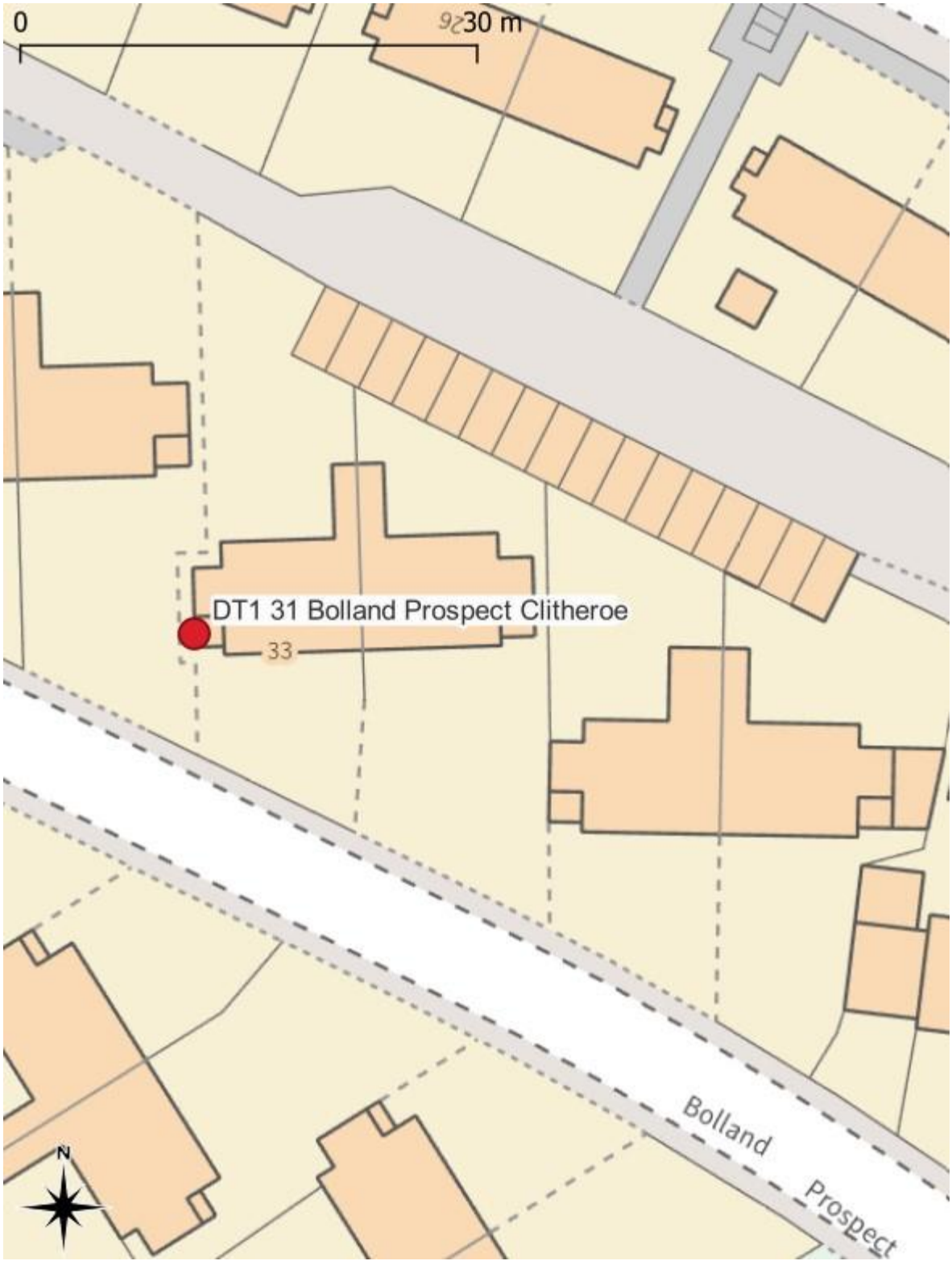
NO_2 Fall-off with Distance from the Road

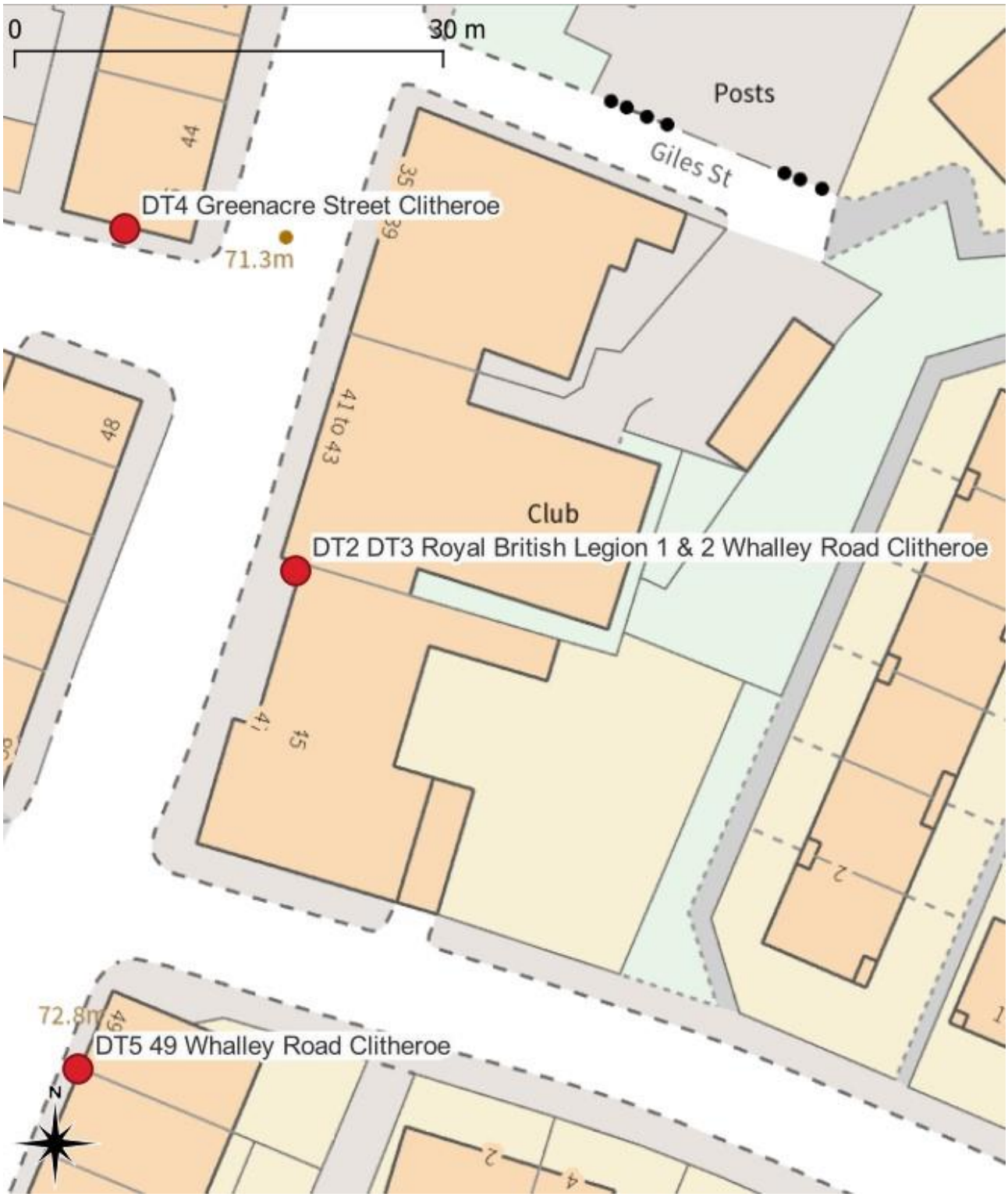
Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO_2 concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/NO_2 fall-off with distance calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean NO_2 concentrations corrected for distance are presented in Table B.1.

No diffusion tube NO_2 monitoring locations within Ribble Valley Borough Council required distance correction during 2023.

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

Figure D.1 – Map of Non-Automatic Monitoring Sites

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Giles St
DT4 Greenacre Street Clitheroe
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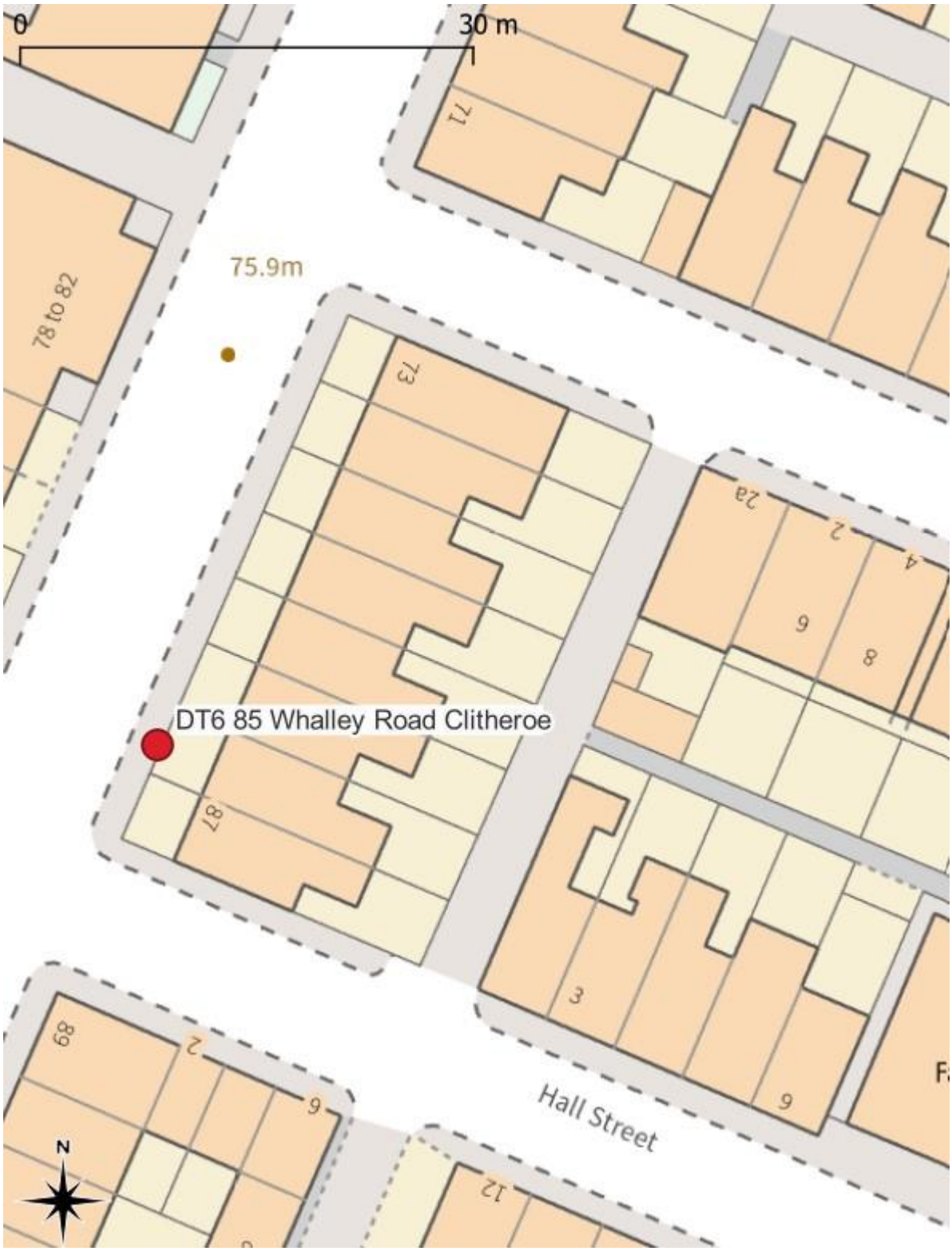
Club
DT2 DT3 Royal British Legion 1 & 2 Whalley Road Clitheroe
72.8m
DT5 49 Whalley Road Clitheroe
N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DT7 Entrance to John Wall Court Clitheroe
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DT9 7/9 Whalley Road Read
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Sharples
Court
Stanley St
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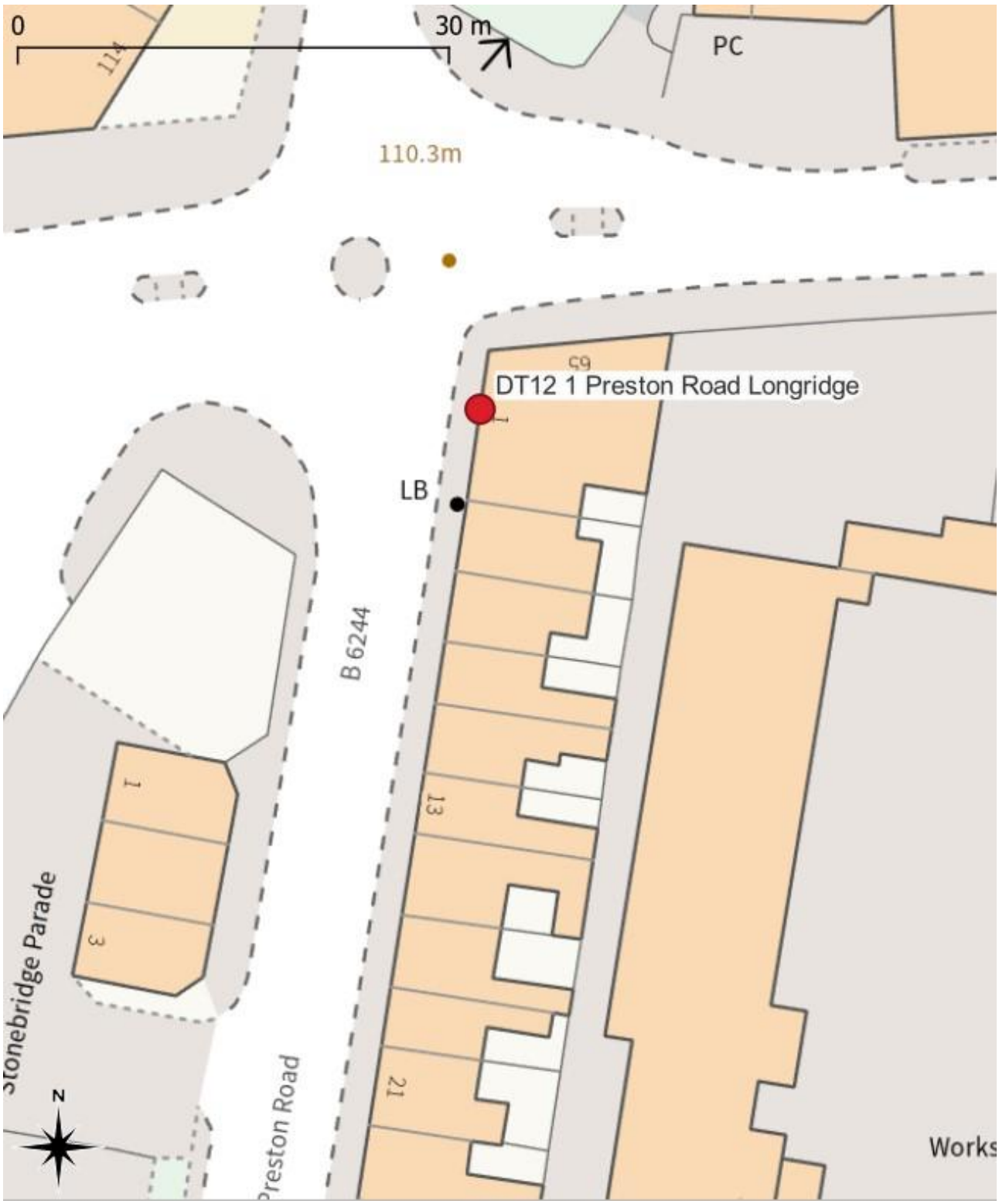
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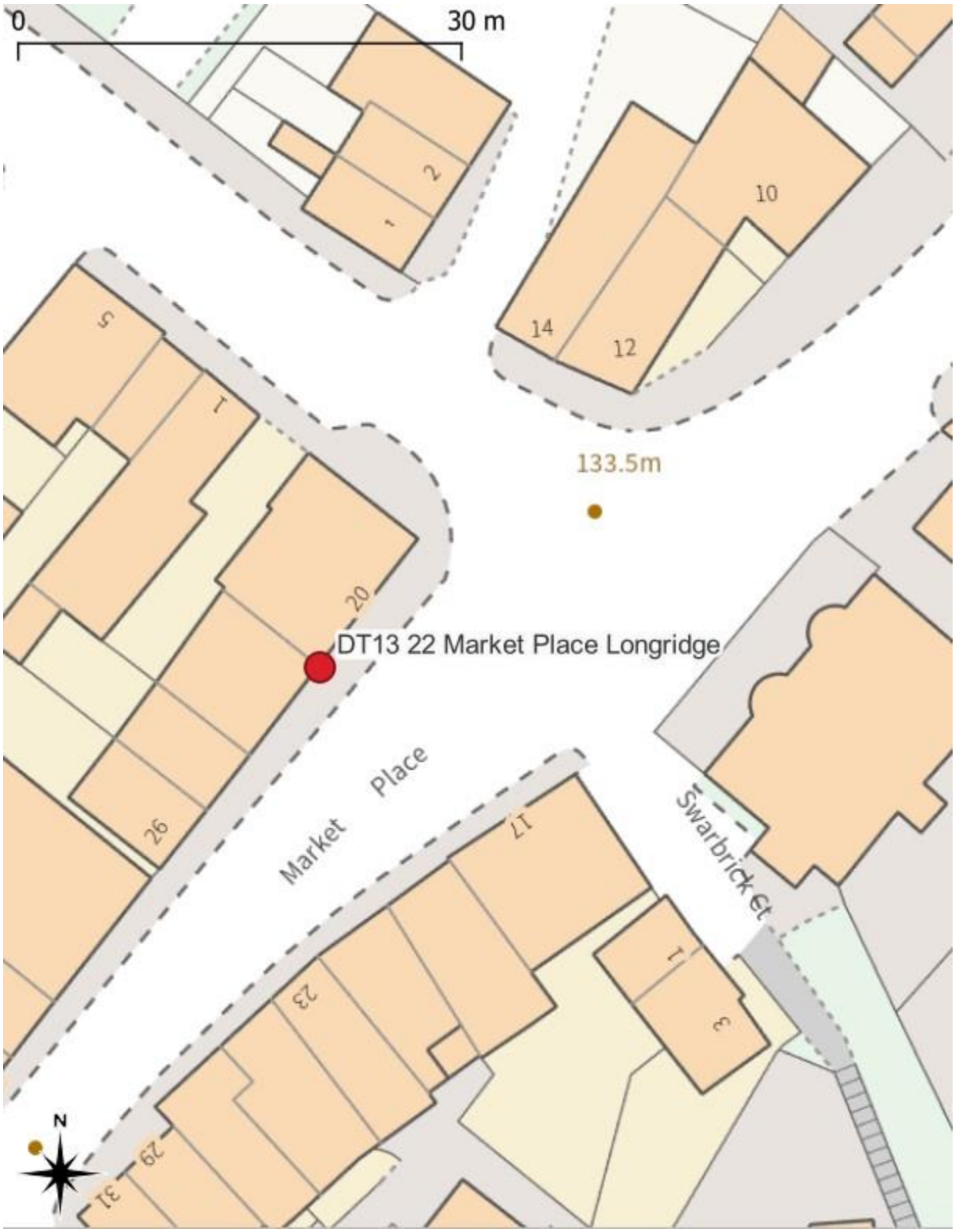
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Market Place
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Swarbrick Et
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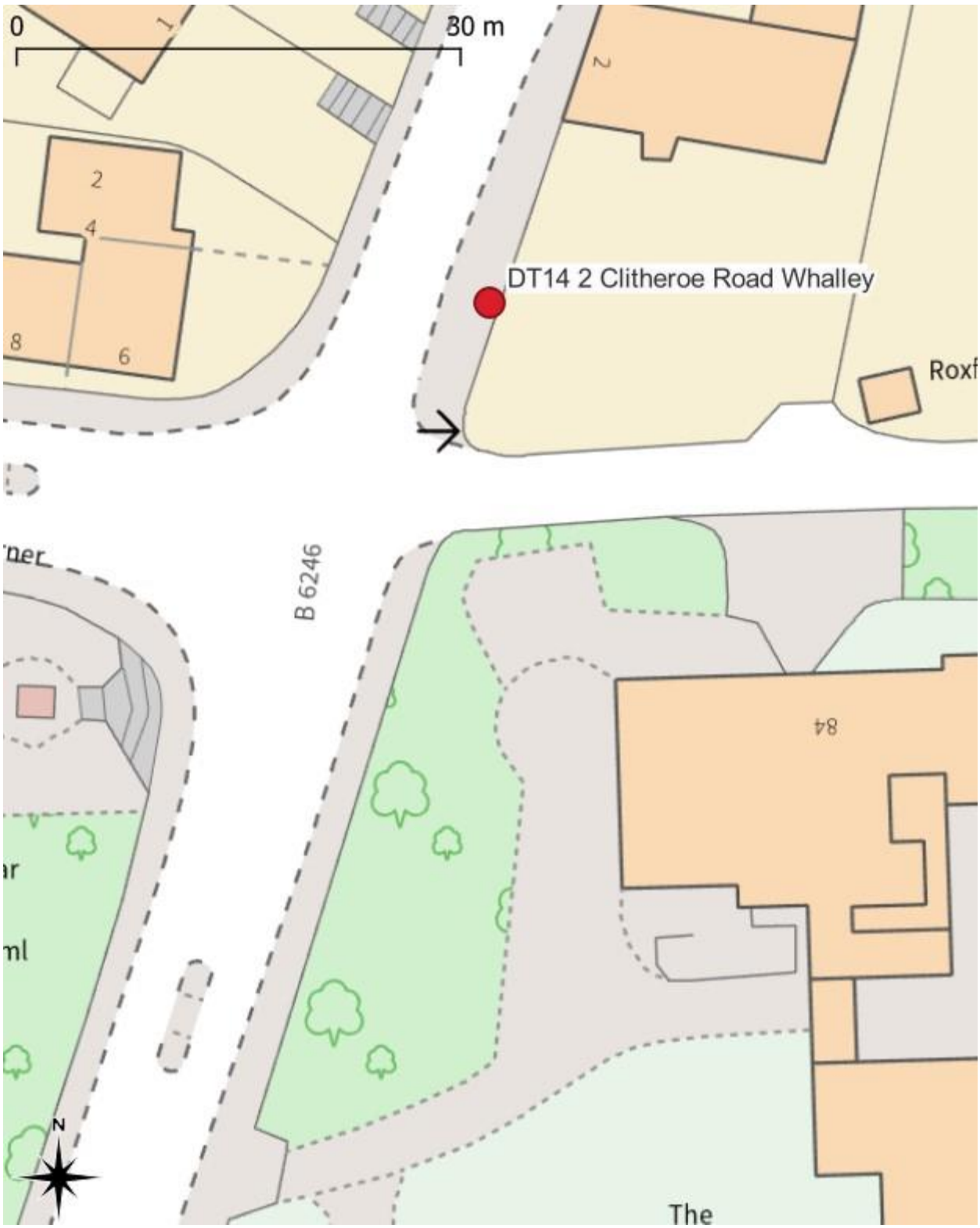
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B 6246
N


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King Street
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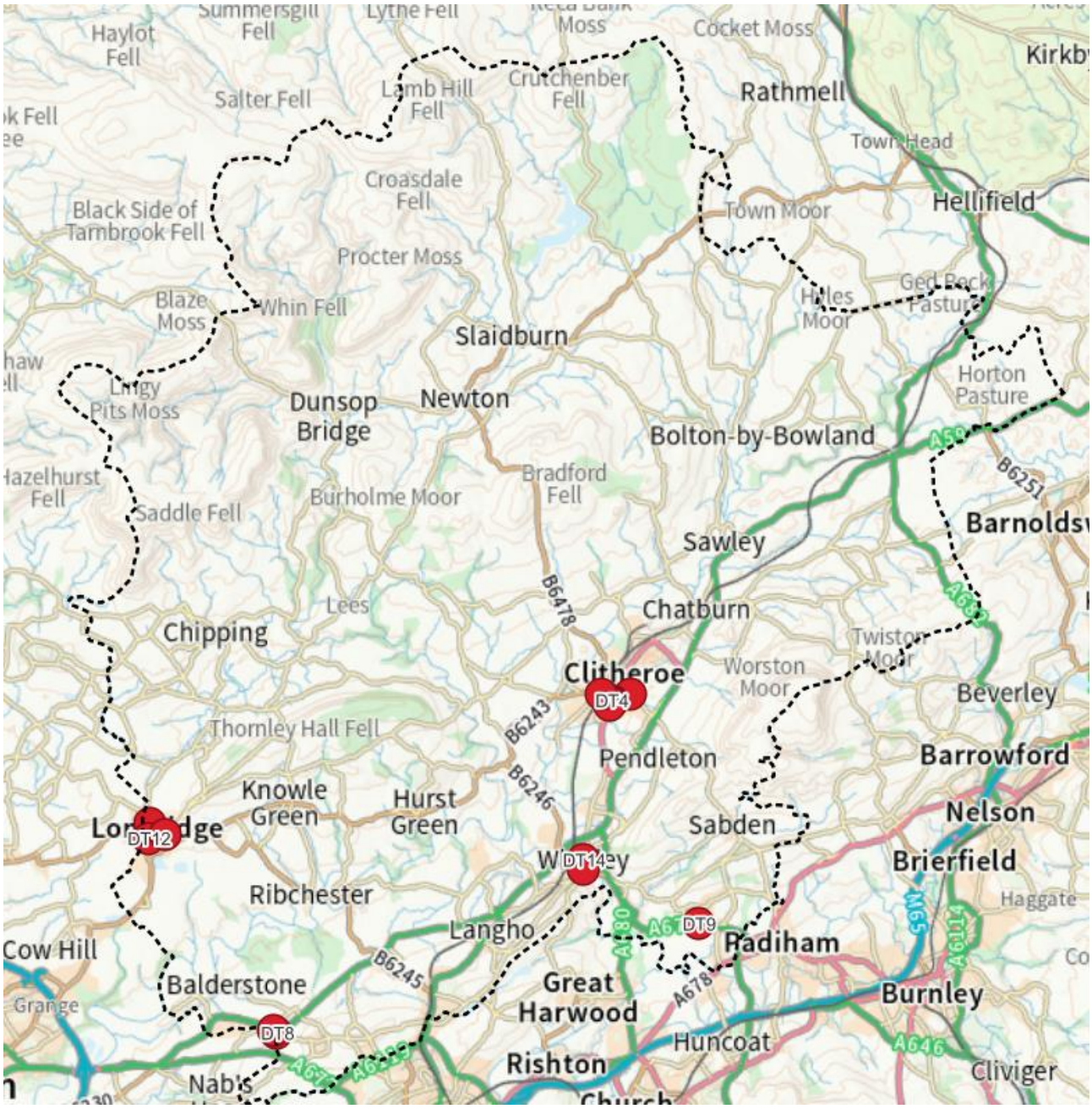
62
Hotel
Car Park
55
1
DT15 1-3 Accrington Road Whalley
B 6246
5
N


Haylot Fell
Summersgill Fell
Lythe Fell
Cocket Moss
Salter Fell
Lamb Hill Fell
Crutchenber Fell
Rathmell
Croasdale Fell
Black Side of Tarnbrook Fell
Town Moor
Hellifield
Procter Moss
Blaze Moss
Whin Fell
Slaidburn
Dunsop Bridge
Newton
Bolton-by-Bowland
Horton Pasture
Bradford Fell
Burholme Moor
Saddle Fell
Sawley
Barnoldsw
Lees
Chatburn
Chipping
Clitheroe
DT4
Worston Moor
Beverley
Thornley Hall Fell
Pendleton
Barrowford
Knowle Green
Hurst Green
Sabden
Nelson
DT12
DT14
Brierfield
Ribchester
Haggate
Langho
DT9
Radiham
Cow Hill
Balderstone
Great Harwood
Burnley
DT8
Huncoat
Rishton
Cliviger
Nab's
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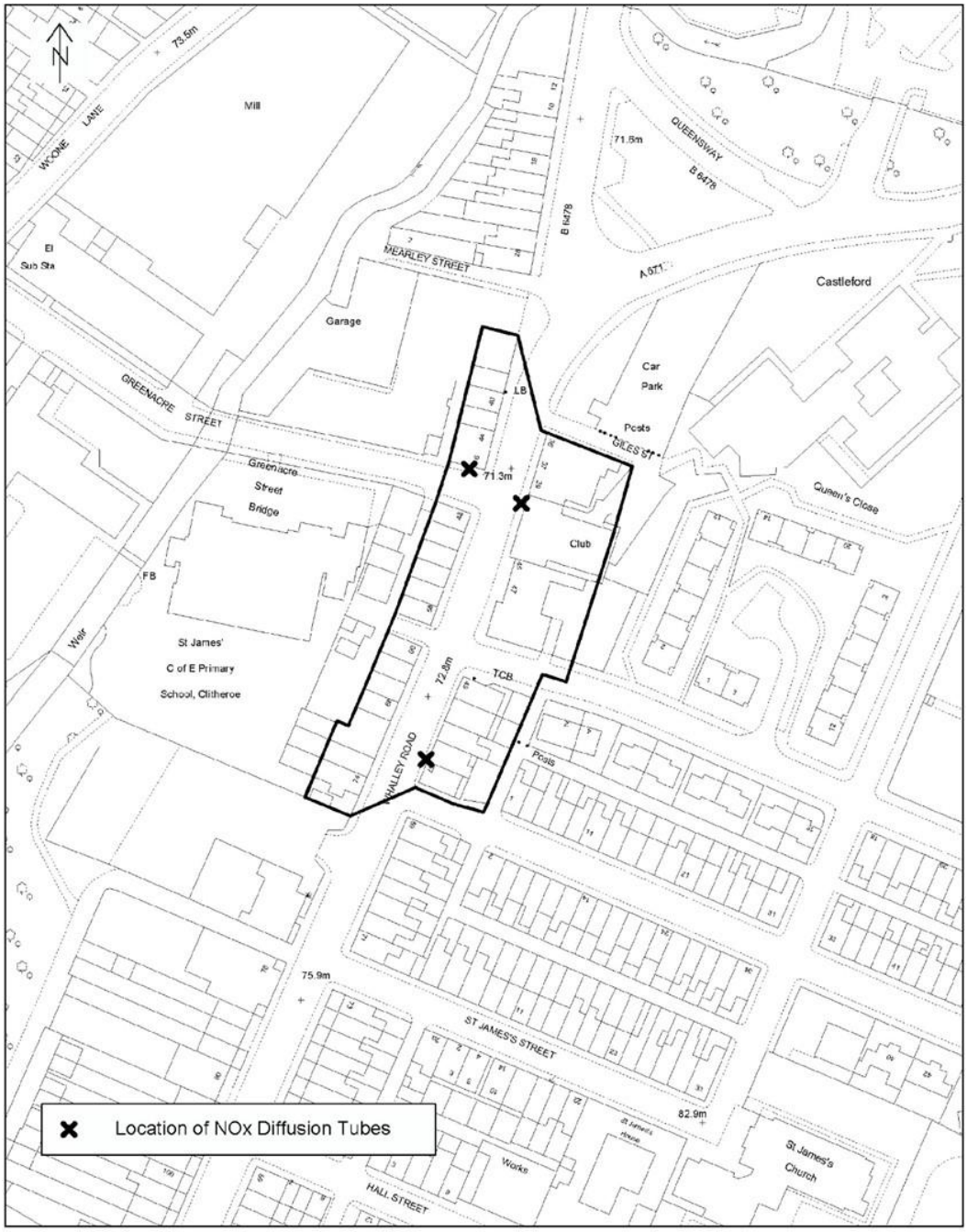
A646

Figure D.2- Map of AQMA



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[9]

Pollutant	Air Quality Objective: Concentration	Air Quality Objective: Measured as
Nitrogen Dioxide (NO_2)	200µg/m^3 not to be exceeded more than 18 times a year	1-hour mean
Nitrogen Dioxide (NO_2)	40µg/m^3	Annual mean
Particulate Matter (PM_{10})	50µg/m^3, not to be exceeded more than 35 times a year	24-hour mean
Particulate Matter (PM_{10})	40µg/m^3	Annual mean
Sulphur Dioxide (SO_2)	350µg/m^3, not to be exceeded more than 24 times a year	1-hour mean
Sulphur Dioxide (SO_2)	125µg/m^3, not to be exceeded more than 3 times a year	24-hour mean
Sulphur Dioxide (SO_2)	266µg/m^3, not to be exceeded more than 35 times a year	15-minute mean

[9] The units are in microgrammes of pollutant per cubic metre of air (µg/m^3).

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	Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways
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 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

- Local Air Quality Management Technical Guidance LAQM.TG22. August 2022. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
- Local Air Quality Management Policy Guidance LAQM.PG22. August 2022. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
- Chemical hazards and poisons report: Issue 28. June 2022. Published by UK Health Security Agency
- Air Quality Strategy – Framework for Local Authority Delivery. August 2023. Published by Defra.
- Air Quality Monitoring Air Quality Modelling - Defra, UK
- Public Health Outcomes Framework- Public Health Outcomes Framework - OHID (phe.org.uk)