2025 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: June 2025

Information	Wirral Council Details
Local Authority Officer	Victoria Chadderton
Department	Environmental Health
Address	P.O Box 290, Brighton Street, Wallasey, Wirral, CH27 9FQ
Telephone	0151 691 8254
E-mail	victoriachadderton@wirral.gov.uk
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Local Responsibilities and Commitment

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

- John Entwistle, Principal Forward Planning Officer.
- Hannah Austin, Place and Partnership Manager.
- Kate Pierce, Principal Economic Development Lead.
- Lee Parker, Regeneration Delivery Project Manager.
- Julie Barnes, Lead Commissioner, Strategic Transport and Technology.
- Colin Irlam, Strategic Transport Project Manager.
- Steve Atkins, Senior Network Operations Manager.
- James Gibbins, Senior Network Manager.
- Ann Rice, Principal Officer, Transport Maintenance.
- Rhian Hughes, Road Safety Strategy Manager.
- Emma Foley, Strategic Housing Services Senior Manager.
- Nathan Lodewyk, Housing and Investment Principal Officer.
- Katy Taylor, Healthy Homes Team Leader.
- Andy Price, Building Control and Technical Support Services Manager.
- Mathew Humble, Head of Parks and Countryside.
- Anthony Bestwick, Parks, Allotments, Countryside Assistant Senior Manager
- Margaret O'Donnell, Licensing Manager.
- Lucy Northey, Climate Emergency Manager.
- Helen Stott, Public Health Principal Officer.

This ASR has been approved by:

- Jackie Davidson, Public Health Consultant and
- Deeta Cooper, Environmental Health Senior Manager

This ASR has been signed off by Dave Bradburn, Director of Public Health.

If you have any comments on this ASR, please send them to Victoria Chadderton at:

PO Box 290, Brighton Street, Wallasey, Wirral, CH27 9FQ

0151 691 8254

victoriachadderton@wirral.gov.uk

Executive Summary: Air Quality in Our Area

Air Quality in Wirral 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.

Air pollution particularly affects the most vulnerable in society; children, the elderly, and those with existing heart and lung conditions. Low-income communities are also disproportionately impacted by poor air quality, exacerbating health and social inequalities.

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.

Wirral Council undertakes monitoring and reporting of air quality across the borough. This monitoring is in the form of real-time monitoring from the 2 Automatic Urban Rural Network (AURN) stations in the borough, operated by the Department of Environment, Food and Rural Affairs' (DEFRA), 5 'indicative' real-time monitors and 56 passive monitoring

locations across the borough. As part of the reporting process, the Authority must assess what actions they are taking now and what planned action, if any, should be taken in the future.

Wirral Council has not declared any Air Quality Management Areas (AQMA) in the borough, as monitoring results have not indicated any breaches of the UK Air Quality Objective levels for air pollution. The main pollutants of concern in Wirral are Nitrogen Dioxide and Particulate Matter.

Nitrogen Dioxide

Within Wirral, Nitrogen Dioxide is monitored in real-time at 2 DEFRA AURN stations and 5 'indicative' real-time sensors. In addition, Nitrogen Dioxide is also monitored using passive diffusion tubes. During 2024, monitoring was undertaken at 56 sites across Wirral. There were no identified exceedances of the annual mean Nitrogen Dioxide national objective of 40µg/m^3 at these 56 passive diffusion monitoring sites. There were also no exceedances of the annual mean National Objective for Nitrogen Dioxide levels, or the hourly mean National Objective of 200µg/m^3 not to be exceeded more than 18 times a year for Nitrogen Dioxide levels monitored at the two AURN real-time air pollution monitoring stations. The results from the 5 'indicative' real-time sensors show that no exceedances of the annual mean Nitrogen Dioxide national objective were identified at these monitoring stations.

Further details on the results for 2024 are provided in Appendix A and Appendix C. The monitoring during 2024 has not identified locations where a detailed assessment or the declaration of an air quality management area will be required.

Wirral's Local Air Quality Management programme has tailored monitoring locations to include those areas identified as traffic 'hot spots.' Areas that may be affected by housing and / or commercial developments have also been considered. This focus is determined using DEFRA's Nitrogen Dioxide modelling data, local intelligence, including an air quality modelling report, commissioned as part of the production of the Local Plan, historical data, information obtained from the Authority's sustainable transport team and the Merseyside Atmospheric Emissions Inventory.

A monitoring location review was undertaken at the end of 2023, to determine whether monitoring was still being undertaken in the most relevant locations. Several information sources were fed into the review including those listed above. Areas that may be impacted by future developments were also considered.

Following this review, during 2024, all fifty-six existing monitoring sites were retained. A further passive diffusion tube monitoring review was carried out in December 2024. Following this review forty-nine monitoring locations were retained for 2025, seven sites were removed and seven new sites were added. The sites that were removed are W32/23, W34/19, W38/19, W42, W44/23, W47/22 and W49. The new monitoring sites are W32/25, W34/25, W38/25, W42/25, W44/25, W47/25 and W49/25. It is recognised that there is a need to closely monitor air quality in the borough and utilise all opportunities to improve air quality. A further review will be undertaken in 2025.

Particulate Matter

The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 has implemented new legally binding $PM_{2.5}$ targets, each with an interim target:

- 10µg/m^3 annual mean concentration $PM_{2.5}$ nationwide by 2040, with an interim target of 12µg/m^3 by January 2028.
- 35% reduction in average population exposure by 2040, with an interim target of a 22% reduction by January 2028, both compared to a 2018 baseline.

NB this is a single figure for England, calculated using data from all relevant AURN monitoring sites.
The AURN located in Tranmere monitors for background levels of Particulate Matter (PM_{10}) and Particulate Matter ($PM_{2.5}$). The AURN in Birkenhead was upgraded to monitor $PM_{2.5}$ in December 2024, so additional monitoring results will be available in ASR 2026. The Tranmere AURN data for PM_{10} has demonstrated that during 2024, there have been no exceedances of the annual mean PM_{10} objective or PM_{10} daily mean concentrations air quality objective of 50µg/m^3, not to be exceeded more than 35 times per year.

The Tranmere AURN data for $PM_{2.5}$ has demonstrated that between 2019 and 2024 Wirral has seen a small reduction in $PM_{2.5}$ levels. The $PM_{2.5}$ concentration for 2024 was an annual mean of 7.0 µg/m^3. This is above the current World Health Organisation Air Quality Guideline level of 5µg/m^3 but below both the interim target of 12µg/m^3 (to be achieved by 2028) and the annual Mean Concentration Target 10µg/m^3 (to be achieved by 2040), set out in The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023.

There were five real-time ‘indicative’ sensors monitoring PM_{10} and $PM_{2.5}$ during 2024. These sensors are in:

- Birkenhead

- Eastham
- Liscard
- Poulton
- Upton

The results from this indicative monitoring show that no exceedances of the annual mean PM_{10} objective were identified, but all five indicative monitors measured levels of $PM_{2.5}$ over the current World Health Organisation Air Quality Guideline level of 5µg/m^3. No sites exceeded the interim target of 12µg/m^3 (to be achieved by 2028) but 4 out of 5 are above the annual Mean Concentration Target 10µg/m^3 (to be achieved by 2040), set out in The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023.The highest annual mean figure for $PM_{2.5}$ was 12µg/m^3 (Wallasey Road, Liscard) and the lowest was 7.9 µg/m^3 (Ivy Street, Birkenhead). It must be noted that these results are indicative only. They are not approved for use by local authorities for compliance monitoring according to TG22, however they can provide indicative air quality data to support our work in reducing air pollution.

Wirral Local Plan

The Wirral Local Plan 2022-2040 was adopted on 31st March 2025. The adopted Local Plan designates eleven Regeneration Areas across the Settlement Areas of the borough. The Regeneration Areas will deliver a significant proportion of planned growth over the plan period. Eight of these Regeneration Areas are in the Birkenhead 2040 Framework area. The three remaining are designated at Liscard, New Brighton and New Ferry.

The Regeneration of Wirral

Wirral Council's comprehensive regeneration vision sets out to deliver more than 17,000 new homes and 6,000 new jobs over the next 20 years. It is based on the Birkenhead 2040 Framework, a 20-year plan which outlines the vision and ambition for the transformational regeneration of Birkenhead. The council has secured substantial government funding in the last few years to transform Birkenhead plus parts of Wallasey and New Ferry through regeneration to support and enhance local communities. The work will support infrastructure improvements and town centre intervention, creating new neighbourhoods and homes and encouraging inward investment and job creation, with the aim of driving up economic growth and delivering improved prospects and prosperity for Wirral residents. Key projects include the docks area in Birkenhead and Wallasey, known

as Wirral Waters, the proposed £150 million regeneration of Birkenhead town centre and Hind Street Urban Village.

A series of Masterplans and Neighbourhood Frameworks have been produced and were published for public consultation prior to adoption. They can be viewed via the council's web site at https://www.wirral.gov.uk/business/regeneration/masterplans

Regeneration Projects

- **The Left Bank**

  There is a regeneration programme along the Left Bank of the River Mersey stretching from New Brighton to Rock Ferry. This includes projects such as:

  - **Hind Street Urban Village**

    This project will see the development of a substantial brownfield site of approximately 12 hectares, with the intention to bring 1,600 new homes to Birkenhead, supporting Wirral Council's 2022-2040 Local Plan. A hybrid planning application was recommended for approval by the Council's Strategic Applications Sub-Committee in January 2025 subject to the completion of a Section 106 legal agreement.

    Wirral Council, Ion and other stakeholders will deliver a low-carbon urban village that will provide a sustainable residential-led neighbourhood, close to both the town centre and the two railway stations.

    The phased development, to span over a decade, will create a new vibrant neighbourhood that will directly connect to and support the resurgence of the town centre. The site enabling works and creation of a linear park at Dock Branch South are due to commence in early 2026 and the delivery of new homes is expected from 2028 onwards.

  - **Birkenhead**

    The regeneration of Birkenhead town centre, as Wirral's principal town, involves several catalyst projects within the regeneration programme. This includes:

    - A new commercial district and the provision of approximately 150,000 square metre, high-quality, flagship lettable floorspace in two BREEAM (Building Research Establishment Environmental Assessment Method) rated "good"

new offices. The Mallory building is currently best in class in the Northwest and is already having an impact, driving footfall into the town centre and raising the bar when it comes to the standard and quality of design.

- New housing, as part of the Council's joint venture with regeneration specialist Muse. Subject to planning approval, this will see approximately 300 homes in the town centre commence on site over the next 18 months, with more in the pipeline.
- New public realm and active travel routes.

- **Wirral Waters**

  There is significant regeneration being undertaken around the docks area in Birkenhead and Wallasey, known as Wirral Waters. Working with Peel L&P, the Council has made significant progress in bringing forward one of the largest regeneration areas in the UK in this location. New housing is complemented by a new college campus with a focus on construction training, new BREEAM excellent office accommodation, and improved streetscape and active travel routes, which provide for a mixed-use waterfront neighbourhood.

- **Liscard**

  Liscard is now one of fifty-five projects across the country to have been selected to receive cash from the round three of Levelling Up grants which total £1,105 million. Wirral Council had bid for Levelling Up Funding in July 2022 and was initially unsuccessful, but the Government has looked again at the plans submitted by the local authority for the town centre. The programme will focus on improved public realm, delivery of affordable housing on the Seaview Road Car Park site, a property improvement scheme and the enhancement of community facilities.

  Liscard is now in line to receive £10.7 million Levelling Up funding as part of what will be a major boost for the town and local traders.

- **New Ferry**

  There is a regeneration plan for New Ferry, following a gas explosion in March 2017, which caused significant damage to the town centre. The master plan incorporates residential development across three key sites in the centre.

  Construction of phase one of the regeneration scheme is at an advanced stage and anticipated to complete by October 2025. This consists of 34, 1 and 2 bedroomed apartments. Planning permission has also been granted for the development of the

second part of the regeneration programme on Woodhead Street and part of New Chester Road. This will involve a further 43 new affordable homes which have been designed to include sustainability and energy efficiency measures. Construction works are expected to begin in the autumn of this year and will complete in 2027.

A highway and environmental improvement scheme have also been approved which involves the renewal of the public realm and pedestrianised area within the town centre. This £5.5 million scheme will begin later this year and includes:

- A new public car park with approximately 54 spaces.
- A high-quality public realm, which prioritises pedestrians and cyclists.
- Traffic calming measures, incorporating hard landscaping to discourage and slow down vehicles.
- New planting and seating to create an inviting and attractive environment.
- Additional CCTV to deter anti-social behaviour.

By being involved in local planning policy formulation, proposed developments and in the decision-making process on formal planning applications, Environmental Health, along with other colleagues from across the council, can help scrutinise plans to enable them to provide advice on how future developments should help to address the Local Air Quality Management Objectives.

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.

Below is a brief summary of the core actions that have been or are being undertaken, to improve air quality in Wirral.

Management of Local Air Quality

Wirral Council carries out its local air quality management duties by monitoring for pollution, assessing pollution levels and taking action to improve local air quality. We are also currently working in partnership with Liverpool John Moores University to undertake research into indoor air quality.

Air Quality Strategy

Wirral Council has implemented an Air Quality Strategy 2024 – 28, which provides a framework for future action to improve air quality within Wirral. It is consistent with national guidelines and assists the council to achieve its objective of improving the air quality within Wirral to help to better the environment and the health and well-being of all residents and visitors to the area. The strategy also assists the Council in preparedness for the 2040 particulate matter targets, as outlined in the Environmental Targets (Fine Particulate Matter) (England) Regulations 2023.

This strategy identifies five key areas for action, which are:

- Reduce emissions from transport
- Improve indoor air quality
- Reduce the impact from housing development and regeneration
- Reduce domestic, commercial, industrial and agricultural emissions
- Raise public awareness and encourage behaviour change

The Strategy's implementation plan is driving forward actions to target the five key priority areas and is a live document which is updated accordingly.

Wirral Council Air Quality Steering Group

The Wirral Air Quality Steering Group meets quarterly and co-ordinates the Council's obligation to manage air quality and identifies and seeks to resolves any issues arising from delivering the implementation plan for the Air Quality Strategy.

Project to Reduce Particulate Emissions from Domestic Burning.

Wirral Council obtained funding from DEFRA in 2023, to support a project to improve air quality by reducing particulate emissions from domestic burning at source, targeted mainly at wood burning stoves but also considering other domestic burning. This project enabled Wirral to work towards meeting the targets for $PM_{2.5}$ set out in The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023.

The project aimed to reduce emissions of particulate matter at source, through a variety of initiatives and interventions aimed at suppliers and installers of solid fuel appliances, maintenance professionals, solid fuel, wood and biomass suppliers, households, and allotment holders.

The project had two main objectives:

1. to reduce particulate matter from domestic burning at source, through an information and education campaign
2. to deliver an information and awareness campaign to provide residents, particularly those more vulnerable to the health effects of air pollution, with the knowledge to protect themselves from air pollution.

Work on the 'Breathe Better' project commenced in August 2023. Campaigns launched in November 2023 and September 2024 focused solely on domestic burning and encouraging best burning practices with three key messages:

1. Use dry, seasoned wood
2. Burn less
3. Stay on top of general maintenance including getting your chimney swept at least once a year and have a working carbon monoxide monitor.

In March 2024, a further campaign was launched with four key messages that featured in a campaign animation and accompanying assets:

1. At home, only burn when necessary, use non-toxic cleaning products and keep your home well ventilated.
2. Where you can, avoid peak traffic times and walk along quieter routes, away from the kerb.
3. When stationary in your car, turn your engine off, if safe to do so. Everyone is affected by idling engine fumes.
4. Where you can, walk, wheel, or take public transport as an alternative to driving.

A public survey was conducted in September 2023 and gathered data from 1,538 Wirral residents. 38% of respondents either agreed or strongly agreed that burning indoors at home can have a negative impact on health.

34% of respondents used solid fuel such as wood or coal to heat their home (with most using it to heat some or most of their home). The top three reasons for burning at home were finance related – to avoid putting the heating on, to save money and to control how much oil/gas/electricity they use.

A final evaluation survey was conducted during November and December 2024, to which there were 234 respondents. The evaluation of responses concluded that:

- 35% recalled seeing a campaign about air pollution or domestic burning, the majority recalled seeing information on social media.
- In total, all campaigns combined generated over 4 million impressions and 36,657 website clicks.
- 64% of respondents reported no change in burning behaviour, with many saying they already felt that they adhered to best burning practice. This is in line with 50% saying that they already follow best burning practice.
- Of those who said they had changed their behaviours, 12% said they now use drier, seasoned wood and 7% reported burning less. This is a positive step to achieving long-term behaviour change.

Wirral Climate Change Strategy

Climate change has become an even more urgent priority since the latest evidence was presented to the United Nations (UN) by the Intergovernmental Panel on Climate Change. Wirral Council declared an environment and climate emergency in July 2019. Wirral Councils climate change strategy, Cool 2, seeks to keep within a local carbon budget,

compliant with the United Nations' Paris Agreement and anticipates reaching net-zero carbon emissions in Wirral by 2041. The strategy should provide positive benefits for local air quality, as local objectives are met. The strategy includes an objective for a "complete transition to fossil fuel free local travel by around 2030". Currently the strategy is being updated by the partners and is due for publication in July 2025.

The Council's Environment and Climate Emergency Policy and Environment and Climate Emergency Action Plan (ECEAP), set the ambitious but achievable target of the council and its entity being 'net zero carbon' by 2030. The action plan has recently been reviewed and will deliver on 3 of the 13 Environment and Climate Emergency (ECE) policies:

- Supporting an increase in the use of walking, wheeling, and cycling.
- Working to support an increase in public transport use.
- Securing investment to support the necessary shift to ultra-low carbon vehicles.

Conclusions and Priorities

Wirral has no AQMA's and no exceedances of the national objectives for Nitrogen Dioxide were identified during 2024, at any monitoring location. There are 56 passive monitoring sites that have been in use between 2023 and 2024. 3 of these sites form a co-location study and for this reason, analysis of these results are not included. Of the 53 sites in place for both 2023 and 2024, 8 sites showed increased concentrations of Nitrogen Dioxide from 2023 to 2024, 1 showed no change in concentrations and 44 sites showed a reduction in concentrations. It is noted that some of these increases and reductions are very small.

The data obtained from the two AURN's located in Wirral shows that there have been no exceedances of the national objectives for Nitrogen Dioxide. The data obtained from the 5 real-time indicative monitors show that there have been no exceedances of the national objectives for Nitrogen Dioxide (e.g. annual mean and hourly objectives).

The AURN data for PM_{10} and $PM_{2.5}$ has demonstrated that there have been no exceedances of the annual mean PM_{10} objective or the PM_{10} daily mean concentrations air quality objective of 50µg/m^3, not to be exceeded more than 35 times per year. It also shows no exceedances of the $PM_{2.5}$ annual mean objective.

The results of the five indicative real-time sensors show that there have been no exceedances of the annual mean PM_{10} objective or the PM_{10} daily mean concentrations air quality objective of 50µg/m^3, not to be exceeded more than 35 times per year. It also

shows no exceedances of the $PM_{2.5}$ annual mean objective. All five indicative monitors measured levels of $PM_{2.5}$ over the current World Health Organisation Air Quality Guideline level and also above the new annual Mean Concentration Target (to be met by 2040). It must be noted that the results from these 5 monitors are only indicative. The monitors are not approved for use by local authorities for compliance monitoring according to TG22, however they can provide indicative air quality data to support our work in reducing air pollution.

The results of approved monitoring methods have not identified any exceedances of the National Objectives, which would require the declaration of an Air Quality Management Area. Organisations including the Royal Society of Physicians, the World Health Organisation and the National Institute for Health and Care Excellence tell us that there are no safe levels of air pollution. The Chief Medical Officer for England, states that Air pollution remains the most important environmental threat to health, with impacts throughout the life course. Global and national exposure threshold target levels are being reduced to reflect these statements. It is therefore recognised that there is a need to closely monitor air quality in the borough and utilise all opportunities to improve air quality.

The Air Quality priorities for the council are as follows:

- To continue to drive forward Wirral's Air Quality Strategy 2024-2028.
- To fully utilise the planning system, in accordance with guidance, to effectively promote air quality.
- To continue to robustly monitor air quality in the borough, to ensure the concentrations are within the National objectives.
- To regularly review air pollution monitoring locations, to reflect the most up to date information e.g. traffic levels and emission sources, to provide a broad understanding of air quality across the borough and meaningful air quality data that can be used as part of the planning application process (e.g. baseline data for air quality impact assessments submitted as part of planning applications).
- To continue to monitor the impact of air quality on the health of Wirral residents, by regularly reviewing the Joint Strategic Needs Assessment Air Quality chapter.
- To continue to work with our partners to encourage and enable increased number of journeys to be undertaken by walking, wheeling, and cycling and to make public transport cleaner and easier to use.

- To continue to deliver our programmes to increase safe active travel and to make public transport cleaner and easier to use.
- To seek opportunities to increase public participation and public engagement to raise awareness of air pollution and inform Wirral's residents how they can help to reduce air pollution and reduce their exposure to it. Particularly seeking opportunities to raise awareness of:
    - Wirral's 'Breathe better' campaign, aimed at informing residents how they can reduce their exposure to air pollution by implementing small changes to their daily life and
    - Wirral's 'You're the key' campaigns, aimed at reducing the number of idling vehicle engines and help improve local air quality.
- To capitalise and support new and changed behaviours e.g. increased numbers of journeys being undertaken by active modes and public transport, which may positively influence better air quality.

The main challenges to achieving these priorities are:

- Challenges with public acceptability of some active travel and public realm projects, noting this is also a national and regional issue and that it can present challenges when developing and designing schemes given there is often very mixed views. To support mitigation of this, Wirral Council is looking to undertake co-design and develop projects with communities, where funding and timescales allows.
- The benefits of active travel networks and electric vehicle networks will only be fully realised once full networks are in place, therefore, initially, usage may be significantly lower than what will be achievable longer term.
- Making the best use of the available resources.

How to get Involved

The council is keen to maintain engagement regarding air pollution and the actions that can be taken to reduce exposure and improve air quality.

The council has engaged with the local communities through the 'Domestic Burning' campaign to deliver an information and awareness campaign to provide residents, particularly those more vulnerable to the health effects of air pollution, with the knowledge to protect themselves from air pollution.

Opportunities to further engage with our local communities through the Public Health 'Community Champions' programme are currently in progress.

The council's website provides information in relation to air quality and signposts local residents to information on air quality, including the main governing legislation. It also provides the latest monitoring results for the borough, in addition to links to further information and data. The Wirral Intelligence Service Joint Strategic Needs Assessment (JSNA) on outdoor air quality provides a summary of key pollutants, the impact on health and priority actions in Wirral. The JSNA was updated in 2022. There is a dedicated Air Quality page on Wirral Health and Wellbeing Knowledge hub, which includes an interactive map of all monitoring locations, with information on the latest monitoring results.

Residents can access 'Breathe better' advice on Wirral Council's website about how they can help reduce their exposure to air pollution by implementing small changes to their daily life. This could include car sharing (e.g. when driving to and from work), walking or cycling rather than driving, particularly for short journeys and reducing vehicle emissions by not letting vehicle engines idle (i.e. switching off a vehicle engine when it is stationary / parked). Residents can contact the council directly for further information on air quality.

Residents can obtain further information on air pollution from websites such as the Clean Air Hub. They can also join local community groups such as, but not limited to, Wirral Environmental Network.

Clean Air Day 2024 and 2025

For Clean Air Day 2024, members of Environmental Health and the Climate Change team visited West Kirby Concourse and Birkenhead Market to speak to our residents about air pollution, particularly:

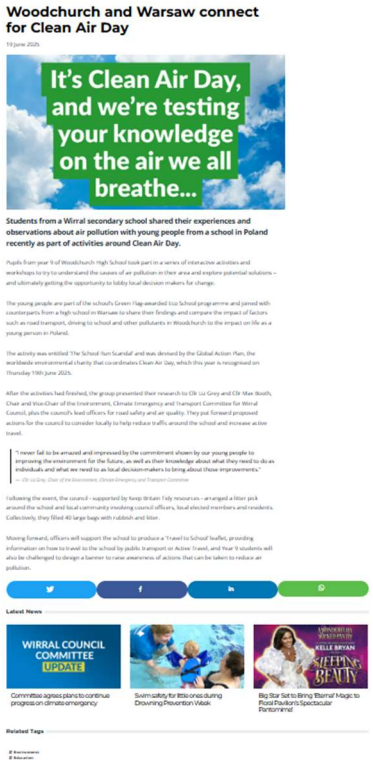
- wood burning and its impact on air quality
- indoor air quality
- the impact of idling engines on air quality
- our 'Breathe Better' campaign, and
- general information on the air quality in Wirral.

and engage them in a quiz to test their knowledge.

For Clean Air Day 2025, Wirral Council built on the 2024 event by using social media to reach a wider audience, highlighted the work that Woodchurch High School has been undertaking, in partnership with Global Action Plan and Wirral Council to raise awareness

about air pollution with their pupils and encourage pupils to actively travel to school or use public transport and to reduce traffic levels outside the school. The Council also posted an online Air Quality quiz to help raise public awareness with our residents.

Example Images from the Clean Air Day Quiz and the Newspaper article



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1 Local Air Quality Management

This report provides an overview of air quality in Wirral Council during 2024. 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 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 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 Wirral 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

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 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 carried out.

Wirral Council currently does not have any declared AQMAs. A local Air Quality Strategy is in place to prevent and reduce polluting activities. The Local Air Quality Strategy is available at www.wirral.gov.uk/environmental-problems/pollution-control/wirrals-air-quality-strategy-2024-2028.

2.2 Progress and Impact of Measures to address Air Quality in Wirral Council

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

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. This is a very good ASR containing a lot of detail about measures being undertaken by Wirral Metropolitan Borough Council to address air quality including the measures being undertaken to address $PM_{2.5}$. No further improvements can be recommended.

   Action: None required.

2. It is commented that the Council replied to last year's comments and included the improvements in this year's ASR.

   Action: None required.

3. The inclusion of tables showing the percentage changes in NO_2 concentrations from 2021 to 2022 as well as the changes in concentrations from 2018 to 2022 is welcomed. These tables help to show the trends observed at these monitoring sites clearly.

   Action: Updated tables included in ASR 2025.

4. A clear statement has been provided that the monitoring has been undertaken in line with the 2023 diffusion tube monitoring calendar published by Defra. This is appreciated for clarity.

   Action: Updated statement included in ASR 2025.

Progress with Measures

Wirral Council has taken forward a number of direct measures during the current reporting year of 2024 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.1. 52 measures are included within Table 2.1, with the type of measure and the progress Wirral Council have made during the reporting year of 2025 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.1.

More detail on these measures can be found in their respective Action Plans or strategies

- City Region Sustainable Transport Settlement (CRSTS) 2022/23 to 2026/27
- Combined Authority Transport Plan (CATP) programme for 2024/25
- Cool2 Climate Change Strategy 2019 (currently being updating to Cool3)
- Liverpool City Region Road Safety Strategy 2022
- Wirral Community Safety Strategy 2021- 2026
- Wirral working together - A Council Plan for 2023 - 2027
- Places for People Strategy 2023
- Core Active Travel Network 2024
- Parking Strategy 2023
- The Local Plan 2022-2040
- Electric Vehicle Infrastructure Strategy 2024

Key Completed Measures are:

Measure 4. Hybrid Buses and Retro Fitted Emissions Reduction Technology

There are currently 44 hybrid buses in operation in Wirral, which are operated by Arriva. There are also 32 buses operating for Arriva Wirral from Laird Street, Birkenhead that have been retrofitted to Euro 6 standard: the most rigorous European standard for emissions. Stagecoach (Rock Ferry) have 20 vehicles manufactured from new to Euro 6 standards and 28 vehicles that have retrofitted to Euro 6 standards. This is for a peak vehicle requirement of 58.

Measure 5. Bus Franchising

On 6 October 2023, the Liverpool City Region Combined Authority (LCRCA) took the decision to franchise the bus network in the Liverpool City Region, following a large-scale public consultation and an independent audit of the bus franchising assessment. Under a franchised system the LCRCA will specify the routes, timetables, and fares, with bus services operated by private companies following a competitive tendering process.

Under a franchised network, bus services will be divided into geographical tender rounds inviting operators to run bus services under contract. The first phase will start in St Helens and Wirral, with the new system up and running by September 2026. The whole LCR should be fully franchised by the end of 2027 (a year ahead of the original schedule).

Measure 6. Bus Service Improvement Plan (BSIP) delivery

The Liverpool City Region Bus Service Improvement Plan was updated in June 2024. The Liverpool City Region received £20,850,110 BSIP funding for 2025-26. This is in addition to £12.294m from 2022/23 to 2024/25 to support the delivery of the BSIP and a further £3.1m in September 2023 under their BSIP plus scheme and £8.82m for buses in the LCR for the financial year of 2024/25 because of the reallocation of HS2 funding to local authorities in Northern England.

Measure 7. The Bus Alliance

The LCRCA formed the Bus Alliance in 2016. It is a formal partnership between Merseytravel and the area's two biggest operators, Stagecoach and Arriva. This alliance addressed several challenges and reversed the national trend of falling bus use. The alliance operates the "MyTicket" day ticket, which allowed unlimited day travel across Merseyside for those aged five to eighteen. In addition, half-priced bus travel for those aged 19-24, living in the Liverpool City Region and who are enrolled on an approved apprenticeship with an Education and Skills funding agency.

Measure 8. Park and Ride

Wirral Council, in partnership with Merseytravel, has provided a network of rail based free park and ride schemes at most train stations in Wirral. Further details regarding parking facilities are available by visiting Merseyrail's website.

Measure 9. Wirral Local Plan 2022-2040 Adopted.

The Wirral Local Plan 2022-2040 was adopted on the 31st of March 2025, replaces the Unitary Development Plan and will provide the framework for planning decisions in the Borough for a fifteen-year period. The Local Plan can be viewed via the following link: Wirral Local Plan 2022 to 2040 | wirral.gov.uk

An Air Quality Modelling Study was commissioned to help in the preparation of the final stages for the new Local Plan before submission to the Secretary of State for public examination. This assessment considered nitrogen dioxide (NO_2) and particulate matter (PM_{10} and $PM_{2.5}$) and concluded that there are no predicted exceedances of the relevant national air quality objectives for England at any development allocation receptors, in the future assessment year.

The air quality modelling study made recommendations regarding implementing air quality monitoring in several locations. Based on these recommendations, in 2021, four passive diffusion sites were installed and in 2022, five real-time monitors were installed. It must be noted that these real-time monitors are providing indicative data only, as the technologies used have not been approved by DEFRA, as being equivalent to reference methods of monitoring. The results obtained will be used to inform future monitoring requirements / actions.

Within the adopted Local Plan there are several policies, Policy WS9 - Strategy for Transport, Policy WD14 - Pollution and Risk, Policy WD23 - Design Details and Policy WM4 - Oil and Gas development which refer directly to air quality, and others such as landscaping (Policy WD1), and carbon emissions reduction (Policy WS8) that are identified as beneficial to local air quality. Air Quality Assessments for proposed developments will be required where appropriate and mitigation measures against any impact on air quality agreed through the planning application process. Air Quality clauses within Local Plan policies are included to adequately address any air quality issues arising from development or neighbouring uses.

Policy WD14 aims to prevent uses which would cause an Air Quality Management Area to be declared and requires development proposals to demonstrate that all practical measures have been taken to minimise pollution levels and mitigate the impacts of the pollution, including exposure to air pollution. Measures within Policy WS9 (Strategy for Transport) to provide a safe, effective and efficient highway network, reduce the need to travel and support active travel to reduce the impact of traffic flows on local communities are intended to benefit air quality.

The Local Plan, along with the Joint Waste Plan for Merseyside & Halton (adopted 18 June 2013) and Neighbourhood Plans for Hoylake and Devonshire Park forms the statutory development plan for Wirral, which is used for determining planning applications in accordance with planning law.

Planning for both residential and industrial developments have a significant impact on air quality. By being involved at the pre-application planning stages of development, Environmental Health Officers along with other colleagues from across the Council can scrutinise plans to ensure that the impact of development on Local Air Quality Management Objectives is considered.

The National Planning Policy Framework (NPPF) also provides guidance to local planning authorities on how to assess the impact of proposed developments.

Paragraph 110 of the NPPF (in relation to Sustainable Transport) states that “Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health.”

The NPPF also states in paragraph 187 that the planning system should “contribute to and enhance the natural and local environment”, it goes on to state under (e) that planning authorities should do this by: “preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability”.

The NPPF also reiterates in paragraph 199 the importance of planning policies and decisions sustaining and contributing towards compliance with the relevant limit values or national objectives for pollutants and the cumulative impacts on air quality from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications.

To assist on the implementation of the NPPF, National Planning Policy Guidance provides additional guidance on how planning can take account of the impact of new development on air quality.

Measure 10. Public Rail Transport Improvements

Fully electric battery-power trains were introduced to the Wirral line in 2023. Using sliding step-technology, and wider aisles, these trains are some of the most accessible and sophisticated trains on the UK rail network. In June 2025 the Liverpool City Region Combined Authority was informed that £1.6 billion of City Region Sustainable Transport Settlement funding has been awarded to the Liverpool City Region for major rail upgrades, a new rapid transit network and infra structure. Part of this funding will be used to upgrade Woodchurch Train Station.

Measure 11. Network Management Plan

The network management plan was updated and approved for adoption by Environment, Climate Emergency and Transport committee in September 2024. The plan identifies support for improving air quality by encouraging more people to use public transport to

reduce air pollution and congestion and to maximise the use of technology to make journeys easier.

The vision of the Network Management Plan is to encourage:

- More people walking and cycling to become fitter and healthier.
- More people using public transport to reduce air pollution and congestion.
- More people using technology to make journeys easier e.g. journey planning, smart ticketing.
- More people being able to access local centres by bus or by walking and cycling.
- More public transport, cycle facilities and pedestrian facilities provided across the borough.
- Fewer people using their cars, especially for short journeys.
- Fewer road traffic collisions and injuries on our roads.
- Fewer cars on our roads.
- Fewer emissions from cars, buses and lorries; and
- Less congestion and delay.

This will be achieved by the following:

- Residents, businesses and visitors will be engaged through consultations, forums and user groups and we will work in partnership.
- We will use engineering to improve our road networks, to build new cycle routes, improve pedestrian facilities and take advantage of new technology to make it easier to travel efficiently, safely and sustainably.
- People will have greater confidence to change their travel habits and try healthy, environmentally friendly ways of getting around.
- Residents, business and visitors will be enabled to know how to get around and where to find information; and
- Enforcement will be required where people do not comply with the driving laws, or do not consider other road users in their driving or parking habits.

Measure 12. Places for People - Wirral Active Travel Strategy

The Places for People Wirral Active Travel Strategy was approved by Committee in January 2024. The strategy sets out our ambition to put walking, cycling and beautiful places at the heart of our communities, through smarter investment in better active travel infrastructure to create places where people and communities can flourish. To support the

delivery of the strategy we have developed a Core Active Travel Network (CATN), which was approved by Committee in January 2025 and will guide where infrastructure will be delivered and which states how that delivery will be prioritised.

Measure 13. Provision of Active Travel Infrastructure

In Wirral, to date, there are 96.7 miles of cycle lanes of various types. This includes:

- 5.75 miles of segregated cycle lanes on highways
- 28.8 miles of traffic free cycle routes away from the highway.
- 35.9 miles of signed cycle routes on low-trafficked and low speed roads
- 7.1 miles of on road painted cycle lanes
- 18.57 miles on shared use footways

In recent years several new schemes have been installed including segregated routes on Old Chester Road in Rock Ferry/New Ferry and Fender Lane between Bidston and Moreton which were both installed using Department for Transport (DFT) Active Travel Funding (Tranche one) scheme. The Harrison Drive / Bayswater Rd scheme in New Brighton has also recently been completed in January 2024 supported by DfT Active Travel Fund Tranche 2.

Two further active travel schemes are currently on site in Birkenhead Town Centre, Conway Street/Europa Boulevard and Grange Road/Charing Cross/Grange Road West. These schemes are both supported by Future High Street Funding and Conway Street is also supported with Active Travel Funding, as well as Active Travel Funding and will provide high quality walking, wheeling and pedestrian and cycle links in the town centre linking to the rail and bus stations as well as the key retail areas.

The LCRCA Local Cycling Walking Infrastructure Plan (LCWIP) which is overarching implementation plan to support the Local Journeys Strategy. It demonstrates the LCR plan to build a network of cycling and walking routes with the aim of making it more feasible and desirable for people to walk or cycle journeys instead of using unsustainable modes.

The LCRCA LCWIP has been considered in the development of Wirral's CATN. The CATN forms the framework now for investment planning regarding the roll out of active travel schemes in the Borough. One of the first major routes as part of the CATN is 'Birkenhead to Liscard' is a 3.5-mile active travel route which is at outline design stage and underwent public consultation in Autum/Winter 2023. The outcome was reported to committee in July

2024. Subject to securing development funding, the route will go to the detailed design stage next and the development of a business case to access funds.

Measure 14. Wirral Active Travel Forum

The Wirral Active Travel Forum is a formally constituted group, which meets quarterly with interested public and private organisations, and individuals. The group supports active travel as a simple, low cost and effective way for people to access life opportunities, whilst increasing levels of physical activity in their day-to-day life. Membership of this group is open to all, and the forum will continue to be engaged as these programmes develop.

Measure 15. Support Schools to increase levels of sustainable travel and increase road safety. Modeshift STARS.

Modeshift STARS is a nationally accredited initiative, supported by the DfT. The STARS Education scheme recognises schools and other educational establishments that have shown excellence in supporting cycling, walking and other forms of sustainable and active travel. The Junior Travel Ambassador (Active Travel Ambassador in Secondary Schools) initiative runs concurrently in these schools by elected pupils to take the message of safe, active and sustainable transport to their peers. Surveying the school community helps us to understand the barriers to safe active travel and an action plan to address the issues is implemented through capital measures, active travel weeks, park and stride sites as a few of the potential solutions.

Two Active Travel Officers have been employed utilising external grant funding provided via the Liverpool City Region to work with schools delivering the School Street initiative and Modeshift. This aims to reduce cars travelling in and around school locations to reduce emissions and air pollution. Schools who have achieved Modeshift currently include 8 at approved status, 21 at Bronze status and 5 at Silver status. March submissions also included Wirral's first Gold status school, along with the first Secondary school accreditation. In total 41 schools are registered on Modeshift STARS and will continue to be supported.

The Road Safety Team further address barriers to safe active travel by targeting capital funding to resolve the issues raised by local and school communities e.g. improved crossing points and facilities.

Measure 16. Support Schools to increase levels of sustainable travel and increase road safety. Living Streets "WOW" walk to school project.

The objective of the Walk to School Outreach (WTSO) project is to support the government to reach its target of fifty-five percent of children walking to school by 2025. This initiative is delivered across the Liverpool City Region. Wirral have the highest proportion of schools engaged, as it is promoted heavily through the road safety team.

WOW in Wirral is encouraging more children and families to think about how they travel, reducing congestion outside school gates, increasing walking rates and instilling healthy habits. The aim is to achieve an eight-percentage point modal shift to 'walk all the way' journeys with the participating schools through WOW, the walk to school challenge.

Pupils self-report how they get to school every day using the interactive Travel Tracker. If they travel sustainably at least one day a week for a month, they get rewarded with a collectable WOW badge. Twenty-five schools in Wirral (sixty-eight in the whole of Liverpool City Region) were fully funded in 2024 - 2025 and had support from a dedicated Living Streets coordinator to guide them through set up, launch and continued engagement.

Participating in WOW saw these twenty-five schools increase walking/wheeling all the way to school by eight percentage points (and a decrease in being driven all the way of twenty-six percentage points).

Further information on support for schools and families please is available by visiting the following website www.LivingStreets.org.uk.

Measure 17. National Standards Cycle Training for Schools

The Council's Road Safety Team support schools with safe sustainable travel and active travel initiatives. Cycle Training is offered to all Wirral Schools. Bikeability level one and two combined sessions, are aimed at year five and six pupils and are provided by the Bikeability provider selected by the Liverpool City Region (LCR). The road safety team actively advertise and signpost these sessions to all Wirral schools by several means, including the use of a school road safety newsletter. There is also "Learn to Ride" sessions which are for early primary school ages, and "Own the Ride" sessions for late secondary/6th form, also run by Bike Right and funded by LCR. These provisions promote safe active travel for pupils on the journey to and from school. Wirral Council have a high

proportion of schools taking up the offer of free training, as this is a key element of the road safety and active travel programme.

Measure 18. Develop the Road Safety Plan, to Improve Road Safety and Help Encourage Active Travel

A Wirral Road Safety Plan has been developed, which sits under the Liverpool City Region Road Safety Strategy and aims to develop and deliver further improvements to road safety in Wirral, creating safer and vibrant communities so more people choose to walk and cycle. Safe Systems approach is utilised considering Safe Vehicles, Safe Speeds, Safe Streets and Safe Behaviours as the core components. For the full programme delivery, please refer to the Road Safety Plan where we set out our engagement for all road users. Examples of some of the projects that are running include Senior Road User initiatives, empowerment and support for children in local issues that affect their community, Park and Stride, Active Travel Week, and educational activities within schools.

Measure 19. Increase Alternatively fuelled vehicle usage in Wirral Council Fleet

- The Mayor has a fully electric car, and an electric van is now in use at Birkenhead Park and the community Safety team use two lease hybrid/petrol cars.
- Several E-cargo bikes are now also used in parks. Electric Gators, small all-terrain vehicles, are in use at Wirral Country Park and Birkenhead Park as replacements to fossil fuels vehicles.
- Electric Mowers are in use, typically on our Bowling Green, replacing previous petrol greens machines.
- Unleaded petrol or bio diesel is used to fuel the Council vehicle fleet and Adblue (a non-toxic, non-flammable, odourless and biodegradable solution designed to help diesel vehicles meet the latest Euro 6 exhaust emission regulations) is available on site for drivers to refill their vehicles when necessary. In addition, regular emissions tests of vehicles are undertaken during routine servicing.
- All of the gritter fleet is fitted with diesel particulate filters and exhaust systems to reduce emissions.

Measure 20. Hydro-treated Vegetable Oil (HVO) Powered Vehicles Used by Biffa

Biffa are contractors for the Council, providing waste collection services. Biffa use a total of thirty-four refuse collection vehicles in Wirral, all of which all are Euro 6 specification (the most rigorous European Standard for emissions). During 2023-24 Biffa completed a successful HVO trial using three of their vehicles. Following the success of this trial, HVO use will be expanded. 15 food waste vehicles will commence using HVO during 2026 and it is hoped that this will be further expanded to include 7 garden waste vehicles and potentially 4 large mechanical sweepers.

Measure 21. Permitted Processes

Environmental Health and the Environment Agency (EA) play a significant role in controlling point sources of pollution nationally. Certain industrial processes whose activities emit pollutants into the environment are required to operate under an Environment Permit. Under the Environmental Permitting (England and Wales) Regulations 2016, Wirral Council has issued and monitors 48 permits for industrial activities across the borough. These span over 9 different sectors: storage terminals, cement and lime, other minerals, combustion and incineration, tar and bitumen, coating, animal and plant treatment, petroleum and solvents sector. Environmental Health and the EA ensure that the operators of the permitted processes carry out their undertakings in accordance with the conditions as described in their Environmental Permit. This includes permitted levels of certain pollutants.

Environmental Health will continue to review current permits in-line with new DEFRA process 'BAT' and guidance notes as and when they are produced.

During 2024-25 Wirral Council have undertaken increased surveillance to support identification of unauthorised processes. This has resulted in the identification of 12 vehicle resprayer. With 6 identified as not requiring a permit, and 4 provided with advice letters regarding assessing the need for permit. The remaining 2 settings are awaiting a revisit, following an unsuccessful attempt to access them.

Environmental Health has also produced a simple guide to whether a business needs a permit, to support local businesses in understanding their responsibilities and reviewed its inter-departmental sharing of information regarding new processes and change of use, to ensure robust systems.

Measure 22. Highway Maintenance

There has been additional investment in Wirral Council's annual highways structural maintenance programme during 2024 / 2025.

Hot Rolled Asphalt (HRA) was used to treat and repair just under 50 of the busiest roads in the borough because it is the most durable surface treatment available to LA's and can last up to 20 years.

Over 100 roads received surface dressing treatment, which in Wirral is augmented by a further Lock Chip treatment that is designed to lock the chipping into the road surface to prevent water damage to the treated surface.

Over 100 roads received micro surfacing treatment, which is mostly used on local roads and is laid over the existing surface to restore some profile and extend the surface life. This usually lasts for 10 plus years.

Over 40 sites received other forms of surface treatment.

Measure 23. Parking Enforcement

The Council's Civil Enforcement Officers and CCTV vehicle enforce illegal parking whilst Merseyside Police enforce dangerous parking in the vicinity of schools and support the safe, active travel education initiatives.

Measure 24. School Crossing Patrols

The School Crossing Patrol Service enables families to walk, cycle and scoot to and from school. Wirral Council manages close to 50 crossing patrol sites.

Measure 25. Anti-idling Actions

- **Wirral Council Anti-Idling Policy**
  Wirral Council's 'in house' anti-idling policy was refreshed and relaunched in 2025. This policy aims to protect air quality in Wirral by reducing the environmental impact of the Council's Day to day use of required vehicles, by asking staff to turn off their engines when their vehicle is parked (exemptions apply e.g. when the engine is required to operate machinery etc.
- **'Be the Key' Public Information Campaign**
  Wirral's 'Be the Key' anti-idling campaign was relaunched on the Councils website during 2024, to help raise public awareness regarding turning off their engines when parked, to reduce air pollution.

134 engagements with drivers regarding idling engines, were undertaken by the Councils' Civil Enforcement Officers traffic wardens between September 2024 to March 2025.

- **Engagement with Taxi Drivers**

  Information regarding idling engines and the link to increased air pollution and the impacts this can have on their health and the health of those around them was included in a newsletter, sent out to all taxi and private hire licence holders in Wirral, in December 2024.

Measure 26. Mersey Ferries

Work began on the renovation of Woodside Ferry terminal in November 2024, and the new landing stage and linkspan bridge is due for completion in summer 2025. Seacombe Ferry Terminal was previously upgraded and reopened in 2022. The new greener and energy efficient ferry that has been ordered by the LCRCA is due to be launched in summer 2026.

Measure 27. Burning waste on Allotments

A consultation on reducing the period in which burning is allowed on allotments commenced in 2024 and was completed in January 2025. After consideration of the feedback, the decision was made that, with effect from 1st June 2025, burning will now only be permitted between October – February, annually. This will have a positive impact on the release of pollutants, including particulate matter, from allotments.

All allotment holders have been sent communications to advise them of this new policy change and communications will continue, to encourage compliance with this new policy.

Measure 28. Indoor Air Quality. Wirral Healthy Homes Damp and Mould Project

Wirral estimated that it had approximately 2,700 privately rented properties, of which 10% could have damp and mould levels that were likely to have a significant impact on health. 8 areas in Wirral have been identified where there is likely to be a high prevalence of cold damp homes, together with higher incidents of respiratory illness and increased hospital admissions as a result.

Public Health funding and a National Ministry of Housing Communities and Local Government (MHCLG) funded pilot have supported Wirral Council to recruit additional

Housing Officers to respond to damp and mould complaints and undertake door knocking, to proactively identify issues, focussed on the 8 identified areas and apply enforcement tools to address damp and mould in homes. These two funding opportunities have enabled the Council to:

- Organise and facilitate Landlord training about understanding and tackling Damp and Mould in October 2024 and have commissioned additional e-learning.
- Arrange forums and attend meetings with partner agencies and Council teams to raise awareness of the project.
- Work together with Wirral Citizens Advice and Gladstone Medical Centre to hold a 'drop in' session for their patients, diagnosed with long term respiratory conditions, around their housing conditions. Plans for further collaborative work is in progress.
- Make 912 contacts with households through visits, door knocking exercises and incoming reports of damp and mould. Nearly a quarter of these households had children under the age of 5 (considered under the HHRSR to be the most vulnerable group) and just under 20% were occupied by adults of pensionable age.
- Identify 252 instances of damp and mould and remove two-thirds of identified damp hazards.
- Identify 336 instances of Excess Cold, with 232 of these excess cold cases have been removed.
- Deal with 560 Housing Health and Safety Rating System (HHSRS) Category 1 and 2 hazards via formal and informal action. 41 formal notices have been served by the dedicated Housing Standards Officer and 3 cases, where the Landlord has failed to comply with the notice served, are being investigated further and may result in prosecution.
- Provide 193 households have been provided with information and support around condensation damp and mould.
- Refer 76 households to Energy Projects Plus for support to improve the thermal quality of their homes to tackle factors contributing to condensation mould growth.

Of the households that were being negatively affected by the damp conditions 108 households have identified as having long term respiratory conditions and 45 households have highlighted cardiac conditions to the team.

Measure 29. Ensure Air Quality is Considered in Domestic Retrofit Strategy

Wirral Council has undertaken work on home retrofits and energy efficiency during 2024 to improve home energy efficiency and heat retention, reducing use of fossil fuels and improving indoor air quality in the home, as the result of improvement works. The Council's support for home retrofit works includes support for ventilation improvements that reduce hazards such as damp and mould. In the Council's upcoming campaign for energy efficiency, improvements to home air quality will be highlighted to raise public awareness.

Measure 30. Provide Home Energy Efficiency Advice

Wirral Council supports the provision of home energy efficiency advice by Energy Projects Plus. This Wallasey-based organisation supports residents to use their existing resources more efficiently and apply for assistance from a variety of sources to improve the warmth and air quality in their home. The most recent programme, the Housing and Health Trailblazer, provides essential energy efficiency measures to households in fuel poverty, reducing emissions associated with heating the home.

Measure 31. Project to Reduce Particulate Emissions from Domestic Burning

Wirral Council obtained funding from DEFRA in 2023, to support a project to improve air quality by reducing particulate emissions from domestic burning at source, targeted mainly at wood burning stoves but also considering other domestic burning. This project is enabling Wirral to work towards meeting the targets for $PM_{2.5}$ set out in The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023.

The project aims to reduce emissions of particulate matter at source, through a variety of initiatives and interventions aimed at suppliers and installers of solid fuel appliances, maintenance professionals, solid fuel, wood and biomass suppliers, households, and allotment holders.

The project has two main objectives:

1. to reduce particulate matter from domestic burning at source, through an information and education campaign
2. to deliver an information and awareness campaign to provide residents, particularly those more vulnerable to the health effects of air pollution, with the knowledge to protect themselves from air pollution.

Work on the 'Breathe Better' project commenced in August 2023. Campaigns launched in November 2023 and September 2024 focused solely on domestic burning and encouraging best burning practices with three key messages:

1. Use dry, seasoned wood
2. Burn less
3. Stay on top of general maintenance including getting your chimney swept at least once a year and have a working carbon monoxide monitor.

In March 2024, a further campaign was launched with four key messages that featured in a campaign animation and accompanying assets:

1. At home, only burn when necessary, use non-toxic cleaning products and keep your home well ventilated.
2. Where you can, avoid peak traffic times and walk along quieter routes, away from the kerb.
3. When stationary in your car, turn your engine off, if safe to do so. Everyone is affected by idling engine fumes.
4. Where you can, walk, wheel, or take public transport as an alternative to driving.

A public survey was conducted in September 2023 and gathered data from 1,538 Wirral residents. 38% of respondents either agreed or strongly agreed that burning indoors at home can have a negative impact on health.

34% of respondents used solid fuel such as wood or coal to heat their home (with most using it to heat some or most of their home). The top three reasons for burning at home were finance related – to avoid putting the heating on, to save money and to control how much oil/gas/electricity they use.

A final evaluation survey was conducted November – December 2024, of which there were 234 respondents.

- 35% recalled seeing a campaign about air pollution or domestic burning, the majority recalled seeing information on social media.
- In total, all campaigns combined generated over 4 million impressions and 36,657 website clicks.
- 64% of respondents reported no change in burning behaviour, with many saying they already felt that they adhered to best burning practice. This is in line with 50% saying that they already follow best burning practice.

- Of those who said they had changed their behaviours, 12% said they now use drier, seasoned wood and 7% reported burning less. This is a positive step to achieving long-term behaviour change.

Measure 32. Air Quality Training for Primary Care

In collaboration with the Cheshire and Merseyside Integrated Care Board, information regarding training opportunities was disseminated to primary health care partners in Wirral, and across the Cheshire and Merseyside, to raise awareness and facilitate tailored advice to patients.

Measure 33. Air Quality Information Web Page and Public Facing Air Pollution Map

Wirral Council has developed and launched a designated “Air Quality” page on Wirral Intelligence Service site, to raise public awareness regarding air quality. The Council has also developed and will continue to update, a public facing 'air pollution' map of Wirral. This maps diffusion tube monitor sites and the most recent results for levels of nitrogen dioxide and comparing the results to National objective / World Health Organisation guideline levels.

Measure 34. Wirral Climate Change Strategy

Climate change has become an even more urgent priority since the latest evidence was presented to the United Nations (UN) by the Intergovernmental Panel on Climate Change. Wirral Council declared an environment and climate emergency in July 2019. Wirral Councils climate change strategy, Cool 2, seeks to keep within a local carbon budget, compliant with the United Nations’ Paris Agreement and anticipates reaching net-zero carbon emissions in Wirral by 2041. The strategy should provide positive benefits for local air quality, as local objectives are met. The strategy includes an objective for a “complete transition to fossil fuel free local travel by around 2030”. Currently the strategy is being updated by the partners and is due for publication in July 2025.

The Council’s Environment and Climate Emergency Policy and Environment and Climate Emergency Action Plan (ECEAP), set the ambitious but achievable target of the council and its entity being ‘net zero carbon’ by 2030. The action plan has recently been reviewed and will deliver on three of the thirteen Environment and Climate Emergency (ECE) policies:

- Supporting an increase in the use of walking, wheeling, and cycling.

- Working to support an increase in public transport use.
- Securing investment to support the necessary shift to ultra-low carbon vehicles.

Measure 35. Public Awareness

Wirral Council has developed and launched a training course on air quality and air pollution on their internal training portal, to help raise awareness amongst their employees.

Measure 36. Air Quality Monitoring

Wirral Council continues to monitor air quality in Wirral, to identify any possible exceedance of the national air quality objectives and to continue to contribute to the wider regional air quality improvements, through co-operation with Liverpool City Region.

A monitoring location review was undertaken at the end of 2023, and 2024, to assess whether monitoring was still being undertaken in the most relevant locations.

Measure 37. Regional Air Quality Meetings

Wirral Council Chairs the Liverpool City Region and Cheshire Air Quality Group (AQTECH), which considers relevant local and regional matters relating to air quality. This group meets once every three months to share best practice, knowledge and legislation updates.

Measure 38. Wirral Council Air Quality Steering Group

The Wirral Air Quality Steering Group meets quarterly and co-ordinate the Council's obligation to manage air quality and identifies and seeks to resolves any issues arising from delivering the implementation plan for the Air Quality Strategy.

Measure 39. Air Quality Implementation Plan Working Groups

Five working groups are in place to drive forward the implementation plan. These groups meet quarterly to ensure that actions outlined in the plan are being progressed and completed and to identify any issues that may impact progress.

Measure 40. Taxi Licensing

A vehicle presented for the grant of a **Hackney Carriage Vehicle** Licence with Wirral Council must have been compliant with Euro 5 emission standards at the date of first registration.

A Hackney Carriage Vehicle that is 11 years of age or more from the date of first registration will be subject to a licence of no more than 6 months and will therefore be required to pass an MOT and Compliance test every 6 months.

A vehicle presented for the grant of a **Private Hire Vehicle** Licence with Wirral Council must have been compliant with Euro 6 emission standards at the date of first registration.

A Private Hire Vehicle that is 8 years of age or more from the date of first registration will be subject to a licence of no more than 6 months and will therefore be required to pass an MOT and Compliance test every 6 months.

The Licensing Authority will be introducing a module in respect of engine idling to the mandatory training for applicants for Private Hire and Hackney Carriage Driver Licences.

Measure 41. Building Control

- Ventilation is a key consideration in maintaining the quality of indoor air. Wirral Council's Building control section continued in their statutory function of assessing new dwellings in relation to the provision of adequate rapid, background and mechanical ventilation to help ensure that the development complies with the requirements of the Building Regulation 2010: Approved Document Part F and assessing new dwellings in relation to the control of overheating of internal spaces to help ensure that the development complies with the requirements of the Building Regulation 2010: Approved Document Part L. They assessed 100% of relevant applications.
- In England and Wales installation work regarding domestic solid fuel, wood and biomass and the associated systems for heating are subject to building control. Where work is carried out by HETAS registered installer, they can self-certificate their work via HETAS rather than the customer applying for a building notice via Wirral Council Building Control. Wirral Councils Building Control received 724 notifications from HETAS of Solid Fuel burning appliances installed in Wirral during the period 2024-25. This is in comparison to 803 from 2023-24.

Wirral Council expects the following measures to be completed over the course of the next reporting year:

Measure 1. Implementation of Wirral's new 'whole Borough' Smoke Control Area

The council is in the process of revoking 26 existing Smoke Control Orders and replacing them with one new Smoke Control Order, that covers the whole of Wirral.

The Tourism, Communities, Culture and Leisure committee considered the one objection that was received regarding the implementation of the new Order, in their meeting on 23 January 2025. It was agreed that the process of implementation can continue.

DEFRA have considered the one objection they received regarding the revocation of existing smoke control orders and have confirmed the Revocation Order. This will come into effect on 1 August 2025.

The new Smoke Control Order has been made and will come into effect on 1 August 2025, making the whole borough a Smoke Control Area.

Measure 2. Electric Vehicle Charging Infrastructure (EVCI)

The Liverpool City Region Combined Authority (LCRCA) has successfully obtained £9,647,000 Local Electric Vehicle Infrastructure (LEVI) Capital funding to invest into EVCI via a regional contract.

Wirral Council are working with Local Authorities across the LCR to provide a sustainable electric vehicle charging infrastructure across the Liverpool City Region, which supports residents without access to off-street parking, is easy to use, inclusive and accessible to use.

The funding will be used to leverage private investment and is planned to deliver:

- 230 locations for lighting column chargers <8kW (some could be on-street bollards up to 22kW)
- 176 bays for LEVI funded Charge points up to 22kW in public car parks
- 140 spaces in 13 Merseyrail station car parks in Wirral that have potential for a mix of LEVI funded chargers up to 22kW and for the CPO to propose rapid/ultra rapid charging hubs.
- 600-800 standard chargers and 1000-1300 fast chargers within the LCR.

To date in Wirral, there are 53 publicly owned electric vehicle charging points available to the public.

Development of a policy position for Wirral and working alongside the LCR to expand the network will be undertaken during 2025.

An Electric Vehicle Charging Infrastructure steering group has been established to support the delivery of a charging network and pilot approaches such as cross pavement solutions. Policies to support the EVCI Strategy will be taken to committee in 2025.

Measure 3. School Streets

Wirral Council has implemented School Streets initiatives that involve closing streets immediately outside school gates at drop-off and pick-up times to most vehicle traffic (there are exemptions for residents, blue badge holders, emergency services etc). It aims to create safer and more pleasant environment for everyone around the school by encouraging walking, cycling and scooting or parking further away from the school and walk the last part of the journey and by preventing vehicles from entering specific roads around the vicinity of the school. Wirral Council's Road Safety Team have delivered six permanent School Street pilots and a trial of an Automatic Number Plate Recognition (ANPR) camera to support the initiative, has begun, with further schools being included this year.

Measure 42. Transport Planning – Transport Delivery Strategy.

The Council is developing a Transport Delivery Strategy, which sets out how transport, movement and connectivity will play a key role in supporting Wirral's future.

This strategy will support the delivery of the wider Regeneration Framework with a focus on facilitating active travel and public transport. The focus of the strategy will be to ensure that we are working towards creating a sustainable and inclusive borough which supports our residents to have access to opportunities and to live healthy lives

Measure 43. Combined Authority Local Transport Plan

The LCRCA is currently developing the Local Transport Plan (LTP) 4 for the region which will set out plans, policies and ambitions for transport services and investment in the Liverpool City Region until 2040. It consulted on the LTP4 Preferred Strategy from October – December 2024, asking for views on the 21 policies in the plan, and intends to finalise the plan in 2025.

Measure 44. Combined Authority Transport Plan Programme (CATP)

In 2022, the City Region Sustainable Transport Settlement (CRSTS) awarded funding to Wirral Council. All the proposed programme of works set out in the 2025/26 CRSTS CATP programme generally have environmental benefits and are aligned with regional and Wirral emission targets and support for active transport, as set out in the Liverpool City Region's Pathway to Net Zero Strategy and the Cool2 Climate Change Strategy for Wirral. Many of the Local Journey and Network Management projects are aimed at improving access to the highway network which will help to support better air quality across the borough and enable a greater number of journeys to be undertaken by sustainable modes, therefore reducing residents' reliance on the private car and reducing carbon emissions. Other projects will improve environmental safety for highway users.

Increasing cycling and walking will help combat climate change. Harmful emissions can be reduced, by encouraging and enabling people to travel more on foot and by cycle, instead of by private car. Promoting active travel can result in reduced emissions of Nitrogen Dioxide (NO_2), particulate matter (PM) and Carbon Dioxide (CO_2), helping to tackle climate change and improve air quality.

Several projects are currently in the planning stage, with statutory consultations to be reported to Environment Climate Emergency and Transport committee during 2025.

Projects include:

- light segregation for cycle route on Duke St and pedestrian upgrade to Price St Junction
- commencing co-design of active travel and public realm schemes at Birkenhead Road, Price St and Arrowe Park Road scheme

The Duke Street scheme is currently being reviewed following public consultation early in 2025 and the outcome of this review will be reported to committee in Summer 2025.

Measure 45. Delivery of Active Travel Schemes within Birkenhead Town Centres

These schemes include the active travel and public realm schemes currently on-site at Conway Street, Europa Boulevard, Grange Road and Charing Cross, as well as major public realm and infrastructure works at Birkenhead Waterfront, Argyle Street, Hamilton Square and Hamilton Street. These schemes all form part of the Core Active Travel Network.

Measure 46. Planning Guidance

The Council will consider the need to develop planning guidance focused on:

- best practice planning and design for air quality to be kept updated with local, regional, and national changes in guidance and legislation. The Council is currently considering its future approach to planning guidance in Wirral following adoption of the Local Plan.

- best practice relating to Health Impact Assessments (HIA) such that HIAs submitted with applicable planning applications consider air quality where appropriate. A draft HIA guidance note in preparation. The Council is currently considering its future approach to planning guidance in Wirral following adoption of the Local Plan.

Measure 47. Engage with Wirral's farming community regarding potential ammonia emissions

The Council will engage with farmers to encourage tenant and other farmers to reduce ammonia emissions by following the Code of Good Agricultural Practice for Reducing Ammonia Emissions.

Measure 48. Seek opportunities to work with schools to raise awareness about air pollution, increase active travel and reduce idling engines outside schools.

Environmental health, in collaboration with the Public Health, Road Safety and Eco Schools teams, will seek opportunities to raise awareness about air pollution, with schools in Wirral and will seek opportunities to discuss the impact of idling vehicles on air pollution outside schools and the simple actions that can be taken to reduce these impacts.

Measure 49. Wirral Council's Green Fleet Strategy

A review of the council fleet took place in 2024, with the aim of consolidating the fleet and introducing electric and alternatively fuelled vehicles across the various services.

A Green Fleet strategy is in development, which will change approach to fleet management, how vehicles are replaced and used. The scope of this strategy was extended in 2024, and it is envisaged it will be implemented in 2025/26 to enable the full scope to be included and considered. The strategy will include reducing emissions from council fleet and installing infrastructure to support a low/zero emission fleet and include utilising innovative technologies, such as e-cargo bikes.

Measure 50. Road safety - Support the Roll Out of 20 mph zones

Wirral Council has supported the roll out of 20mph Limits in Wirral with supporting education and communication plans, to reduce vehicle speeds and make the environment happier and healthier for people to choose sustainable modes of travel.

The introduction of 20mph speed limits is most beneficial in residential, shopping and school areas and therefore roads have been selected based on the type of area as well as collision data.

Phases one and two of the implementations of the borough wide 20mph speed limit project are now complete. Phases three and four have been approved by committee and are currently being implemented on site. The Council expects the roll out to be complete by 2025.

This year, a speed limit review will be undertaken of the existing speed limits on our A, B and strategic C classified roads within the borough and any appropriate changes will be implemented over a two-year period in 2025/26 and 2026/27.

Measure 51. Decarbonisation of Wirral Council Buildings

Wirral Council secured £14.4 m of funding from Public Sector Decarbonisation Scheme (PSDS) to transition Council buildings away from fossil fuels. Preliminary work on Wirral Country Park and the Landican Buildings has begun. It is expected that the work will be completed by 31 March 2026. A bid for further funding has been successful and will provide an additional £15.632m.

Measure 52. Non-Road Mobile Machinery

The Council will investigate opportunities for incorporating NRMM emissions standards in contracts for construction, by initially reviewing the machinery in use in demolitions work to determine emissions stages of equipment in use.

Measure 53. Town Centre and Council Workplace and Residential Travel Planning

As part of the planning process for the development of the town centre, workplace and residential travel plans will be required, including on behalf of the council for the new ‘Mallory’ Council building, to ensure the Council leads by example and encourage and enable a transition to more sustainable modes of travel where possible, to reduce reliance

on cars, and single car occupancy use. A framework travel plan was produced for the Council as it moved into Mallory Building, Birkenhead in 2024. During 2025 a staff travel survey will be undertaken to support the delivery and roll out of the travel plan.

Wirral Council's priorities for the coming year are

The Air Quality priorities for the council are as follows:

- To continue to drive forward Wirral's Air Quality Strategy 2024-2028.
- To fully utilise the planning system, in accordance with guidance, to effectively promote air quality.
- To continue to robustly monitor air quality in the borough, to ensure the concentrations are within the National objectives.
- To regularly review air pollution monitoring locations, to reflect the most up to date information e.g. traffic levels and emission sources, to provide a broad understanding of air quality across the borough and meaningful air quality data that can be used as part of the planning application process (e.g. baseline data for air quality impact assessments submitted as part of planning applications).
- To continue to monitor the impact of air quality on the health of Wirral residents, by regularly reviewing the Joint Strategic Needs Assessment Air Quality chapter.
- To continue to work with our partners to encourage and enable increased number of journeys to be undertaken by walking, wheeling, and cycling and to make public transport cleaner and easier to use.
- To continue to deliver our programmes to increase safe active travel and to make public transport cleaner and easier to use.
- To seek opportunities to increase public participation and public engagement to raise awareness of air pollution and inform Wirral's residents how they can help to reduce air pollution and reduce their exposure to it. Particularly seeking opportunities to raise awareness of:
    - Wirral's 'Breathe better' campaign, aimed at informing residents how they can reduce their exposure to air pollution by implementing small changes to their daily life and
    - Wirral's 'You're the key' campaigns, aimed at reducing the number of idling vehicle engines and help improve local air quality.

- To capitalise and support new and changed behaviours e.g. increased numbers of journeys being undertaken by active modes and public transport, which may positively influence better air quality.

Wirral Council worked to implement these measures in partnership with the following stakeholders during 2024:

- Liverpool City Region Combined Authority.
- Members of the Health and Wellbeing Board, including Wirral Community Health and Care NHS Foundation Trust, Wirral University Teaching Hospital, Healthwatch Wirral, Community Action Wirral, Wirral CCG, Clatterbridge Cancer Centre NHS Foundation Trust, Jobcentre plus, Merseyside Fire and Rescue.
- Cheshire East and Cheshire West Councils.
- Sustrans.
- Living Streets.
- Biffa.
- Merseytravel.
- Green Bus Fund.
- Merseyside Police.
- Hitch.

The principal challenges and barriers to implementation that Wirral Council anticipates facing are:

- Challenges with public acceptability of some active travel and public realm projects, noting this is also a national and regional issue and that it can present challenges when developing and designing schemes given there is often very mixed views. To support mitigation of this, Wirral Council is looking to undertake co-design and develop projects with communities, where funding and timescales allows.
- The benefits of active travel networks and electric vehicle networks will only be fully realised once full networks are in place, therefore, initially, usage may be significantly lower than what will be achievable longer term.
- Making the best use of the available resources.

Table 2.1 – 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 Funded	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	Implementation of a new borough-wide Smoke Control Area on 1st August 2025	Other	Other		2025	Wirral Council	Wirral Council	NO	Not Funded		Implementation			The council is revoking 26 existing Smoke Control Orders and replacing them with one new Smoke Control Order, that covers the whole of Wirral. The objection regarding the implementation of the new Order and the revocation of the old orders have been considered. The new Smoke Control Order has been made and will come into effect on 1 August 2025, making the whole borough a Smoke Control Area.	
2	Improving the electric vehicle charging infrastructure across Wirral by installing an additional 546 chargers by 2027	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	N/A	2027	Wirral Council & Liverpool City Region		NO	Funded		Planning	Reduced vehicle emissions	Number of charge points installed annually.	The Council will be installing an additional 546 chargers by 2027	
3	Identification and implementation of three school streets initiatives during 2025/26	Promoting Travel Alternatives	Other	N/A	2026	Wirral Council, Department for Transport and Liverpool City Region Combined Authority		NO	Funded		Implementation	Reduced vehicle emissions		6 school street now made permanent. 1st ANPR camera installed	
4	Hybrid Buses and retrofitted emissions reduction technology	Promoting Low Emission Transport	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	N/A		Merseytravel, Arriva, Green Bus fund		NO	Funded		Completed	Reduced vehicle emissions		Arriva buses operate 44 hybrid buses, and 32 buses retrofitted to Euro 6 standards in Wirral. Stagecoach (Rock Ferry) have 20 vehicles manufactured from new to Euro 6 standards and 28 vehicles retrofitted to Euro 6 standards.	

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5	Bus Franchising	Promoting Travel Alternatives	Other	N/A	2027	Liverpool City Region Combined Authority	Liverpool City Region Combined Authority	NO	Funded		Implementation	Reduced vehicle emissions		Decision made to franchise bus network in 2023. The first phase will begin in St Helens and Wirral in 2026. The whole LCR should be franchised by the end of 2027.	
6	Bus Service Improvement Plan Delivery	Bus Service Improvement Plan Delivery	Public Information	N/A	2023	Liverpool City Region Combined Authority	Liverpool City Region Combined Authority	NO	Funded		Implementation	Reduced vehicle emissions	Completed Improvements	The LCR BSIP updated in June 2024. LCR received £20,850,110 BSIP funding for 2025-26.	
7	The Bus Alliance	Promoting Travel Alternatives	Other	N/A		Merseytravel		NO	Funded		Completed	Reduced vehicle emissions	Alliance Formed	The LCRCA formed the Bus Alliance in 2016. It is a formal partnership between Merseytravel, Stagecoach and Arriva. The alliance operates the "MyTicket" day ticket - unlimited day travel across Merseyside for those aged five to eighteen. In addition, half-priced bus travel for apprentices aged 19-24 living in the Liverpool City Region who are enrolled on an approved apprenticeship.	
8	Park and Ride	Alternatives to private vehicle use	Rail based Park & Ride	N/A		Wirral Council and Merseytravel	Merseytravel and Department for Transport	NO	Funded		Completed	Reduce exposure to relevant emissions		Park and ride places provided at the majority of Wirral's train stations.	
9	Wirral Local Plan 2022-2040 adopted	Policy Guidance and Development Control	Other policy	N/A	2025	Wirral Council	Wirral Council	NO	Not Funded		Completed	Reduce exposure to relevant emissions		Local Plan Inspectors Report issued to Council on 13/03/2025 and Local Plan adopted by Full Council on 31/3/25. Judicial Review period expired mid-May 2025.	

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10	Public Rail Transport Improvements	Transport Planning and Infrastructure	Other	N/A	2024	Mersey Travel		NO	Funded		Completed	Reduce Vehicle Emissions		First electric trains introduced onto Wirral Line in 2023.	
11	Network Management Plan	Transport Planning and Infrastructure	Other	N/A	2024	Wirral Council	Wirral Council	NO	Not Funded		Completed			The network management plan was updated and approved for adoption by Environment, Climate Emergency and Transport committee in September 2024. The plan identifies support for improving air quality by encouraging more people to use public transport to reduce air pollution and congestion and to maximise the use of technology to make journeys easier.	UTC, Congestion management, traffic reduction, encourages active travel and use of public transport.
12	Places for People. Wirral Active Travel Strategy	Promoting Travel Alternatives	Promotion of walking, wheeling and cycling	N/A	2024	Wirral Council	Wirral Council	NO	Not Funded		Completed			Approved by Committee in Jan 2024	Core Active Travel Network (CATN) will guide where infrastructure will be delivered and which states how that delivery will be prioritised
13	Provision of Active Travel Infrastructure	Promoting Travel Alternatives	Promotion of walking, wheeling and cycling	N/A		Wirral Council	Department For Transport Active Travel Funding & Ministry of Housing, Communities and Local Government Future High Street Funding	NO	Funded		Implementation			Two active travel schemes underway in Birkenhead. Several cycling / walking routes identified, which now need business cases developing to access funds. by	
14	Wirral Active Travel Forum	Promoting Travel Alternatives	Promotion of walking, wheeling and cycling	N/A	Ongoing			NO	Not Funded		Implementation	Public Engagement / Behaviour change			Promoting active travel with various stakeholders across the borough.

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15	Support Schools to increase levels of sustainable travel and increase road safety	Promoting Travel Alternatives	Other	N/A	Ongoing	Wirral Council	Liverpool City Region Combined Authority	NO	Funded	< £10k	Implementation	Public engagement. Behaviour change	Increase in numbers of children walking, cycling, scooting to school.	Schools who have achieved Modeshift currently include 8 at approved status, 21 at Bronze status and 5 at Silver status. March submissions also included Wirral's first Gold status school, along with the first Secondary school accreditation.	
16	Support Schools to increase levels of sustainable travel and increase road safety	Promoting Travel Alternatives	Other	N/A	Ongoing	Living Streets / Wirral Council	Department For Transport	NO	Funded	< £10k	Implementation	Public engagement. Behaviour change	Increase in numbers of children walking, cycling, scooting to school.	25 schools in Wirral were fully funded in 2024 - 2025. Participating in WOW saw these 25 schools increase walking/wheeling all the way to school by eight percentage points (and a decrease in being driven all the way of twenty-six percentage points).	
17	National Standards Cycle Training for Schools	Promoting Travel Alternatives	Promotion of cycling	N/A	Ongoing	Wirral Council	Liverpool City Region Combined Authority and Department of Transport	NO	Funded	£50k - £100k	Implementation			Cycle Training is offered to all Wirral Schools. The road safety team actively advertise and signpost these sessions to all Wirral schools by several means, including the use of a school road safety newsletter. There is also "Learn to Ride" sessions which are for early primary school ages, and "Own the Ride" sessions for late secondary/6th form, also run by Bike Right and funded by LCR.	
18	Develop the Road safety plan, to improve road safety and help encourage active travel.	Traffic Management	Other	N/A	2023	Wirral Council	Council Staffing Budget and Liverpool City Region Combined Authority	NO	Partially Funded	£50k - £100k	Completed			A Wirral Road Safety Plan has been developed and aims to develop and deliver further improvements to road safety in Wirral, creating safer and vibrant communities	

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														so more people choose to walk and cycle. For the full programme delivery, please refer to the Road Safety Plan Examples of some of the projects that are running include Senior Road User initiatives, empowerment and support for children in local issues that affect their community, Park and Stride, Active Travel Week, and educational activities within schools.	
19	Increase alternatively fuelled vehicles	Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	N/A	Ongoing	Wirral Council	Wirral Council	NO			Implementation			The Mayor has a fully electric car an electric van is now in use at Birkenhead Park and two leased hybrid/petrol cars are in use. Several E-cargo bikes are now used in parks. Electric Gators, are in use at Wirral Country Park and Birkenhead Park. Electric Mowers are in use, typically on our Bowling Green, replacing previous petrol greens machines. All of the gritter fleet is fitted with diesel particulate filters and exhaust systems to reduce emissions	
20	HVO fuelled vehicles used by Biffa	Vehicle Fleet Efficiency	Vehicle Retrofitting programmes	N/A	2026	Wirral Council / Biffa		NO			Implementation			15 food waste vehicles will commence using HVO during 2026 and it is hoped that this will be further expanded to include 7 garden waste vehicles and potentially 4 large	

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														mechanical sweepers.	
21	Permitted Processes	Environmental Permits	Other measure through permit systems and economic instruments	N/A	Ongoing	Wirral Council	Wirral Council	NO	Not Funded		Implementation			Wirral Council has issued and monitors 48 permits for industrial activities across the borough. Surveillance visits identified 12 vehicle resprayers. With 6 not requiring a permit, 4 provided with advice letters regarding assessing the need for permit and 2 awaiting a revisit following no access. A simple guide to whether a business needs a permit has been produced. A review of inter-departmental info sharing regarding new processes and change of use has been completed.	
22	Highways Maintenance	Traffic Management	Other	N/A	Ongoing	Wirral Council	Department For Transport	NO	Funded		Implementation	Reduced vehicle emissions		During 2024 / 2025, just under 50 busiest roads had hot Rolled Asphalt (HRA) repair. Over 100 roads received surface dressing treatment. Over 100, mostly local roads received micro surfacing treatment. Over 40 sites received other forms of surface treatment.	
23	Parking Enforcement	Traffic Management	Other	N/A	Ongoing	Wirral Council / Merseyside Police		NO			Implementation	Reduced vehicle emissions		Council Enforcement Officers and CCTV vehicle enforce illegal parking. Police enforce dangerous parking around schools to support active travel.	Traffic Management
24	School Crossing Patrols	Promoting Travel Alternatives	Other	N/A	Ongoing	Wirral Council	Wirral Council	NO			Implementation	Public Engagement/	Number of sites operating	SCP services are delivered across the borough and assists	

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												Behaviour Change		school/local communities to walk and scoot to school.	
25	Anti-idling actions	Traffic Management	Other	N/A	2025	Wirral Council	Wirral Council	NO	Not Funded		Completed	Reduced vehicle emissions		Wirral Council's 'in house' anti idling policy was refreshed and relaunched in 2025. Wirral's 'Be the Key' anti idling campaign was relaunched on the Councils website during 2024. 134 engagements with drivers between September 2024 to March 2025. Information regarding idling engines and health was included in a newsletter, sent out to all taxi and private hire licence holders in Wirral, in December 2024.	
26	Mersey Ferries	Promoting Low Emission Transport	Other	N/A	2026	Wirral Council / Liverpool City Region Combined Authority		NO	Funded		Implementation	Reduced emissions		Renovation work at Woodside Ferry terminal began in November 2024 and is due for completion in summer 2025. The new greener and energy efficient ferry, ordered from Cammell Laird / Damen by the LCRCA is due to be launched in summer 2026.	Seacombe Ferry Terminal has previously been upgraded and reopened in 2022.
27	Burning Waste on Allotments	Other	Other	N/A	2025	Wirral Council	Wirral Council	NO	Not Funded		Implementation	Reduced emissions		Consultation finished Jan 2025. Had around 58 responses. Policy changes consulted on and then changed, being introduced 1/6/25. Ongoing Comms to encourage compliance.	

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28	Indoor Air Quality	Other	Other	N/A	2026	Wirral Council	Dept for Levelling up, Housing and Communities (DLHC)	NO	Funded	£100k - £500k	Implementation	Reduced emissions		• Made 912 contacts with households. • Identified 252 instances of damp and mould and remove two-thirds of identified damp hazards. • Identify 336 instances of Excess Cold and removed 232 of these cases. Deal with 560 Housing Health and Safety Rating System (HHSRS) Category 1 and 2 hazards via formal and informal action. Provided 193 households with information and support on condensation damp and mould. Referred 76 households to Energy Projects Plus for support.	
29	Home Retrofits	Other	Other	N/A	2026	Wirral Council, Energy Projects Plus, Social Housing Providers		NO	Funded	£10-50k	Implementation	Reduced emissions		The retrofit communications plan will be delivered in 2025. AQ messaging will be integrated into the communications material.	
30	Providing Home Energy Efficiency Information	Other	Other	N/A	2026	Wirral Council, Energy Project Plus.		NO	Funded	<£10k	Implementation	Reduced emissions		Scope of contract is wider than just advice and includes small measures to support residents (e.g. draughtproofing, home heaters).	
31	Reduce particulate emissions from domestic burning	Public Information	Other	N/A		Wirral Council / Hitch	DEFRA	YES	Funded	£100k - £500k	Completed	Reduced emissions		DEFRA AQ grant funded project to reduce emissions from domestic wood burning. A final evaluation survey was conducted November – December 2024, of	

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														which there were 234 respondents. 35% recalled seeing the campaign. In total, all campaigns combined generated over 4 million impressions and 36,657 website clicks. 64% of respondents reported no change in burning behaviour Of those who said they had changed their behaviours, 12% said they now use drier, seasoned wood and 7% reported burning less.	
32	Air Quality Training for Primary Care	Public Information	Via other mechanisms	N/A		Wirral Council	Wirral Council / Cheshire and Merseyside Integrated care Board	NO	Not Funded		Completed	Public engagement, behaviour change.		Information regarding training opportunities was disseminated to primary health care partners in Wirral, and across the Cheshire and Merseyside, to raise awareness and facilitate tailored advice to patients.	
33	Air Quality Information and map	Public Information	Via the Internet	N/A		Wirral Council	Wirral Council	NO	Not Funded		Completed	Raising public awareness.		Launched a designated “Air Quality” page on Wirral Intelligence Service site, and developed and will continue to update a public facing 'air pollution' map of Wirral,	
34	Wirral Climate Change Strategy	Other	Other	N/A		Wirral Council	Wirral Council	NO	Not Funded		Implementation	Reduced emissions		The current Cool2 strategy is being updated by the partners and is due for publication in July 2025.	
35	Public Awareness	Public Information	Via the Internet	N/A		Wirral Council	Wirral Council	NO	Not Funded		Completed	Public engagement,		Wirral Council has developed and launched a training	

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												behaviour change		course on air quality and air pollution on their internal training portal, to help raise awareness amongst their employees.	
36	Air Quality Monitoring	Other	Other	N/A	Ongoing	Wirral Council	Wirral Council	NO	Not Funded		Implementation			56 passive diffusion tube monitoring sites during 2024	
37	Regional Air Quality Meetings	Other	Other	N/A	Ongoing	Wirral Council and Officers across the Liverpool City Region and Cheshire.		NO	Not Funded		Implementation			Wirral Council Chairs the Liverpool City Region and Cheshire Air Quality Group (AQTECH), which considers relevant local and regional matters relating to air quality.	
38	Wirral Council Air Quality Steering Group	Other	Other	N/A	2028	Wirral Council	Wirral Council	NO	Not Funded		Implementation			The group meets quarterly and co-ordinate the Council's obligation to manage air quality and identifies and seeks to resolves any issues arising from delivering the implementation plan for the Air Quality Strategy.	
39	Wirral Council Air Quality Implementation Plan Working Groups	Other	Other	N/A	2028	Wirral Council	Wirral Council	NO	Not Funded		Implementation			Five working groups are in place to drive forward the implementation plan. These groups meet quarterly.	
40	Taxi Licensing	Promoting Low Emission Transport	Taxi Licensing conditions	N/A	Ongoing	Wirral Council	Wirral Council	NO	Not Funded		Implementation	Reduced vehicle emissions		Updated emissions standards for Hackney Cabs and Private Hire Vehicles. Exam to be updated to include idling engines.	
41	Building Control	Other	Other	N/A	Ongoing	Wirral Council	Wirral Council	NO	Not Funded		Implementation			• Assessing new dwellings in relation to the provision of adequate rapid, background and mechanical	

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														ventilation and also assessing new dwellings in relation to the control of overheating of internal spaces • Received 724 notifications from HETAS of Solid Fuel burning appliances installed in Wirral during the period 2024-25. This is in comparison to 803 from 2023-24.	
42	Transport Planning – Transport Delivery Strategy.	Transport Planning and Infrastructure	Other	N/A	2025	Wirral Council	Wirral Council	NO	Funded	<£50k	Implementation		Completion of plan.	The Council is developing a Transport Delivery Strategy, which sets out how transport, movement and connectivity will play a key role in supporting Wirral's future. This strategy will support the delivery of the wider Regeneration Framework with a focus on facilitating active travel and public transport. The focus of the strategy will be to ensure that we are working towards creating a sustainable and inclusive borough which supports our residents to have access to opportunities and to live healthy lives	
43	Combined Authority Local Transport Plan	Transport Planning and Infrastructure	Other	N/A	2025	Liverpool City Region Combined Authority		NO			Implementation			The LCRCA is currently developing the Local Transport Plan (LTP) 4. It consulted on the LTP4 Preferred Strategy from October – December 2024 and intends to	

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														finalise the plan in 2025.	
44	Combined Authority Transport Plan Programme	Promoting Travel Alternatives	Other	N/A		Liverpool City Region Combined Authority		NO			Implementation	Reduced vehicle emissions		Several projects are currently in the planning stage, with statutory consultations to be reported to committee during 2025. Projects include: • light segregation for cycle route on Duke St and pedestrian upgrade to Price St Junction • commencing co-design of active travel and public realm schemes at Birkenhead Road, Price St and Arrowe Park Road scheme	
45	Delivery of Active Travel Schemes	Promoting Travel Alternatives	Promotion of cycling	N/A		Wirral Council		NO	Funded		Implementation	Reduced vehicle emissions		Includes the active travel and public realm schemes currently on-site at Conway Street, Europa Boulevard, Grange Road and Charing Cross, as well as major public realm and infrastructure works at Birkenhead Waterfront, Argyle Street, Hamilton Square and Hamilton Street.	
46	Develop Planning Guidance	Other	Other	N/A		Wirral Council	Wirral Council	No	Not Funded		Implementation			The Council will consider the need to develop planning guidance focused on: • best practice planning and design for air quality to be kept updated with local, regional, and	

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														• national changes in guidance and legislation • best practice relating to Health Impact Assessments (HIA) such that HIAs submitted with applicable planning applications consider air quality where appropriate. A draft HIA guidance note is in preparation.	
47	Engagement with Wirral's Farming Community	Other	Other	N/A	2026	Wirral Council	Wirral Council	NO	Not Funded		Planning	Reduced emissions		The Council will engage with farmers to encourage tenant and other farmers to reduce ammonia emissions by following the Code of Good Agricultural Practice for Reducing Ammonia Emissions.	
48	Seek opportunities to work with schools	Promoting Travel Alternatives	Other	N/A	2026	Wirral Council	Wirral Council	NO	Not Funded		Planning	Public engagement, behaviour change.		Seek opportunities to raise awareness about air pollution and discuss the impact of idling vehicles on air pollution outside schools and the simple actions that can be taken to reduce these impacts. Linking into existing work with road safety team.	
49	Wirral Councils Green Fleet Strategy	Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	N/A	2026	Wirral Council	Wirral Council	NO	Not Funded		Planning	Reduced vehicle emissions	Fleet review completed May 2024.	The scope of this strategy was extended in 2024, and it is envisaged it will be implemented in 2025/26	
50	Roll out of 20 MPH limits.	Traffic Management	Reduction of speed limits.	N/A	2027	Wirral Council		NO			Planning			A speed limit review will be undertaken of the existing speed limits on our A, B and strategic C classified	Roll out of 20 MPH limits with supporting education and comms plan to

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	DEFRA AQ Grant Funded	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
														roads within the borough and any appropriate changes will be implemented over a two-year period in 2025/26 and 2026/27.	reduce vehicle speeds and make the environment happier and healthier for people to choose sustainable modes
51	Decarbonisation of Wirral Council Buildings	Other	Other	N/A	2026	Wirral Council		NO	Funded		Implementation	Reduced emissions		Wirral Council secured £14.4 m of funding from Public Sector Decarbonisation Scheme (PSDS) to transition Council buildings away from fossil fuels. Preliminary work on Wirral Country Park and the Landican Buildings has started. Completion of work expected by 31 March 2026. A bid for an additional £15.632m has been successful.	
52	Review of Use of Non mobile machinery (NRMM)	Other	Other	N/A	2026	Wirral Council		NO	Not Funded		Implementation	Reduced emissions.		Review of machinery in use in demolitions work to determine emissions stages of equipment in use. 2 sites reviewed.	
53	Town Centre and Council Workplace and Residential Travel Planning	Promoting Travel Alternatives	Workplace Travel Planning	N/A	2025	Wirral Council	Wirral Council	NO			Implementation			During 2025 a staff travel survey will be undertaken to support the delivery and roll out of the travel plan	

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

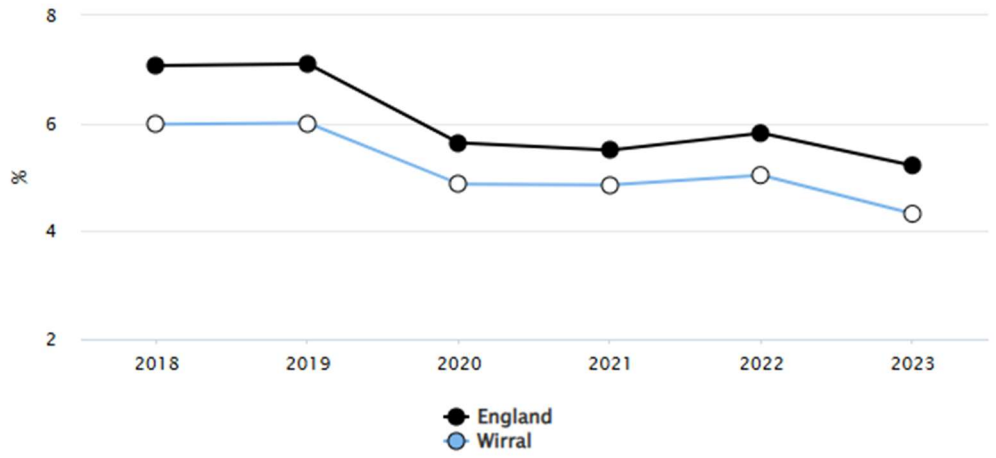
As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy[1], local authorities are expected to work towards reducing emissions and/or concentrations of fine particulate matter ($PM_{2.5}$). There is clear evidence that $PM_{2.5}$ (particulate matter smaller than 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

The Department of Health's public health outcomes framework (PHOF) identifies the life expectancy within Wirral to be better than the benchmark for England. When using the PHOF to refer to the fraction of mortality attributable to particulate air pollution, Wirral is below the England average and the North-West average. The most up to date figures (2023) show that the England average is 5.2%, the North-West being 4.9% and Wirral's average is 4.3%.

This is not an estimate of the number of people whose untimely death is caused entirely by air pollution. Instead, it is a way of representing the effect of air pollution across the whole Wirral population. Air pollution is considered to act as a contributory factor to many more individual deaths. The 'fraction of mortality' figure shows the effect of air pollution in Wirral equivalent to a specific number of deaths at typical ages and help raise awareness of the effect of air pollution on public health.

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

Figure B - Fraction of mortality attributable to particulate air pollution



The data obtained from the Tranmere AURN in relation to $PM_{2.5}$ demonstrates that the 2024 concentration of $PM_{2.5}$ was 7.0µg/m^3, below the interim target of 12µg/m^3 (to be achieved by 2028) and below the Target Value of 10µg/m^3 (to be achieved by 2040). It is above the World Health Organisation guideline level of 5µg/m^3.

The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 has implemented new legally binding $PM_{2.5}$ targets, each with an interim target

- 10µg/m^3 annual mean concentration $PM_{2.5}$ nationwide by 2040, with an interim target of 12µg/m^3 by January 2028.
- 35% reduction in average population exposure by 2040, with an interim target of a 22% reduction by January 2028, both compared to a 2018 baseline.

Wirral Council is taking the following measures to address $PM_{2.5}$:

Existing measures

- **Air Quality Strategy**.
  The Council has implemented an Air Quality Strategy 2024 - 28 for Wirral.
- **Air Quality Implementation Plan**.
  This details the work that is planned and the work that is underway to address the identified priority areas for action.
- **Reducing Particulate Emissions from Domestic Burning**.
  Wirral Council obtained funding from DEFRA to support a project to improve air quality by reducing particulate emissions from domestic burning at source, targeted mainly at wood burning stoves but also considering other domestic burning. It will ensure we are working towards meeting the targets for $PM_{2.5}$ set out in The

Environmental Targets (Fine Particulate Matter) (England) Regulations 2023. Further details regarding the aims and objectives of this project, and the findings of the evaluation after completion of the project in January 2025, can be found on page 17 and 18 of this report.

- **Smoke Control Areas**.

  These are designated areas where smoke must not be emitted from a chimney unless an authorised fuel or 'exempt appliances' is being used. The burning of coal or wood in an ordinary residential fireplace, in these areas is not permitted. As the emissions from the combustion of coal and wood include $PM_{2.5}$'s, the designation of these smoke control areas helps to reduce the release of $PM_{2.5}$'s. Environmental Health ensure that relevant environmental legislation is enforced including the enforcement of smoke control areas.

  Following the changes to the Clean Air Act 1993, implemented by the Environment Act 2021, Local Authorities are now able to issue fixed penalty notices for the emission of smoke in smoke control areas in England. Wirral Council provide advice to members of the public regarding smoke control areas and emissions of smoke from chimneys.

  Enforcement of the laws covering smoke emissions in a smoke control area is taken where it is deemed appropriate. 25 complaints regarding smoke in a smoke control area were received in 2024/25. 20 of these complaints could not be investigated further due to insufficient information provided by the complainant. Of the remaining 5 complaints, 1 test burn was undertaken, 2 advice letters were issued, 1 advisory email was sent, and 1 complaint remains under investigation.

  Wirral Council has completed the legal process for revoking all existing smoke control areas and implementing one smoke control area that covers the whole of Wirral. The new 'whole borough' smoke control area will come into force on 1st August 2025.

- **Active Travel Network.**

  In Wirral, to date, there are 96.7 miles of cycle lanes, 5.75 miles of segregated cycle lanes on highways and 28.8 miles of traffic free cycle routes away from the highway.

  Two active travel schemes are currently on site in Birkenhead Town Centre, Conway Street/Europa Boulevard and Grange Road/Charing Cross/Grange Road West. These schemes are both supported by Future High Street Funding and Conway Street is also supported with Active Travel Funding, as well as Active Travel

Funding and will provide high quality walking, wheeling and pedestrian and cycle links in the town centre linking to the rail and bus stations as well as the key retail areas.

Several additional active travel routes have been identified by The LCRCA Local Cycling Walking Infrastructure Plan (LCWIP), which will be required to go through the development of a business case to access funds which will require optioneering and stages of design including public consultation. The first route 'Birkenhead to Liscard' is a 3.5-mile active travel route which is at outline design stage and underwent public consultation in Autum/Winter 2023.

- **Permitted Processes.**
  Environmental Health ensure that relevant environmental legislation is enforced including the enforcement of smoke control areas, Environmental Permitting legislation and statutory nuisance legislation (i.e. smoke from bonfires).
- **Planning Processes**.
  Environmental Health will continue to advise on planning applications to help limit any adverse effect on air quality from proposed developments. Environmental Health, in which the main function of Local Air Quality Management sits, works closely with the Public Health Team and is represented at the Wirral Health Protection Board by the Environmental Health Senior Manager. Local Air Quality Management also forms part of the Joint Strategic Needs Assessment, which aims to describe the health implications of poor air quality in Wirral.
- **Monitoring Health Outcomes**.
  This is important to assess the health impact of air quality, particularly amongst individuals with pre-existing cardiovascular or respiratory illness, those living and working near main roads and those living in more deprived areas. Local Air Quality Management also forms part of the Joint Strategic Needs Assessment (JSNA), which aims to describe the health implications of poor air quality in Wirral. Wirral Council's JSNA on outdoor air quality provides a summary of key pollutants, the impact on health and priority actions in Wirral. The Air Quality JSNA was updated in 2022.
- **Air Quality Monitoring**.
  The Council will undertake proactive air quality management, as part of the development of the Local Plan. An air quality assessment of particulate matter (PM_{10} and $PM_{2.5}$) and nitrogen dioxide (NO_2) from the transport network, has previously been undertaken to support the Local Plan.

- **Working with External Partners**.

  The Council will also continue to work with UKHSA, neighbouring councils, John Moores University and other key stakeholders to optimise opportunities, and develop interventions, to improve air quality.

New Measure

- **Non-Road Mobile Machinery (NRMM)**

  The Council will investigate opportunities for incorporating NRMM emissions standards in contracts for construction, by initially reviewing the machinery in use in demolitions work to determine emissions stages of equipment in use.

- **Restricting burning on allotments**

  Following consultation, burning garden waste on allotments will now only be permitted between October – February, annually. This will have a positive impact on the release of particulate matter from allotments.

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

This section sets out the monitoring undertaken within 2024 by Wirral Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2020 and 2024 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

Wirral Council undertook automatic (continuous) monitoring at two sites during 2024. Table A.1 in Appendix A shows the details of the automatic monitoring sites. NB. Local authorities do not have to report annually on the following pollutants: 1,3 butadiene, benzene, carbon monoxide and lead, unless local circumstances indicate there is a problem. The automatic monitoring results are available through the UK-Air website.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on how the monitors are calibrated and how the data has been adjusted are included in Appendix C.

3.1.2 Non-Automatic Monitoring Sites

Wirral Council undertook non- automatic (i.e. passive) monitoring of NO_2 at fifty-six sites during 2024. Table A.2 in Appendix A presents the details of the non-automatic sites.

Maps showing the location of the monitoring sites are provided in Appendix D and Wirral Mapping page. 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)

Table A.3 and Table A.4 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 2024 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.

Table A.5 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.

Wirral Council undertook non-automatic (i.e. passive) monitoring of NO_2 at 56 sites during 2024. Table A.2 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.

The conclusion drawn from the monitoring results for Wirral for 2024 are that no exceedances of the air quality objectives, relating to both the annual mean and 1-hour objectives have been identified. The results of passive tube monitoring have been taken into consideration for the 1-hour objectives and as no sites have annual means greater than 60µg/m^3 it is likely that there are no exceedances of the 1-hour objective at these sites. There are currently no AQMA's declared in Wirral and no AQMA's will be declared this year.

A review of monitoring locations was undertaken in December 2023. Following this review, all 56 existing monitoring sites insitu in 2023 were retained for 2024. A further review was undertaken in December 2024. Following this review 49 monitoring locations were retained for 2025, 7 sites were removed and 7 new sites were added. The sites that

were removed are W32/23, W34/19, W38/19, W42, W44/23, W47/22 and W49. The new monitoring sites are W32/25, W34/25, W38/25, W42/25, W44/25, W47/25 and W49/25. It is recognised that there is a need to closely monitor air quality in the borough and utilise all opportunities to improve air quality. A further review will be undertaken in 2025.

There are 56 passive monitoring sites that have been in use between 2023 and 2024. 3 of these sites (W66A, W66B and W66C) form a co-location study and for this reason, analysis of these results are not included in this section. Of the 53 sites analysed, 8 sites (15%) showed increased concentrations of Nitrogen Dioxide. 1 site (2%) has shown no change in levels. 44 sites (83%) have shown a reduction in concentrations. It is noted that some of these increases and reductions are very small.

The site with the smallest increase in concentrations is W52, (Batten Road) with 0.1µg/m^3 increase. The site with the largest increase is site W24 (Conway Street) with 2.5 µg/m^3 increase. It is noted that there have been significant road works in the vicinity of the monitoring site on Conway Street during 2024, which may have impacted the results.

The sites with the smallest reduction in concentrations are W4 (Borough Road, Oxton) and W15 (Arrowe Park Road, Woodchurch) both with 0.2µg/m^3 decreases in Nitrogen Dioxide concentrations. The site with the largest reduction is W9/23 (Woodchurch Road, Prenton) with a 5.9 µg/m^3 decrease.

There have been no exceedances of the national objective for 1-hour mean or annual mean Nitrogen Dioxide indicated by this passive monitoring during 2024. This is because no site has measured an annual mean greater than 60µg/m^3, which indicates that an exceedance of the 1-hour mean objective is not likely at these sites.

Table 3.1 – Changes in Nitrogen Dioxide Levels at Passive Monitoring Sites Between 2023 – 24

Site	Location	2023 NO2 Monitoring Results	2024 NO2 Monitoring Results	Increase / Decrease from 2023-24	Difference (µg/m³)
W2	New Chester Road, Eastham	12.9	13.2	Increase	0.3
W3/19	Leasowe Road, Wallasey	22.1	19.8	Decrease	2.3
W4	Borough Road, Oxton	23.8	23.6	Decrease	0.2
W5	Bolton Road East, New Ferry	27.2	26.2	Decrease	1.0
W8	Moreton Cross, Moreton	23.1	21.9	Decrease	1.2
W9/23	Woodchurch Road, Prenton	31.6	25.7	Decrease	5.9
W12	New Chester Road, New Ferry	35.1	30.9	Decrease	4.2
W13	New Chester Road, New Ferry	17.1	15.8	Decrease	1.3
W14/21	Wallasey Road, Liscard	20.4	19.6	Decrease	0.8
W15	Arrowe Park Road, Woodchurch	24.3	24.1	Decrease	0.2
W17	St Albans Rd Liscard	26.9	24.1	Decrease	2.8
W18/19	New Chester Road, New Ferry	27.5	25.4	Decrease	2.1
W21	Singleton Ave, Prenton	25.2	22.5	Decrease	2.7
W22/23	Birkenhead Road, Seacombe	22.8	23.7	Increase	0.9
W23/23	Argyle Street South, B/head	21.8	21.1	Decrease	0.7
W24	Conway Street, Birkenhead	23.8	26.3	Increase	2.5
W25	Dock Road, Seacombe	21.2	19.9	Decrease	1.3
W27	New Chester Road, New Ferry	20.2	18.6	Decrease	1.6
W28	Church Road, Bebington	19.9	17.5	Decrease	1.4
W29/20	Mill Lane, Poulton	17.4	17.0	Decrease	0.4
W31	Canning St, Birkenhead	31.2	29.1	Decrease	1.3
W32/23	Telegraph Road, Heswall	15.3	15.0	Decrease	0.3
W33/19	Storeton Road, Bebington	23.1	22.0	Decrease	1.1
W34/19	New Chester Road, New Ferry	19.7	18.0	Decrease	1.7
W35	Vernon Road, Seacombe	19.3	18.0	Decrease	1.3
W36/21	Geneva Road, Seacombe	22.4	20.0	Decrease	2.4
W37	Corporation Road, Birkenhead	22.0	22.0	No change	0
W38/19	Mount Road, Higher Bebington	20.8	20.0	Decrease	0.8
W39/21	Chester St, Birkenhead	22.1	23.0	Increase	0.9
W41	St Georges Road, Wallasey	14.0	12.0	Decrease	2.0
W42	New Chester Rd, Bromborough	18.9	16.4	Decrease	2.5
W43	Whetstone Lane, Birkenhead	20.6	18.0	Decrease	2.6

W44/23	Meols Drive, West Kirby	15.7	15.1	Decrease	0.6
W45	Arrowe Park Rd, Upton	31.3	30.0	Decrease	1.3
W47/22	Bridle Road, Eastham	13.5	12.0	Decrease	1.5
W48	Wheatland Lane, Seacombe	24.8	25.0	Increase	0.2
W49	Cross Street, Birkenhead	20.1	19.0	Decrease	1.1
W50	Parry Street, Seacombe	23.0	22.4	Decrease	0.6
W51	Mount Grove, Birkenhead	11.6	13.0	Increase	1.4
W52	Batten Road, Birkenhead	12.9	13.0	Increase	0.1
W53	Morland Avenue, Bromborough	10.0	9.0	Decrease	1.0
W54	Morland Avenue, Bromborough	8.9	8.5	Decrease	0.4
W55	Norbury Avenue, Higher Bebington	11.3	11.0	Decrease	0.3
W56	Norbury Avenue, Higher Bebington	11.5	9.0	Decrease	1.5
W57	Pulford Road, Bebington	11.6	9.0	Decrease	2.6
W58/23	Seabank Road, New Brighton	22.4	21.0	Decrease	1.4
W59	Lees Ave, Rock Ferry	11.9	11.0	Decrease	0.9
W60	Ionic Street, Rock Ferry	15.6	13.0	Decrease	2.6
W61	Green Lane, Wallasey Village	12.8	12.0	Decrease	0.8
W62	Greenleas Road, Wallasey Village	13.2	12.0	Decrease	1.2
W63	Manor Lane, Liscard	14.4	14.0	Decrease	0.4
W64	Withens Lane, Liscard	14.5	13.5	Decrease	1.0
W65	Tower Road, Birkenhead	22.6	24.0	Increase	1.4

When looking at longer term trends, there are 22 passive monitoring sites where long-term monitoring data is available. The latest 2024 monitoring results indicate that there has been a reduction in Nitrogen Dioxide concentrations in the last 6 years (2019 and 2024) at all 22 sites where long-term data is available. 2020 monitoring results were not used to provide the usual 5 year, long-term data comparison, due to the effects of Covid restrictions on traffic levels and subsequently the monitoring results obtained for 2020.

Long term data comparison is not available at all other sites, as these sites were either newly introduced after 2019 or deleted prior to 2024. Site W17, located at St Albans Road, Liscard has seen the highest reduction in Nitrogen Dioxide concentrations, with a decrease of 9.9µg/m^3, whilst site W24, located at Conway Street, Birkenhead has seen the lowest reduction in concentrations, with a decrease of 1.7µg/m^3. As noted above, the results for W24-Conway Street may have been negatively impacted by the significant road works that have been in place in the vicinity of the monitoring sites during 2024.

Table 3.2 – Changes in Nitrogen Dioxide Levels at Passive Monitoring Sites Between 2019 – 24

Site		2019 NO2 Monitoring Result	2024 NO2 Monitoring Result	Increase / Decrease from 2019-2024	Difference (µg/m³)
W02	New Chester Road, Eastham	18.0	13.2	Decrease	4.8
W03/19	Leasowe Road, Wallasey	26.0	19.8	Decrease	6.2
W04	Borough Road, Oxton	29.0	23.6	Decrease	5.4
W05	Bolton Road East, New Ferry	33.0	26.2	Decrease	6.8
W08	Moreton Cross, Moreton	29.0	21.9	Decrease	7.1
W12	New Chester Road, New Ferry	39.0	30.9	Decrease	8.1
W13	New Chester Road, New Ferry	21.0	15.8	Decrease	5.2
W15	Arrowe Park Road, Woodchurch	27.0	24.1	Decrease	2.9
W17	St Albans Rd Liscard	34.0	24.1	Decrease	9.9
W18/19	New Chester Road, New Ferry	33.0	25.4	Decrease	7.6
W21	Singleton Ave, Prenton	29.0	22.5	Decrease	6.5
W24	Conway Street, Birkenhead	28.0	26.3	Decrease	1.7
W25	Dock Road, Seacombe	27.0	19.9	Decrease	7.1
W27	New Chester Road, New Ferry	26.0	18.6	Decrease	7.4
W28	Church Road, Bebington	25.0	17.5	Decrease	7.5
W31	Canning St, Birkenhead	35.0	29.1	Decrease	5.9
W33/19	Storeton Road, Bebington	28.0	21.8	Decrease	6.2
W34/19	New Chester Road, New Ferry	24.0	17.8	Decrease	6.2
W35	Vernon Road, Seacombe	26.0	17.8	Decrease	8.2
W37	Corporation Road, Birkenhead	25.0	21.6	Decrease	3.4
W38/19	Mount Road, Higher Bebington	26.0	20.1	Decrease	5.9

The data obtained from the 2 AURN's located in Wirral shows that there has been a decrease in Nitrogen Dioxide levels from 2023 to 2024 at Tranmere AURN (1.6 µg/m^3 decrease) and a longer-term decrease in annual mean concentrations of Nitrogen Dioxide in the last 6 years (2019 to 2024) of 4.8 µg/m^3. The data shows that there has been a decrease in Nitrogen Dioxide levels from 2023 to 2024 at Birkenhead AURN (1.0 µg/m^3 decrease) and a longer-term decrease in annual mean concentrations of Nitrogen Dioxide in the last 6 years (2019 to 2024) of 6.1µg/m^3 decrease. NB 2020/2021 was not used to

provide long term comparisons, due to the effects of Covid restrictions on monitoring results.

5 indicative real-time sensors were used to monitor Nitrogen Dioxide Levels in locations in Birkenhead, Eastham, Liscard, Poulton, Upton during 2024. No exceedance of the annual mean Nitrogen Dioxide national objective were identified at these monitoring stations. The highest annual mean concentration was measured on Wallasey Road, Liscard (24.6 µg/m^3). The lowest annual mean concentration was measured on New Chester Road, Eastham (15.4 µg/m^3). A table with the monitoring results can be found in Appendix C. It must be noted that these results are indicative only and they are not approved for use by local authorities for compliance monitoring according to TG22, however they can provide indicative air quality data to support our work in reducing air pollution.

3.2.2 Particulate Matter (PM_{10})

Table A.6 in Appendix A: Monitoring Results compares the ratified and adjusted monitored PM_{10} annual mean concentrations for the past five years with the air quality objective of 40µg/m^3.

Table A.7 in Appendix A compares the ratified continuous monitored PM_{10} daily mean concentrations for the past five years with the air quality objective of 50µg/m^3, not to be exceeded more than 35 times per year.

The AURN data for PM_{10} has demonstrated that there have been no exceedances of the annual mean PM_{10} objective of 40µg/m^3 between 2020 and 2024. There has been an increase of levels between 2023 and 2024 of 0.2 µg/m^3, with monitoring levels in 2023 of 10.9 µg/m^3 and levels in 2024 of 11.1 µg/m^3.

There has been a decrease in levels between in 2020 and 2024, with monitoring levels of 11.5 µg/m^3 in 2020 and monitoring levels of 11.1 µg/m^3 in 2024.

There have been no exceedances of PM_{10} daily mean concentrations air quality objective of 50µg/m^3, not to be exceeded more than 35 times per year during 2024. The number of days where exceedances occurred has stayed the same from 2023 to 2024, with 0 days with exceedances in 2023 and 2024.
Monitoring for PM_{10} was also undertaken using 5 indicative real-time sensors located in Birkenhead, Eastham, Liscard, Poulton, Upton during 2024. The results from the indicative monitoring show that no exceedances of the annual mean PM_{10} objective were identified

The highest annual mean figure was 13.2 µg/m^3 (Wallasey Road, Liscard and Poulton Bridge Road, Poulton) and the lowest was 10.8 µg/m^3 (Ivy Street, Birkenhead). It must be noted that these results are indicative only. They are not approved for use by local authorities for compliance monitoring according to TG22, however they can provide indicative air quality data to support our work in reducing air pollution.

3.2.3 Particulate Matter ($PM_{2.5}$)

Table A.8 in Appendix A presents the ratified and adjusted monitored $PM_{2.5}$ annual mean concentrations for the past five years.

$PM_{2.5}$ is monitored by the AURN station located in Tranmere. This AURN is used to monitor background levels. Throughout 2024 there was an exposure reduction approach for $PM_{2.5}$. The AURN results show that the annual mean result for 2024 of 7.0 µg/m^3, which is below both the interim target of 12µg/m^3 (to be achieved by 2028) and the annual Mean Concentration Target 10µg/m^3 (to be achieved by 2040), set out in The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023. This 7.0 µg/m^3 level is above the current World Health Organisation Air Quality Guideline level of 5µg/m^3

The AURN data for $PM_{2.5}$ has demonstrated that background levels have had a small reduction between 2019 and 2024, with levels in 2019 of 8.2µg/m^3 and levels in 2024 of 7.0 µg/m^3.

There were five real-time 'indicative' sensors monitoring PM_{10} and $PM_{2.5}$ during 2024. These sensors are in:

- Birkenhead
- Eastham
- Liscard
- Poulton
- Upton

The results from this indicative monitoring show that no exceedances of the annual mean PM_{10} objective were identified, but all five indicative monitors measured levels of $PM_{2.5}$ over the current World Health Organisation Air Quality Guideline level of 5µg/m^3. No sites exceeded the interim target of 12µg/m^3 (to be achieved by 2028) but 4 out of 5 are above the annual Mean Concentration Target of 10µg/m^3 (to be achieved by 2040), set out in The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023. The highest

annual mean figure for $PM_{2.5}$ was 12µg/m^3 (Wallasey Road, Liscard) and the lowest was 7.9 µg/m^3 (Ivy Street, Birkenhead). It must be noted that these results are indicative only. They are not approved for use by local authorities for compliance monitoring according to TG22, however they can provide indicative air quality data to support our work in reducing air pollution.

Appendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) (2)	Distance to kerb of nearest road (m) (1)	Inlet Height (m)
CM1	Wirral Tranmere	Urban Background	332054	386711	0_3; NO_2; PM_{10}; $PM_{2.5}$	NO	Chemiluminescent; FDMS	68.6	50	3
CM2	Wirral Birkenhead	Urban Centre	331931	388466	NO_2	NO	Chemiluminescent	14	13.4	1.5

Notes:

(1) N/A if not applicable

(2) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

Table A.2 – 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)
W02	New Chester Road, Eastham	Roadside	335887	379797	NO_2	NO	0	12.8	No	2.0
W03/19	Leasowe Road, Wallasey	Kerbside	329070	392309	NO_2	NO	5.5	0.5	No	2.3
W04	Borough Road, Oxton	Roadside	331322	387414	NO_2	NO	9.6	2.6	No	2.5

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)
W05	Bolton Road East, New Ferry	Roadside	334128	384634	NO_2	NO	12.5	4.3	No	2.2
W08	Moreton Cross	Kerbside	326243	389946	NO_2	NO	1.5	0.5	No	2.2
W09/23	Woodchurch Road, Prenton	Kerbside	329261	386449	NO_2	NO	11.4	0.5	No	2.4
W12	New Chester Road, New Ferry	Roadside	334061	384617	NO_2	NO	9.4	1.0	No	2.2
W13	New Chester Road, New Ferry	Kerbside	334113	384588	NO_2	NO	0	9.3	No	2.0
W14/21	Wallasey Rd, Liscard	Roadside	330462	391907	NO_2	NO	2.1	1.0	No	2.7
W15	Arrowe Park Road, Woodchurch	Kerbside	327625	386340	NO_2	NO	1.5	2.1	No	2.4
W17	St Albans Rd Liscard	Kerbside	330646	391805	NO_2	NO	30.0	0.3	No	2.1
W18/19	New Chester Road, New Ferry	Roadside	334097	384546	NO_2	NO	5.0	4.9	No	2.4
W21	Singleton Ave, Prenton	Roadside	331034	387019	NO_2	NO	3.6	1.7	No	2.6
W22/23	Birkenhead Road, Seacombe	Kerbside	332294	390429	NO_2	NO	2.5	0.4	No	2.5
W23/23	Argyle Street South, B/head	Kerbside	332150	388372	NO_2	NO	3.6	0.6	No	2.3
W24	Conway Street Birkenhead	Roadside	332231	388723	NO_2	NO	N/A	2.0	No	2.3

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)
W25	Dock Road, Seacombe	Roadside	331756	390332	NO_2	NO	13.3	1.8	No	2.3
W27	New Chester Road, New Ferry	Roadside	334194	384348	NO_2	NO	7.6	3.5	No	2.1
W28	Church Road, Bebington	Roadside	333223	383277	NO_2	NO	6.4	2.6	No	2.1
W29/20	Mill Lane, Poulton	Kerbside	330209	391139	NO_2	NO	0	11.8	No	1.7
W31	Canning St, Birkenhead	Roadside	332423	389398	NO_2	NO	7.5	1.9	No	2.2
W32/23	Telegraph Road, Heswall	Roadside	327096	381691	NO_2	NO	9.6	2.9	No	2.3
W33/19	Storeton Road, Bebington	Kerbside	330921	386652	NO_2	NO	7.8	0.7	No	2.4
W34/19	New Chester Road, New Ferry	Roadside	334096	384535	NO_2	NO	0	9.5	No	2.0
W35	Vernon Road, Seacombe	Kerbside	331716	390696	NO_2	NO	5.5	0.5	No	2.5
W36/21	Geneva Road, Seacombe	Kerbside	331843	390812	NO_2	NO	4.7	0.5	No	2.7
W37	Corporation Road, Birkenhead	Roadside	331529	389762	NO_2	NO	N/A	1.8	No	2.1
W38/19	Mount Road, Higher Bebington	Roadside	331481	384564	NO_2	NO	0	6.0	No	2.0
W39/21	Chester St, Birkenhead	Kerbside	332711	388856	NO_2	NO	3.7	0.5	No	2.5

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)
W41	St Georges Road, Wallasey	Roadside	329487	392312	NO2	NO	6.7	4.4	No	2.7
W42	New Chester Rd, Bromborough	Roadside	334888	382627	NO_2	NO	8.3	2.5	No	2.7
W43	Whetstone Lane, Birkenhead	Roadside	331607	388353	NO_2	NO	2.6	1.8	No	2.7
W44/23	Meols Drive, West Kirby	Roadside	321238	387034	NO_2	NO	7.9	3.5	No	2.4
W45	Arrowe Park Rd, Upton	Kerbside	327155	387140	NO_2	NO	2.6	0.8	No	2.4
W47/22	Bridle Road, Eastham	Roadside	335784	380076	NO_2	NO	0	15.9	No	2.0
W48	Wheatland Lane, Seacombe	Roadside	331878	390822	NO_2	NO	5.8	2.7	No	2.4
W49	Cross Street, Birkenhead	Kerbside	332627	388749	NO_2	NO	1.7	0.4	No	2.4
W50	Parry Street, Seacombe	Roadside	331928	390767	NO_2	NO	4.3	1.5	No	2.2
W51	Mount Grove, Birkenhead	Roadside	331301	388040	NO_2	NO	30.2	2.6	No	2.4
W52	Batten Road, Birkenhead	Roadside	331337	387973	NO_2	NO	4.2	2.9	No	2.1
W53	Morland Avenue, Bromborough	Roadside	334697	380863	NO_2	NO	14.3	4.9	No	2.3
W54	Morland Avenue, Bromborough	Roadside	334794	380852	NO_2	NO	14.3	4.9	No	2.1

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)
W55	Norbury Avenue, Higher Bebington	Roadside	332488	384189	NO_2	NO	8.0	1.6	No	2.1
W56	Norbury Avenue, Higher Bebington	Roadside	332471	384120	NO_2	NO	8.4	1.7	No	1.9
W57	Pulford Road, Bebington	Kerbside	332620	384345	NO_2	NO	50.0	0.6	No	2.1
W58/23	Seabank Road, New Brighton	Kerbside	330940	393447	NO_2	NO	5.8	0.7	No	2.6
W59	Lees Ave, Rock Ferry	Kerbside	332854	386834	NO_2	NO	23.2	0.3	No	2.3
W60	Ionic Street, Rock Ferry	Roadside	332894	386792	NO_2	NO	0	1.7	No	2.3
W61	Green Lane, Wallasey Village	Kerbside	328527	392568	NO_2	NO	23.8	0.8	No	2.2
W62	Greenleas Road, Wallasey Village	Kerbside	328587	392536	NO_2	NO	9.7	0.7	No	2.2
W63	Manor Lane, Liscard	Kerbside	331202	392366	NO_2	NO	7.7	0.5	No	2.3
W64	Withens Lane, Liscard	Roadside	331031	392396	NO_2	NO	109.2	2.1	No	2.2
W65	Tower Road, Birkenhead	Roadside	332170	389843	NO_2	NO	14.2	1.9	No	2.4

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 NO_2 Monitoring Results: Automatic Monitoring (µg/m³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1	332054	386711	Urban Background	98.2	98.2	9.6	12.6	13.4	12.8	11.2
CM2	331931	388466	Urban Centre	98.0	98.0	13.1	18.3	16.8	17.9	16.9

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

☒ **Reported concentrations are those at the location of the monitoring site (annualised, as required), i.e. prior to any fall-off with distance correction.**

☒ **Where exceedances of the NO_2 annual mean objective occur at locations not representative of relevant exposure, the fall-off with distance concentration has been calculated and reported concentration provided in brackets for 2024.**

Notes:

The annual mean concentrations are presented as µg/m³.

Exceedances of the NO_2 annual mean objective of 40µg/m³ are shown in **bold**.

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%).

Table A.4 – 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 2024 (%) (2)	2020	2021	2022	2023	2024
W02	335887	379797	Roadside	100	100	14.3	15.1	14.7	12.9	13.2
W03/19	329070	392309	Kerbside	83.33	83.33	22.7	24.0	21.4	22.1	19.8
W04	331322	387414	Roadside	91.67	91.67	25.3	25.1	24.3	23.8	23.6
W05	334128	384634	Roadside	100	100	26.8	27.5	28.3	27.2	26.2
W08	326243	389946	Kerbside	58.33	58.33	23.5	23.7	25.3	23.1	21.9
W09/23	329261	386449	Kerbside	83.33	83.33	x	x	x	24.1	25.7
W12	334061	384617	Roadside	100	100	32.7	36.5	35.6	35.1	30.9
W13	334113	384588	Kerbside	91.67	91.67	17.1	17.8	17.3	17.1	15.8
W14/21	330462	391907	Roadside	100	100	x	20.5	21.3	20.4	19.6
W15	327625	386340	Kerbside	100	100	22.5	24.6	24.5	24.3	24.1
W17	330646	391805	Roadside	83.33	83.33	26.4	28.8	27.2	26.9	24.1
W18/19	334097	384546	Roadside	100	100	26.6	29.2	28.5	27.5	25.4
W21	331034	387019	Roadside	75	75	22.8	27.2	24.0	25.2	22.5
W22/23	332294	390429	Roadside	91.67	91.67	x	x	x	22.8	23.7
W23/23	332150	388372	Kerbside	100	100	x	x	x	21.8	21.1
W24	332231	388723	Roadside	83.33	83.33	23.0	26.3	24.2	23.8	26.3
W25	331756	390332	Roadside	75	75	18.8	23.1	22.5	21.2	19.9
W27	334194	384348	Roadside	75	75	17.2	23.4	20.2	20.2	18.6
W28	333223	383277	Roadside	100	100	20.5	21.8	21.2	19.9	17.5
W29/20	330209	391139	Kerbside	91.67	91.67	15.4	18.3	18.8	17.4	17.0
W31	332423	389398	Roadside	66.67	66.67	27.7	31.5	30.7	31.2	29.1
W32/23	327096	381691	Roadside	83.33	83.33	x	x	x	15.3	15.0
W33/19	330921	386652	Roadside	100	100	23.5	23.4	23.3	23.1	21.8
W34/19	334096	384535	Kerbside	75	75	20.9	20.9	20.8	19.7	17.8
W35	331716	390696	Roadside	100	100	21.4	20.3	19.1	19.3	17.8
W36/21	331843	390812	Kerbside	91.67	91.67	x	21.4	23.1	22.4	20.0
W37	331529	389762	Kerbside	91.67	91.67	24.2	23.5	22.9	22.0	21.6
W38/19	331481	384564	Roadside	91.67	91.67	14.0	21.7	22.1	20.8	20.1
W39/21	332711	388856	Kerbside	91.67	91.67	x	24.2	25.0	22.1	23.0
W41	329487	392312	Kerbside	100	100	11.5	14.3	15.2	14.0	12.4

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 2024 (%) (2)	2020	2021	2022	2023	2024
W42	334888	382627	Roadside	41.67	41.67	19.1	20.6	19.9	18.9	16.4
W43	331607	388353	Roadside	83.33	83.33	21.5	22.3	21.8	20.6	18.4
W44/23	321238	387034	Roadside	58.33	58.33	x	x	x	15.7	15.1
W45	327155	387140	Kerbside	91.67	91.67	34.0	36.8	32.4	31.3	29.8
W47/22	335784	380076	Roadside	100	100	x	x	13.5	13.5	12.0
W48	331878	390822	Roadside	75	75	x	23.1	27.4	24.8	24.9
W49	332627	388749	Kerbside	100	100	x	17.9	20.4	20.1	18.7
W50	331928	390767	Roadside	66.67	66.67	x	26.0	25.6	23.0	22.4
W51	331301	388040	Roadside	91.67	91.67	x	x	13.3	11.6	12.7
W52	331337	387973	Roadside	91.67	91.67	x	x	13.0	12.9	13.1
W53	334697	380863	Roadside	100	100	x	x	11.0	10.0	9.5
W54	334794	380852	Roadside	50	50	x	10.0	8.2	8.9	8.5
W55	332488	384189	Roadside	83.33	83.33	x	x	11.8	11.3	10.9
W56	332471	384120	Roadside	75	75	x	10.6	11.7	11.5	8.9
W57	332620	384345	Kerbside	91.67	91.67	x	10.1	10.7	11.6	9.5
W58/23	330940	393447	Kerbside	91.67	91.67	x	x	x	22.4	21.3
W59	332854	386834	Roadside	83.33	83.33	x	x	13.0	11.9	10.5
W60	332894	386792	Roadside	75	75	x	x	12.9	15.6	13.3
W61	328527	392568	Kerbside	100	100	x	11.9	13.9	12.8	11.9
W62	328587	392536	Kerbside	91.67	91.67	x	x	14.1	13.2	12.3
W63	331202	392366	Kerbside	75	75	x	x	16.6	14.4	13.7
W64	331031	392396	Roadside	66.67	66.67	x	x	15.6	14.5	13.5
W65	332170	389843	Roadside	75	75	x	x	22.6	22.6	24.3

☒ **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: X indicates that no data is available.

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 a – Annual Mean NO_2 Concentrations

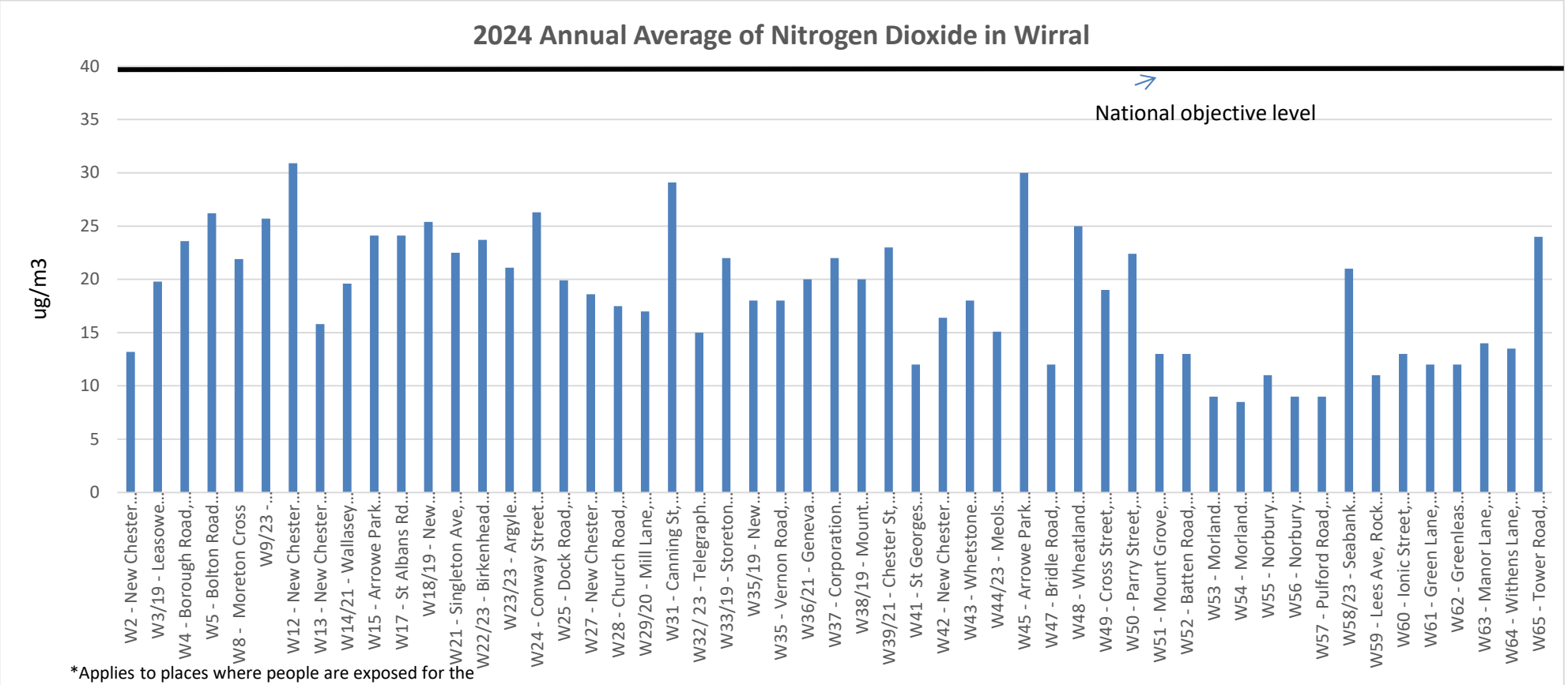


Figure A.2b – Trends in Annual Mean NO_2 Concentrations

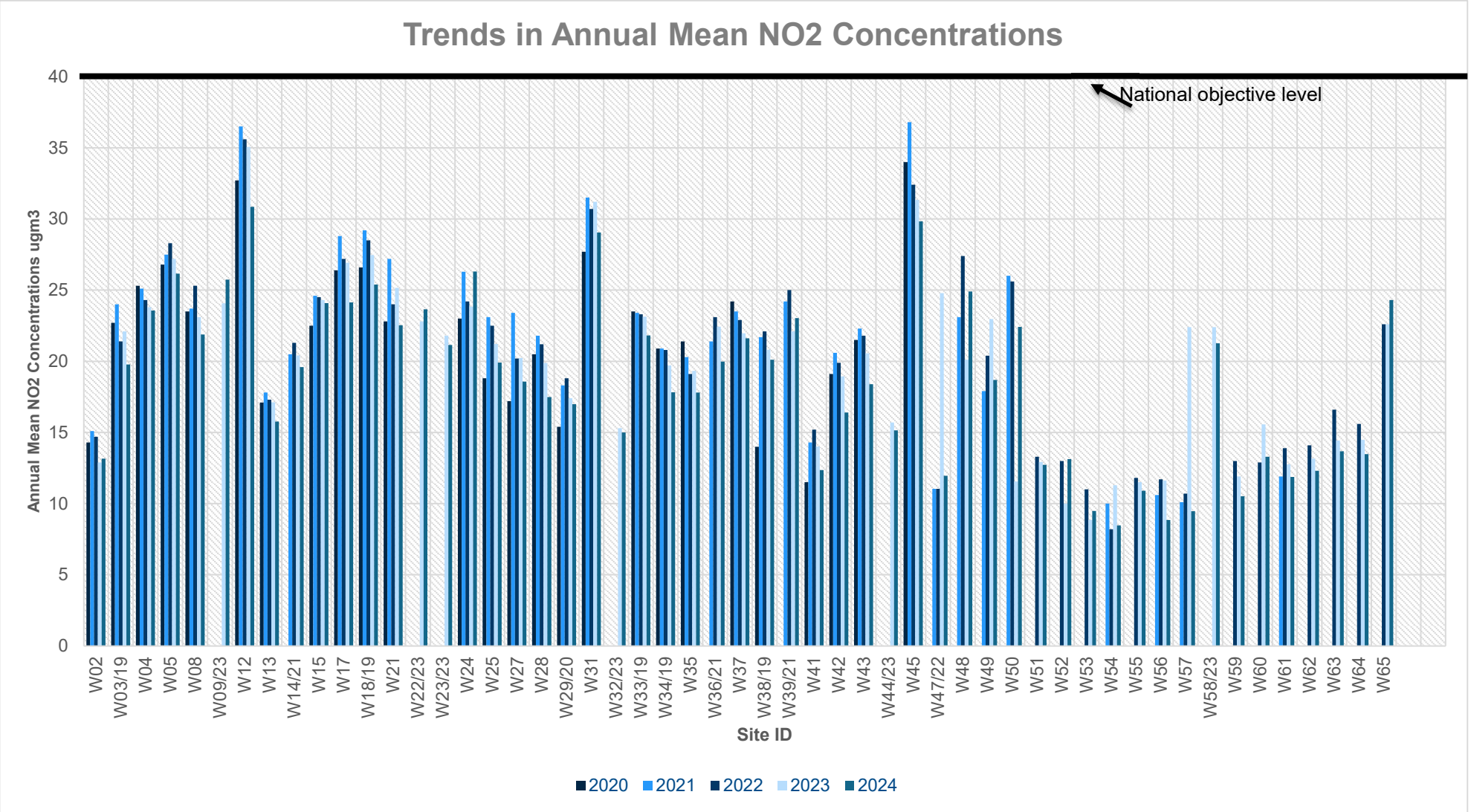


Figure A.3c – Trends in Annual Mean NO_2 Concentrations from AURN Real-Time Monitors

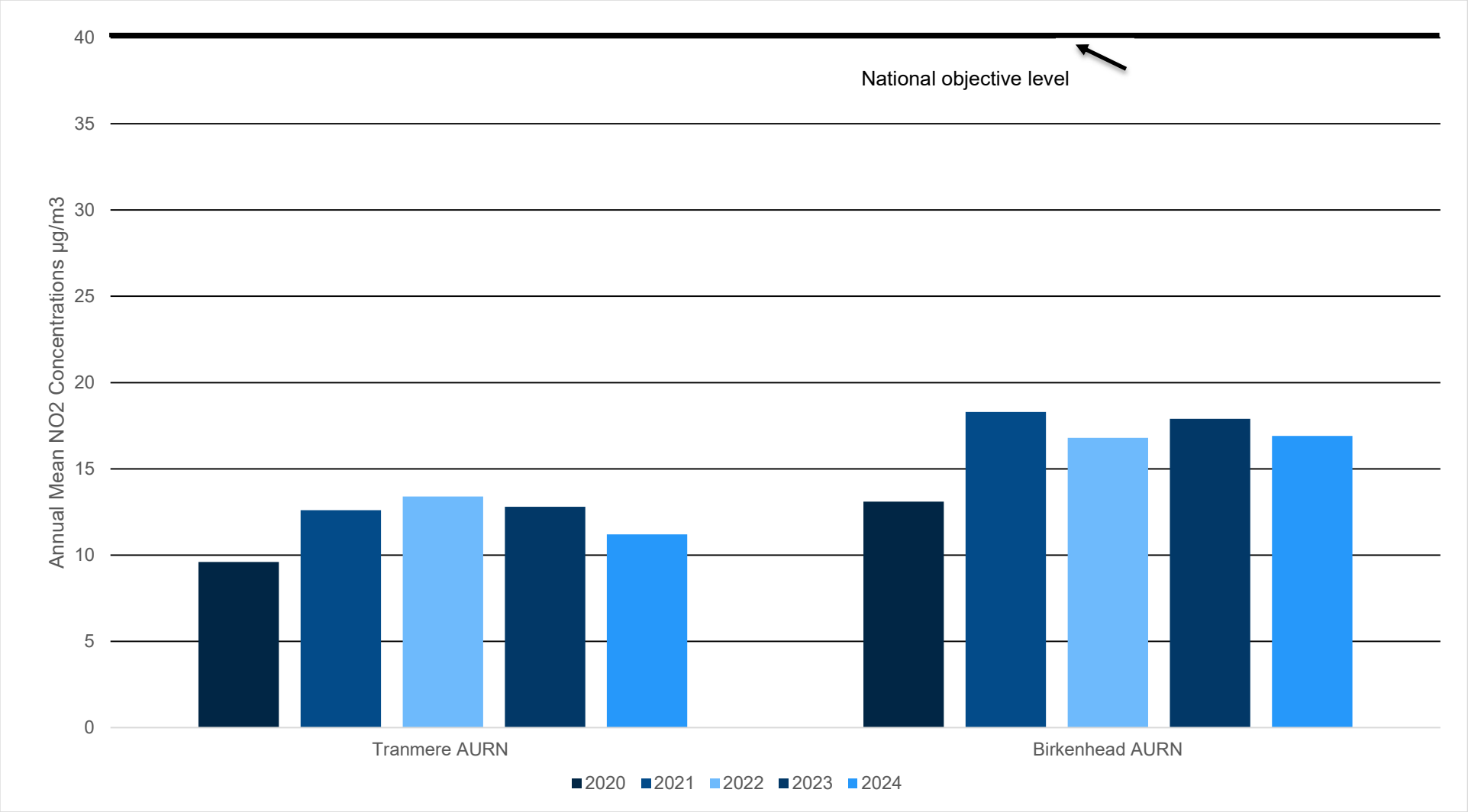


Table A.5 – 1-Hour Mean NO_2 Monitoring Results, Number of 1-Hour Means > 200µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1	332054	386711	Urban Background	98.2	98.2	0	0	0	0	0
CM2	331931	388466	Urban Centre	98.0	98.0	0	0	0	0	0

Notes:

Results are presented as the number of 1-hour periods where concentrations greater than 200µg/m^3 have been recorded.

Exceedances of the NO_2 1-hour mean objective (200µg/m^3 not to be exceeded more than 18 times/year) are shown in **bold**.

If the period of valid data is less than 85%, the 99.8th percentile of 1-hour means is provided in brackets.

(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%).

Table A.6 – Annual Mean PM_{10} Monitoring Results (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1	332395	433175	Urban Background	99.9	99.9	11.5	11.3	12.8	10.9	11.1

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

Notes:

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

Exceedances of the PM_{10} annual mean objective of 40µg/m^3 are shown in **bold**.

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.

(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.4 – Trends in Annual Mean PM_{10} Concentrations

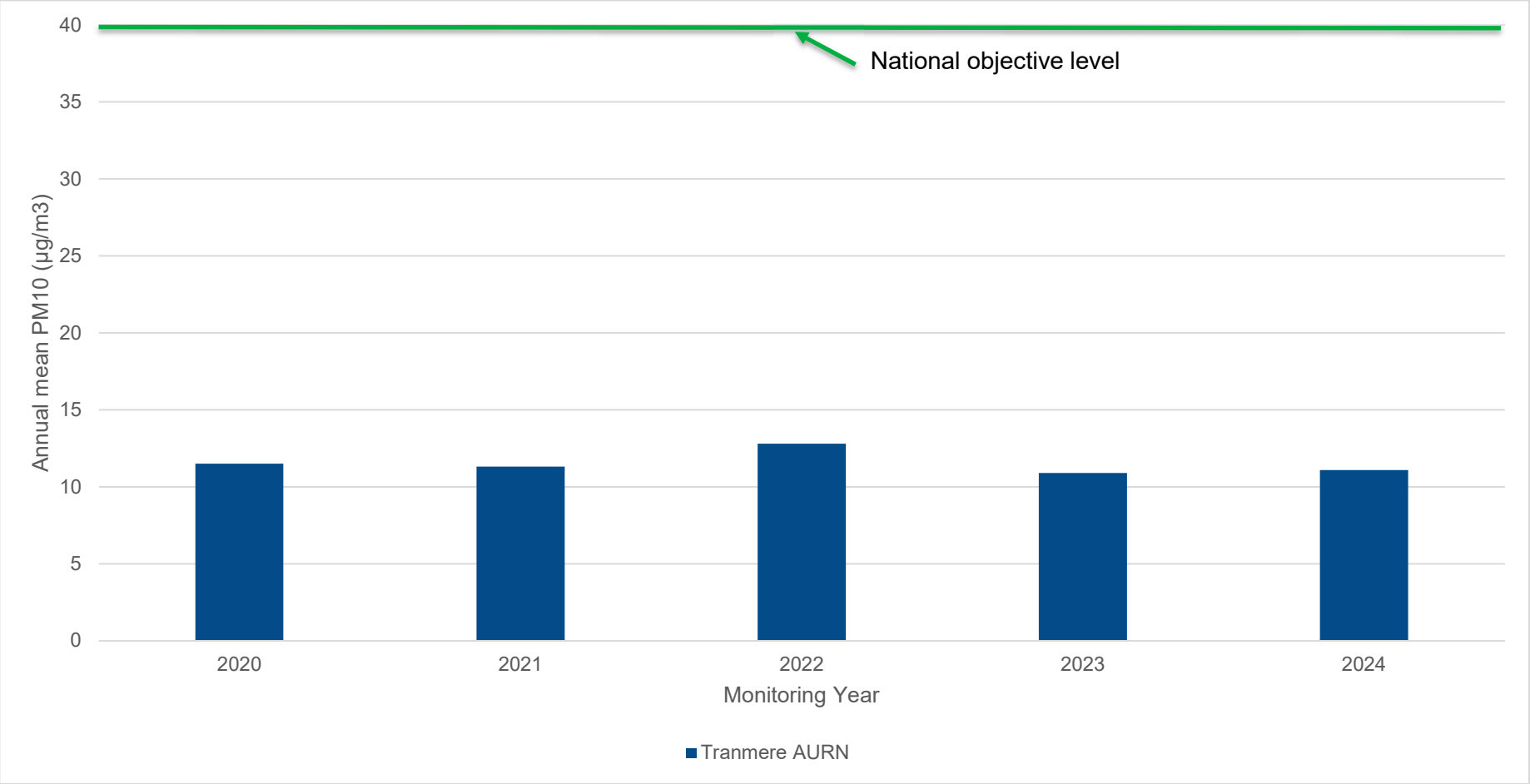


Table A.7 – 24-Hour Mean PM_{10} Monitoring Results, Number of PM_{10} 24-Hour Means > 50µg/m³

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1	332054	386711	Urban Background	99.9	99.9	1	1	5	0	0

Notes:

Results are presented as the number of 24-hour periods where daily mean concentrations greater than 50µg/m³ have been recorded.

Exceedances of the PM_{10} 24-hour mean objective (50µg/m³ not to be exceeded more than 35 times/year) are shown in **bold**.

If the period of valid data is less than 85%, the 90.4th percentile of 24-hour means is provided in brackets.

(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.5 – Trends in Number of 24-Hour Mean PM_{10} Results > 50µg/m³

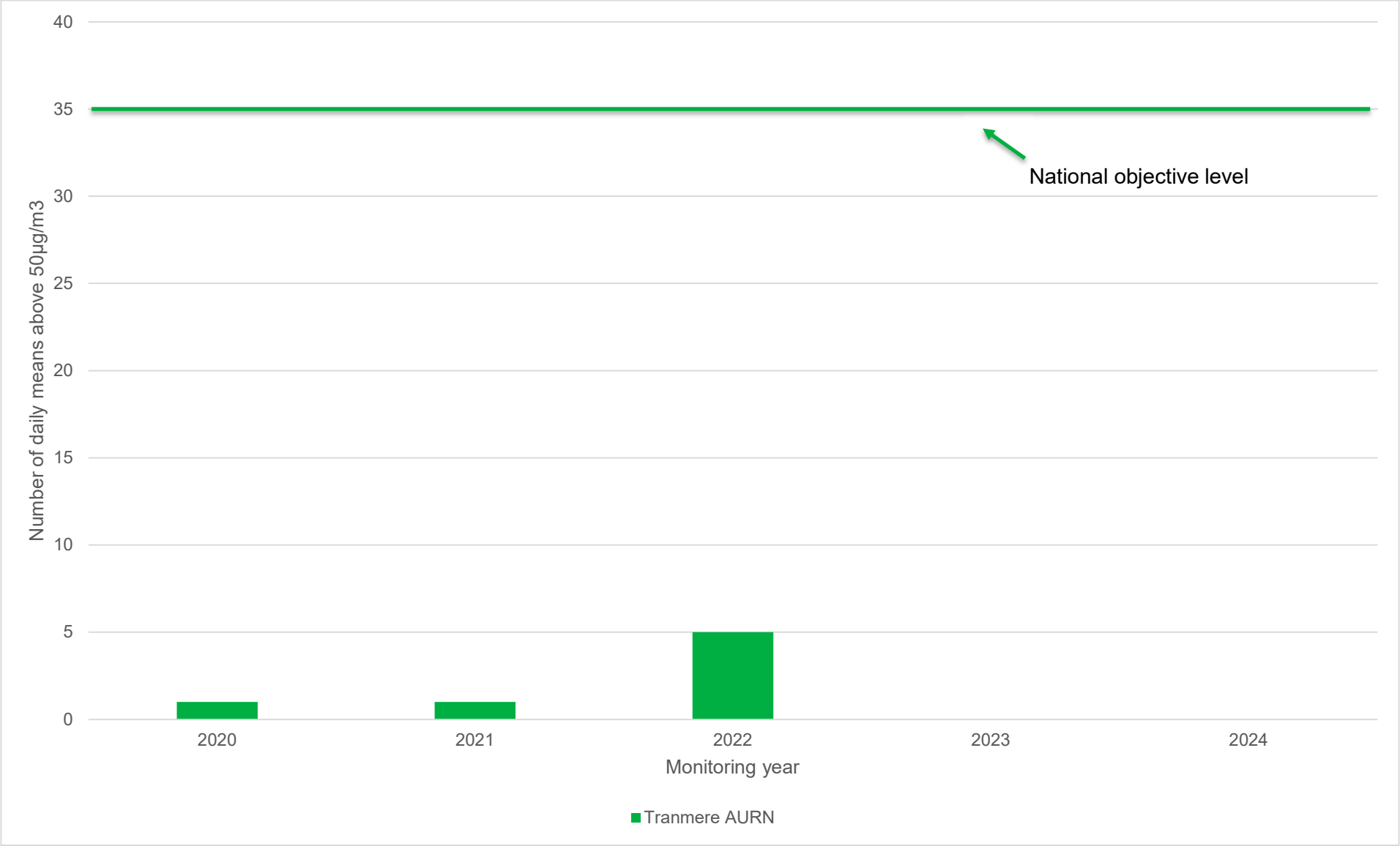


Table A.8 – Annual Mean $PM_{2.5}$ Monitoring Results (µg/m³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
CM1	332395	433175	Urban Background	99.9	99.9	7.1	7.0	7.8	6.6	7.0

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

Notes:

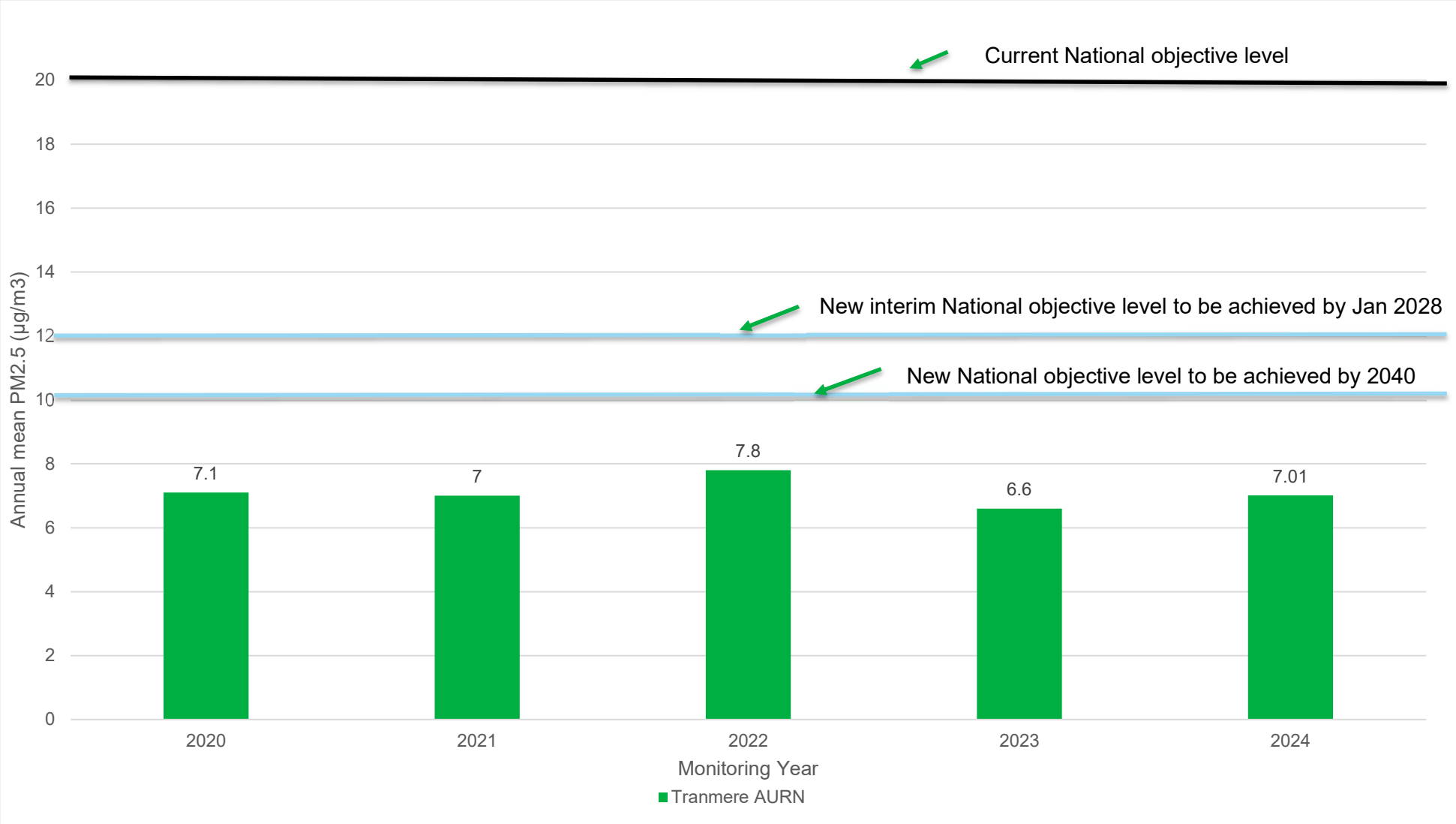
The annual mean concentrations are presented as µg/m³.

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.

(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.6 – Trends in Annual Mean $PM_{2.5}$ Concentrations



Appendix B: Full Monthly Diffusion Tube Results for 2024

Table B.1 – NO_2 2024 Diffusion Tube Results (µg/m³)

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 <(0.8)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
W02	335887	379797	22.5	21.5	17.8	13.6	16.4	10.5	10	8.6	21.8	17.1	21.6	15.9	16.4	13.2		
W03/19	329070	392309	37	39.1	25.2	21.3	x	17.4	17.9	18	28.3	23	x	19.9	24.7	19.8		
W04	331322	387414	38.9	**40.2**	30.1	22.5	24.6	22.2	26	21.3	35.7	25.6	36.9	x	29.5	23.6		
W05	334128	384634	**42.9**	39.9	27.9	30.4	30.2	29.5	29.5	23.1	35.8	27.2	**41.1**	34.9	32.7	26.2		
W08	326243	389946	x	20.7	x	x	25.5	23.9	24.9	x	28.9	32.7	35.1	x	27.4	21.9		
W09/23	329261	386449	**46.3**	39.5	x	37	x	25.9	27.7	19.5	36.8	20.8	38.3	30	32.2	25.7		
W12	334061	384617	38.3	**53.8**	**44.4**	34.2	38.6	32	35.7	32.7	**46**	**41.6**	**52.2**	13.4	38.6	30.9		
W13	334113	384588	28.4	25.1	18.3	16.3	x	14	17	13.6	18	21	26.9	18.2	19.7	15.8		
W14/21	330462	391907	24.5	34.7	26.2	22.2	23.3	17.6	20.9	18	27	25.6	31.9	21.9	24.5	19.6		
W15	327625	386340	33.2	30.7	32	29.2	34.3	28.6	28.8	27.1	31.4	30	29.2	26.7	30.1	24.1		
W17	330646	391805	x	**41.6**	37.3	27.1	33.1	23.2	26.2	20.8	34.1	28.6	29.8	x	30.2	24.1		
W18/19	334097	384546	**45.4**	**41**	32.9	27.3	30.3	24.7	14.6	24.9	34.6	31.2	**42.3**	31.7	31.7	25.4		
W21	331034	387019	1.5	**48.3**	21.5	x	27	23.5	27	x	31.5	34.3	38.9	x	28.2	22.5		
W22/23	332294	390429	x	**42.7**	31.7	26.8	26.9	23.3	27	24.9	28.4	27.9	36.2	29.5	29.6	23.7		
W23/23	332150	388372	28.2	37.5	20.5	21.6	25.4	22.1	21.1	20.8	33	25.2	34.9	26.8	26.4	21.1		
W24	332231	388723	**40.7**	39.1	27.8	x	32.2	22.9	32.4	25.4	39.1	30.3	39	x	32.9	26.3		
W25	331756	390332	x	34.1	29.3	x	23.8	15.1	20.6	17.3	21.4	29.3	33.1	x	24.9	19.9		
W27	334194	384348	23	x	x	22.1	23.6	x	19.1	16.8	29.7	28.8	20.3	25.6	23.2	18.6		
W28	333223	383277	26.2	33	23.4	6.5	19.2	15.6	18.3	16.2	25.8	21.6	31.7	24.9	21.9	17.5		
W29/20	330209	391139	26.7	31.8	21.5	16.3	18.9	13.3	16.5	14.7	22	24.7	27.2	x	21.2	17.0		
W31	332423	389398	**53.4**	**40.1**	34.7	31.8	x	x	36.3	26.9	x	39.4	**50.3**	x	39.1	29.1		
W32/23	327096	381691	21.9	25.6	21.7	16.2	x	13	14.4	12.2	17.9	21.2	23.3	x	18.7	15.0		
W33/19	330921	386652	35.5	38.3	21.3	25.1	23.8	21.9	20.6	17.2	29.2	27.7	39.3	27.2	27.3	21.8		
W34/19	334096	384535	28.4	26.7	25.1	20.1	20.7	19.5	19.7	17.2	23.1	x	x	x	22.3	17.8		
W35	331716	390696	31.8	25.2	28	19.9	20.9	16.6	21.9	14.7	27.3	23.9	10.9	26	22.3	17.8		
W36/21	331843	390812	26.3	35.2	28.8	21.4	x	15	20.8	19.1	27	33.3	22.1	25.6	25.0	20.0		

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 <(0.8)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
W37	331529	389762	14	35.7	30.1	21.9	27.5	21.8	x	18.9	31.9	32.3	36.1	26.9	27.0	21.6		
W38/19	331481	384564	31.9	31.3	28.4	22.4	x	20.4	20.7	19.9	27.4	24.4	28.3	21.4	25.1	20.1		
W39/21	332711	388856	**41.4**	36.3	24.3	25.3	x	19.1	24.4	23	28.4	28	37.2	29.4	28.8	23.0		
W41	329487	392312	19.7	22.6	20.2	12.1	12.1	7.1	11.3	7.8	16.5	18.4	25.7	11.9	15.5	12.4		
W42	334888	382627	18.5	26.6	21.4	19.4	21.1	x	x	x	x	x	x	x	21.4	16.4		
W43	331607	388353	35.9	26.9	26.8	19.2	x	20.4	21.7	16.4	29	23.1	10.4	x	23.0	18.4		
W44/23	321238	387034	21.2	20.9	20.6	x	x	14.6	14.3	12.9	17.1	x	x	x	17.4	15.1		
W45	327155	387140	**49.6**	**48.9**	34.1	35.7	x	28.5	34.5	31.5	36.3	37.3	39.9	33.8	37.3	29.8		
W47/22	335784	380076	23.5	21.2	18.9	11.8	11.7	7.9	10.1	8.1	17.9	16.1	23.1	9	14.9	12.0		
W48	331878	390822	32.4	**47.1**	39.3	26.5	x	16.5	25.1	23.7	x	34.1	35.4	x	31.1	24.9		
W49	332627	388749	29.2	36.8	27.5	19.1	20.7	12.4	18.1	17.8	22.8	25.7	30.3	19.9	23.4	18.7		
W50	331928	390767	33.6	**40**	32.6	x	x	27.9	28	x	32.6	31.9	21.5	x	31.0	22.4		
W51	331301	388040	21.7	21.5	x	11.5	13.1	8.5	12.2	7.5	18.2	19.1	23	18.6	15.9	12.7		
W52	331337	387973	24.5	21.3	21.6	9.9	12.7	7.5	11.3	7.5	19.6	19.3	25.2	x	16.4	13.1		
W53	334697	380863	17.3	17.4	13.9	7.9	9.9	6.8	8.7	6.5	13.6	13.8	14.4	12.1	11.9	9.5		
W54	334794	380852	x	18.9	12.2	7.4	x	x	x	x	x	11.5	13.6	10.6	12.4	8.5		
W55	332488	384189	17.4	19.6	16.3	10	x	8.4	10.1	8.1	14.7	16	x	15.8	13.6	10.9		
W56	332471	384120	x	16.8	15	9.3	x	7	9.1	6.6	13.8	15.4	x	6.6	11.1	8.9		
W57	332620	384345	18.3	12.6	13.9	8.8	10.8	6.8	8.9	5	15.2	13.4	14.3	13.9	11.8	9.5		
W58/23	330940	393447	33.7	39.1	33.4	20.9	22.4	19.8	23.9	x	27.1	22.2	27.7	22.1	26.6	21.3		
W59	332854	386834	21.5	17.5	13.6	7.9	11	6.9	9.1	x	15.2	7.3	21.6	x	13.2	10.5		
W60	332894	386792	24.2	21.3	17.8	9.7	x	x	11.4	7.8	16	18.3	23.1	x	16.6	13.3		
W61	328527	392568	19.8	23.5	18.9	11.6	11.1	7.6	12.4	8.3	16.7	19.2	21.1	7.9	14.8	11.9		
W62	328587	392536	x	21.2	19.3	11.3	12.3	7.6	12	9	16.7	20.1	22.5	17.3	15.4	12.3		
W63	331202	392366	21.1	27.3	x	x	14	7.4	10.8	8.9	20.6	22.2	21.6	x	17.1	13.7		
W64	331031	392396	16.7	23.8	x	x	x	9.1	13.4	12.6	18.8	24.3	22.8	x	17.7	13.5		
W65	332170	389843	**40.6**	x	39.1	26.3	x	14.5	23.4	20.7	35.9	33	**40**	x	30.4	24.3		
W66A	332055	386714	21.4	17.2	9.4	10.4	x	8.8	10.8	x	13.4	15.2	x	13.3	13	11		
W66B	332055	386714	37.1	18	14.4	8.4	x	8	11.3	x	13.5	14.8	21.6	6.7	15	12		
W66C	332055	386714	19	19.8	13.6	9.1	x	7.6	10.6	x	14.2	14	21.9	18.1	15	12		

☒ **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.**

☒ **Wirral Council confirm that all 2024 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.**

Notes: X indicates no data is available.

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 Wirral Council During 2024

Wirral Council has not identified any new sources relating to air quality within the reporting year of 2024.

Additional Air Quality Works Undertaken by Wirral Council During 2024

Wirral Council has implemented an Air Quality Strategy 2024 – 2028 and has produced a supporting implementation plan for 2024/25 and 2025/26 to drive the Strategy forward.

Wirral Council has not completed any additional works within the reporting year of 2024 relating to the development of action plan measures or the declaration, amendment, or revocation of an AQMA. Although work regarding air quality monitoring locations has been undertaken for 2024, including a co-location study.

Review of Passive Diffusion Tube Monitoring Locations

A review of the monitoring locations of the existing passive diffusion tubes used to monitor nitrogen dioxide levels was undertaken in December 2023. This review was carried out to ensure that monitoring was being undertaken in the most appropriate location. Several information sources were fed into the review including traffic information from the sustainable transport team, the Air Quality Monitoring Study, previous monitoring results at each site and information about the school streets initiative. Areas that may be impacted by future developments were also considered.

Following this review, all existing 56 passive diffusion tube monitoring sites were maintained for 2024.

A further review was undertaken in December 2024. Following this review, in 2025, 49 sites were retained, 7 sites were removed, and 7 new monitoring locations were added. The sites that were removed are W32/23, W34/19, W38/19, W42, W44/23, W47/22 and W49. The new monitoring sites are W32/25, W34/25, W38/25, W42/25, W44/25, W47/25 and W49/25.

QA/QC of Diffusion Tube Monitoring

Wirral Council uses SOCOTEC – Didcot, using a 50% TEA method of preparation for the analysis of its NO_2 diffusion tubes. Monitoring during 2024 was completed in adherence with the 2024 Diffusion Tube Monitoring Calendar, apart from during December 2024, where sites W32/33, W34/19, W41, W42, W47, W66a, W66B and W66C were collected 3 days outside of the calendar window due to safety issues regarding accessing sites in icy conditions.

The Local Air Quality Management Help Desk has provided information on the precision data for each laboratory based on the results of duplicate or triplicate diffusion tubes being submitted for analysis. The data shows that Socotec – Didcot is determined to have **good** precision. You can find this information at the following link https://laqm.defra.gov.uk/air-quality/air-quality-assessment/precision-and-accuracy/#SummaryPrecision

In the AIR PT intercomparison scheme for comparing spiked Nitrogen Dioxide diffusion tubes, SOCOTEC currently holds the highest rank of a **Satisfactory** laboratory.

Table 1: Laboratory summary performance for AIR NO_2 PT rounds AR050, 52, 53, 55, 56, 58, 59, 62 and 63

The following table lists those UK laboratories undertaking LAQM activities that have participated in recent AIR NO_2 PT rounds and the percentage (%) of results submitted which were subsequently determined to be **satisfactory** based upon a z-score of ≤ ± 2 as defined above.

AIR PT Round	AIR PT AR050	AIR PT AR052	AIR PT AR053	AIR PT AR055	AIR PT AR056	AIR PT AR058	AIR PT AR059	AIR PT AR062	AIR PT AR063
Round conducted in the period	May – June 2022	July – August 2022	September – October 2022	January – February 2023	May – June 2023	July – August 2023	September – October 2023	January – February 2024	April – June 2024
Aberdeen Scientific Services	100 %	100 %	100 %	0 %	100 %	100 %	75 %	100 %	100 %
Cardiff Scientific Services	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]	NR [3]
Edinburgh Scientific Services	50 %	100 %	100 %	100 %	75 %	100 %	50 %	100 %	100 %
SOCOTEC	100 % [1]	100 % [1]	100 % [1]	100 % [1]	100 % [1]	100 % [1]	100 % [1]	100 % [1]	100 % [1]

Diffusion Tube Annualisation

If annualisation was required for any non-automatic monitoring sites, the sites requiring annualisation should be clearly defined along with details of the calculation method undertaken provided in Table C.1. Annualisation is required for any site with data capture less than 75% but greater than 25%.

Table C.1 – Annualisation Summary (concentrations presented in µg/m³)

Site ID	Annualisation Factor Tranmere	Annualisation Factor Wigan Central	Annualisation Factor Preston	Annualisation Factor <Site 4 Name>	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean
W08	0.9747	1.0321	0.9884	-	0.9984	27.4	27.3
W31	0.9446	0.8952	0.9460	-	0.9286	39.1	36.3
W42	0.9473	0.9800	0.9458	-	0.9577	21.4	20.5
W44/23	1.0680	1.1496	1.0518	-	1.0898	17.4	18.9

Site ID	Annualisation Factor Tranmere	Annualisation Factor Wigan Central	Annualisation Factor Preston	Annualisation Factor <Site 4 Name>	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean
W50	0.8895	0.9050	0.9156	-	0.9034	31.0	28.0
W54	0.8673	0.8160	0.8837	-	0.8556	12.4	10.6
W64	0.9464	0.9516	0.9584	-	0.9521	17.7	16.8

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2024 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 with regard to 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.

Wirral Council have applied a national bias adjustment factor of 0.80 to the 2024 monitoring data. A summary of bias adjustment factors used by Wirral Council over the past five years is presented in

Table C.2.

For 2024, the data from the diffusion tubes has been bias adjusted using National Diffusion tube bias adjustment factor spreadsheet March 2024 for Socotec Didcot, using a 50% TEA preparation, 33 studies, that can be seen below.

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 03/25

Follow the steps below **in the correct order** to show the results of **relevant** co-location studies

Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods

Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet

This spreadsheet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.

This spreadsheet will be updated at the end of June 2025

LAQM Helpdesk Website

The LAQM Helpdesk is operated on behalf of Defra and the Devolved Administrations by Bureau Veritas, in conjunction with contract partners AECOM and the National Physical Laboratory.

Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.

Step 1: Select the Laboratory that Analyses Your Tubes from the Drop-Down List

If a laboratory is not shown, we have no data for this laboratory.

Step 2: Select a Preparation Method from the Drop-Down List

If a preparation method is not shown, we have no data for this method at this laboratory.

Step 3: Select a Year from the Drop-Down List

If a year is not shown, we have no data[2]

Step 4: Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor[3] shown in blue at the foot of the final column.

If you have your own co-location study then see footnote[4]. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@bureauveritas.com or 0800 0327953

Analysed By[1]	Method (To undo your selection, choose (All) from the pop-up list)	Year[5] (To undo your selection, choose (All))	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m³)	Automatic Monitor Mean Conc. (Cm) (µg/m³)	Bias (B)	Tube Precision[6]	Bias Adjustment Factor (A) (Cm/Dm)
SOCOTEC Didcot	50% TEA in acetone	2024	R	Slough Borough Council	12	23	17	30.5%	G	0.77
SOCOTEC Didcot	50% TEA in acetone	2024	R	Slough Borough Council	11	30	23	31.5%	G	0.76
SOCOTEC Didcot	50% TEA in acetone	2024	R	Slough Borough Council	12	30	23	32.8%	G	0.75
SOCOTEC Didcot	50% TEA in acetone	2024	R	Thanet Distric Council	11	19	15	24.9%	G	0.80
SOCOTEC Didcot	50% TEA in acetone	2024	UB	Wirral Council	10	15	12	16.6%	G	0.86
Socotec Didcot	50% TEA in acetone	2024	R	Derry City And Strabane District Council	12	28	32	-11.4%	G	1.13
Socotec Didcot	50% TEA in acetone	2024	UB	Derry City And Strabane District Council	12	11	7	53.7%	G	0.65
Socotec Didcot	50% TEA in acetone	2024	UB	Southend-on-sea City Council	9	13	11	18.8%	G	0.84
Socotec Didcot	50% TEA in Acetone	2024	R	Horsham District Council	12	22	17	31.8%	G	0.76
Socotec Didcot	50% TEA in Acetone	2024	R	Leeds City Council	11	35	27	29.2%	G	0.77
Socotec Didcot	50% TEA in Acetone	2024	KS	Leeds City Council	12	28	20	41.8%	G	0.71
Socotec Didcot	50% TEA in Acetone	2024	R	Leeds City Council	9	39	28	36.1%	G	0.73
Socotec Didcot	50% TEA in Acetone	2024	R	Leeds City Council	12	23	18	31.8%	G	0.76
Socotec Didcot	50% TEA in Acetone	2024	UC	Leeds City Council	11	24	19	26.7%	G	0.79
Socotec Didcot	50% TEA in Acetone	2024	R	Huntingdonshire District Council	11	28	23	21.3%	G	0.82
SOCOTEC Didcot	50% TEA in acetone	2024		Overall Factor[3] (33 studies)				Use		0.80

Table C.2 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	**03/25**	**0.80**
2023	National	**03/24**	**0.77**
2022	National	**03/23**	**0.76**
2021	National	**03/22**	**0.78**
2020	National	**03/21**	**0.77**

Table C.3 – Local Bias Adjustment Calculation

	Local Bias Adjustment Input 1	Local Bias Adjustment Input 2	Local Bias Adjustment Input 3	Local Bias Adjustment Input 4	Local Bias Adjustment Input 5
Periods used to calculate bias	12				
Bias Factor A	0.81 (0.74 – 0.9)				
Bias Factor B	24% (11% - 36%)				
Diffusion Tube Mean (µg/m^3)	15				
Mean CV (Precision)	14				
Automatic Mean (µg/m^3)	12				
Data Capture	98				
Adjusted Tube Mean (µg/m^3)	12 (11 – 14)				

Notes:

The national combined bias adjustment factor has been used to bias adjust the 2024 diffusion tube results, because, as per TG22, Wirral's monitoring programme consists of roadside and kerb side monitoring sites, which differ from the urban background location of the co-location study.

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 Wirral Council required distance correction during 2024.

QA/QC of Automatic Monitoring

The real-time air pollution monitoring network consists of an automatic monitoring station located in Tranmere and an automatic monitoring station located in Birkenhead. Both monitoring stations are part of the national survey and results can be found on the UK Air website at the following link; https://uk-air.defra.gov.uk/data/data_selector_service#mid

Tranmere AURN

The site is managed by Bureau Veritas and is classified as an urban background site.

Full audits of all analysers are carried out at six-monthly intervals in the winter (January-March) and summer (July-September). In addition, audits of ozone analysers are also carried out in spring (April) and autumn (October).

Data is ratified on a three-monthly basis, and instances of suspected poor-quality data are investigated as required.

LSO duties are contracted to Ricardo who undertake 4 weekly routine calibration of the equipment.

Birkenhead Borough Road AURN

The site is managed by Bureau Veritas and is classified as an Urban Traffic site.

Full audits of all analysers are carried out at six-monthly intervals in the winter (January-March) and summer (July-September).

Data is ratified on a three-monthly basis, and instances of suspected poor-quality data are investigated as required.

The LSO duties are contracted to Ricardo who conduct fortnightly calibration checks on the

gaseous equipment.

PM_{10} and $PM_{2.5}$ Monitoring Adjustment

The type of PM_{10} and $PM_{2.5}$ monitor(s) utilised within Wirral Council do not require the application of a correction factor.

Non-LAQM monitoring results

Wirral Council conducted air quality monitoring using 5 Earthsense Zephyrs sensors in 2024. It is important to note that these sensors are not approved for use by local authorities for compliance monitoring according to TG22, however they can provide indicative air quality data to support our work in reducing air pollution. The results for 2024 are shown in the table below.

Table C.5 Annual Mean Results for Indicative Real-Time Sensors

Site reference number	Data Capture %	Eastings	Northings	NO_2	$PM_{2.5}$	PM_{10}
700037 Arrowe Park Road	99.68	327021	387618	15.9	10.9	12.0
700058 New Chester Road	99.45	335801	379987	15.4	11.5	12.7
700067 Wallasey Road	98.1	330635	392005	24.6	12	13.2
700073 Poulton Bridge Road	97.3	330211	391108	17.4	11.9	13.2
700088 Ivy Street	69.3	332685	388736	22.4	7.9	10.8

Table C.6 Comparison of Annual Mean Results for Indicative Real-Time Sensors between 2023 - 2024

Site reference number	NO_2			$PM_{2.5}$			PM_{10}		
	2023	**2024**	**Increase /decrease 2023-24**	**2023**	**2024**	**Increase /decrease 2023-24**	**2023**	**2024**	**Increase/ decrease 2023-24**
700037 Arrowe Park Road	17.5	15.9	1.6 Decrease	10.5	10.9	0.4 Increase	11.6	12.0	0.4 Increase
700058 New Chester Road	16.8	15.4	1.4 Decrease	11.0	11.5	0.5 Increase	12.1	12.7	0.6 Increase
700067 Wallasey Road	26.5	24.6	1.9 Decrease	11.6	12	0.4 Increase	12.8	13.2	0.4 Increase
700073 Poulton Bridge Road	18.8	17.4	1.4 Decrease	11.6	11.9	0.3 Increase	12.8	13.2	0.4 Increase
700088 Ivy Street	18.9	22.4	3.5 Increase	11.0	7.9	3.1 Decrease	12.0	10.8	1.2 Decrease

PM_{10} and $PM_{2.5}$ Monitoring Adjustment

The type of PM_{10}/$PM_{2.5}$ monitor(s) utilised within Wirral Council do not require the application of a correction factor.

Automatic Monitoring Annualisation

All automatic monitoring locations within Wirral Council recorded data capture of greater than 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.

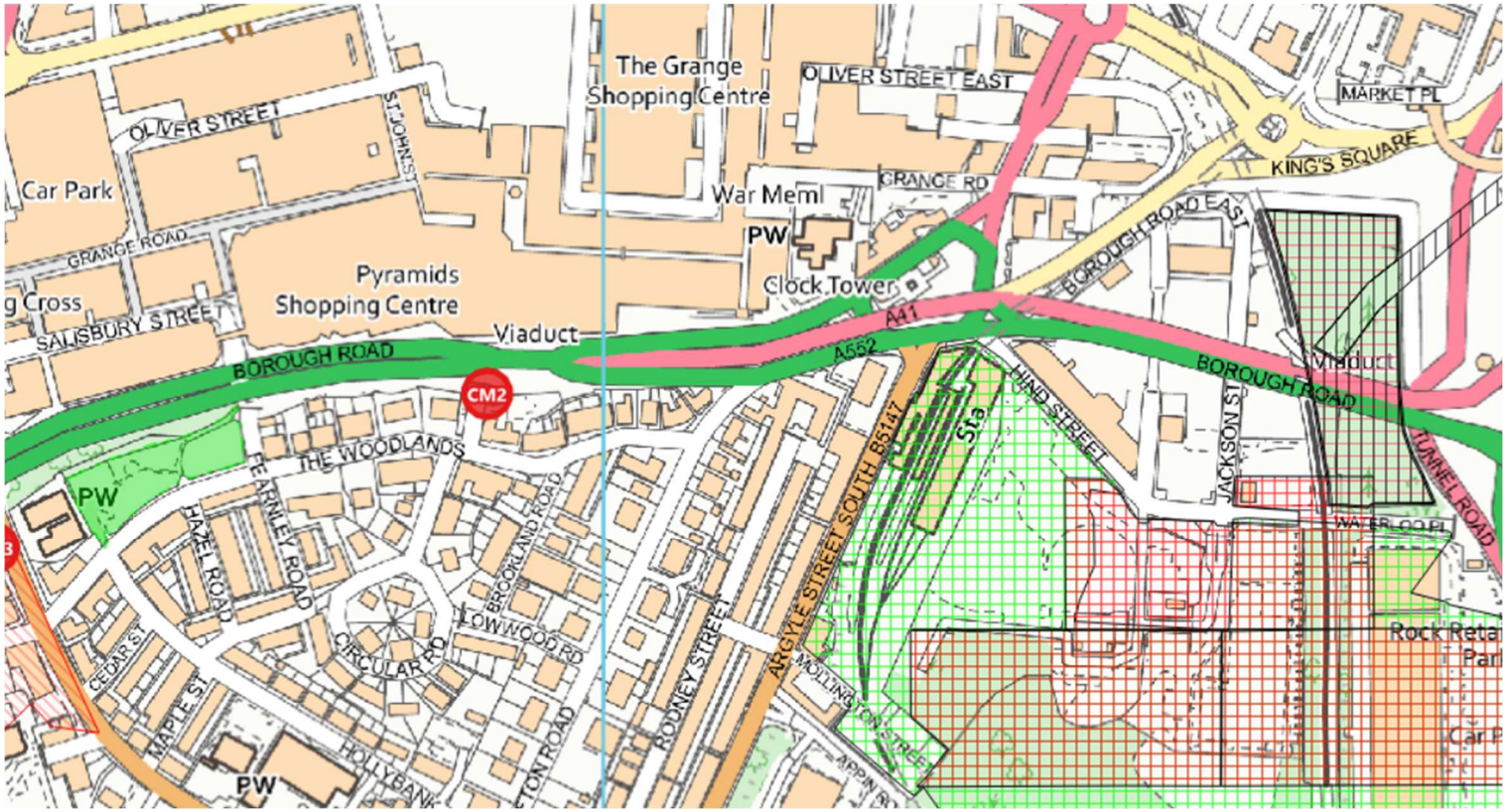
NO_2 Fall-off with Distance from the Road

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 NO_2 fall-off with distance calculator available on the LAQM Support website. Where appropriate, automatic annual mean NO_2 concentrations corrected for distance are presented in Table A.3.

No automatic NO_2 monitoring locations within Wirral Council required distance correction during 2024.

Appendix D: Map(s) of Monitoring Locations

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



Legend

AURN Birkenhead

Location: Birkenhead

Birkenhead AURN

CM2 – AURN Birkenhead

Date: June 2025	**Figure No. D1**

Figure D.2 – Map of Automatic Monitoring Site

Legend

AURN

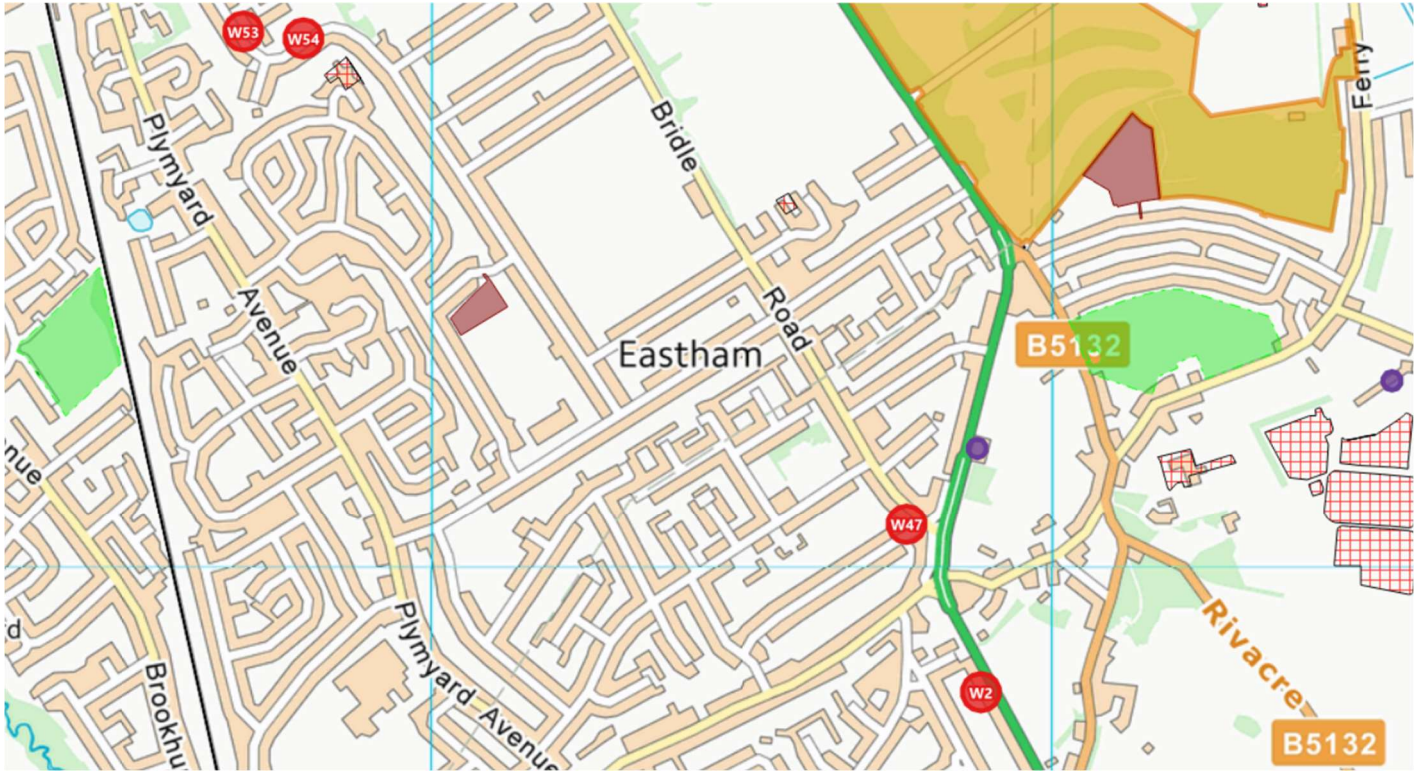
Location: Tranmere

AURN Tranmere

CM1 – AURN Tranmere

Date: June 2025	**Figure No. D2**

Figure D.3 – Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

Location: Bromborough and Eastham

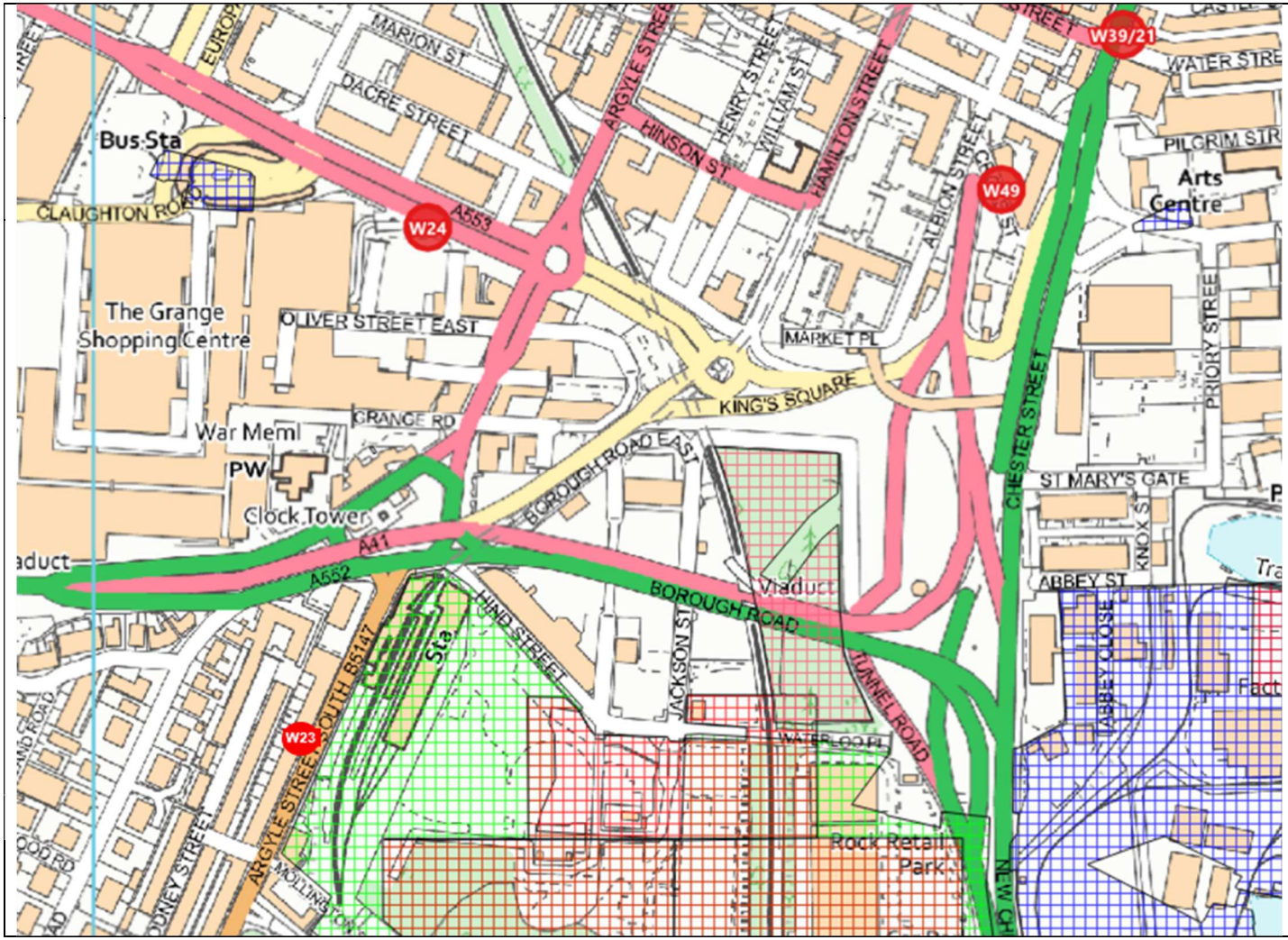
Diffusion Tube Locations

W2 – New Chester Road, Eastham
W47 – Bridle Road, Eastham
W53 – Moorland Avenue
W54 – Moorland Avenue

Date: June 2025

Figure No. D3

Figure D.4 – Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

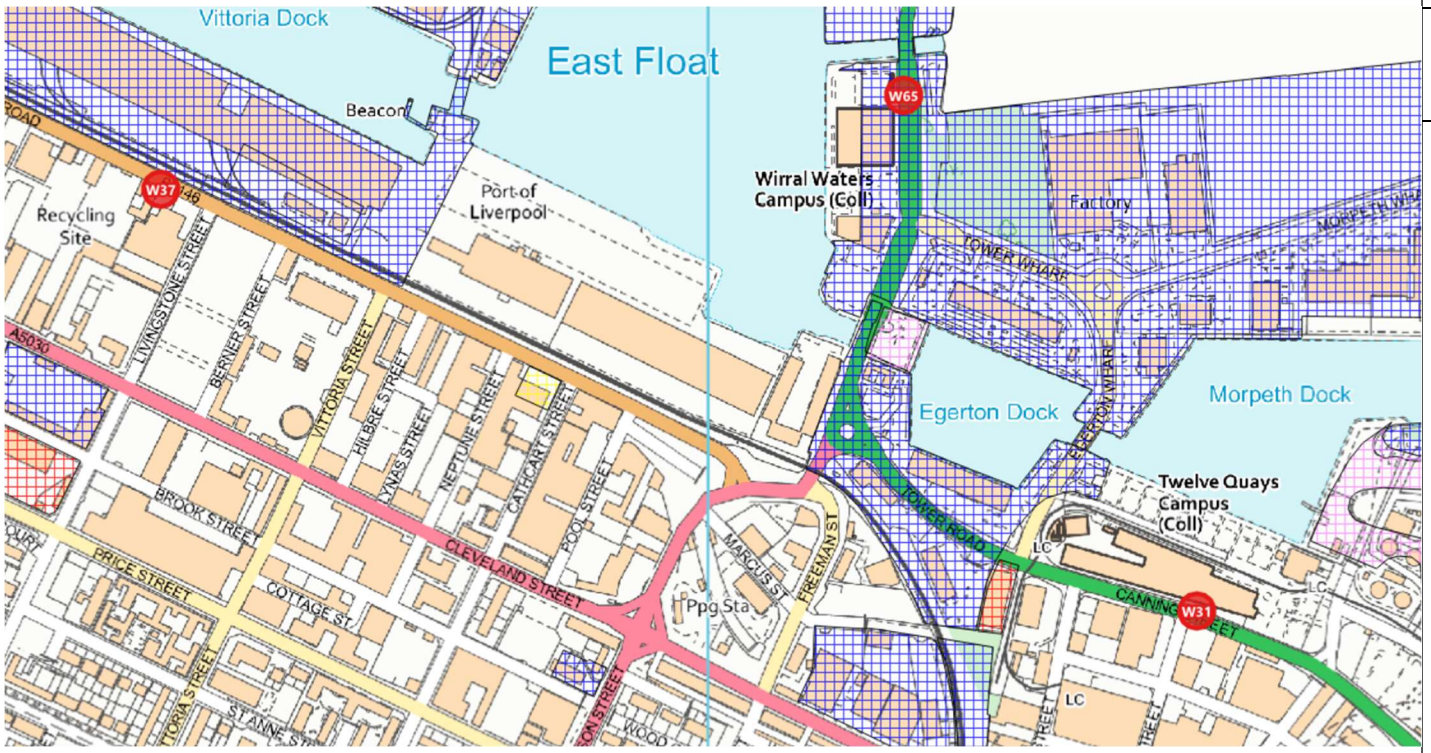
Location: Birkenhead

Diffusion Tube Locations

W23/23 – Argyle Street South
W24 – Conway Street
W39/21 – Chester Street
W49 – Cross Street

Date: June 2025	Figure No. D4

Figure D.5 – Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

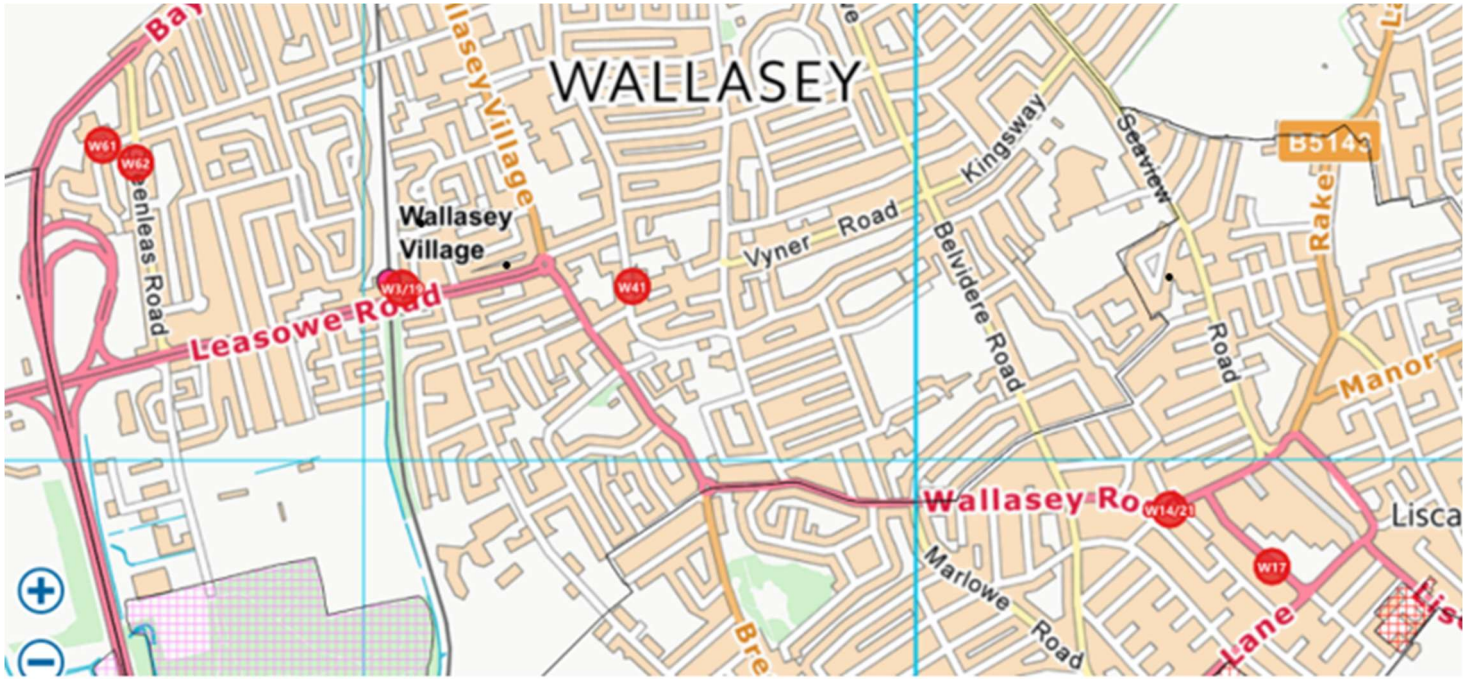
Location: Birkenhead

Diffusion Tube Locations

W31 – Canning Street
W37 – Corporation Road
W65 – Tower Road

Date: June 2025 | **Figure No. D5**

Figure D.6 – Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

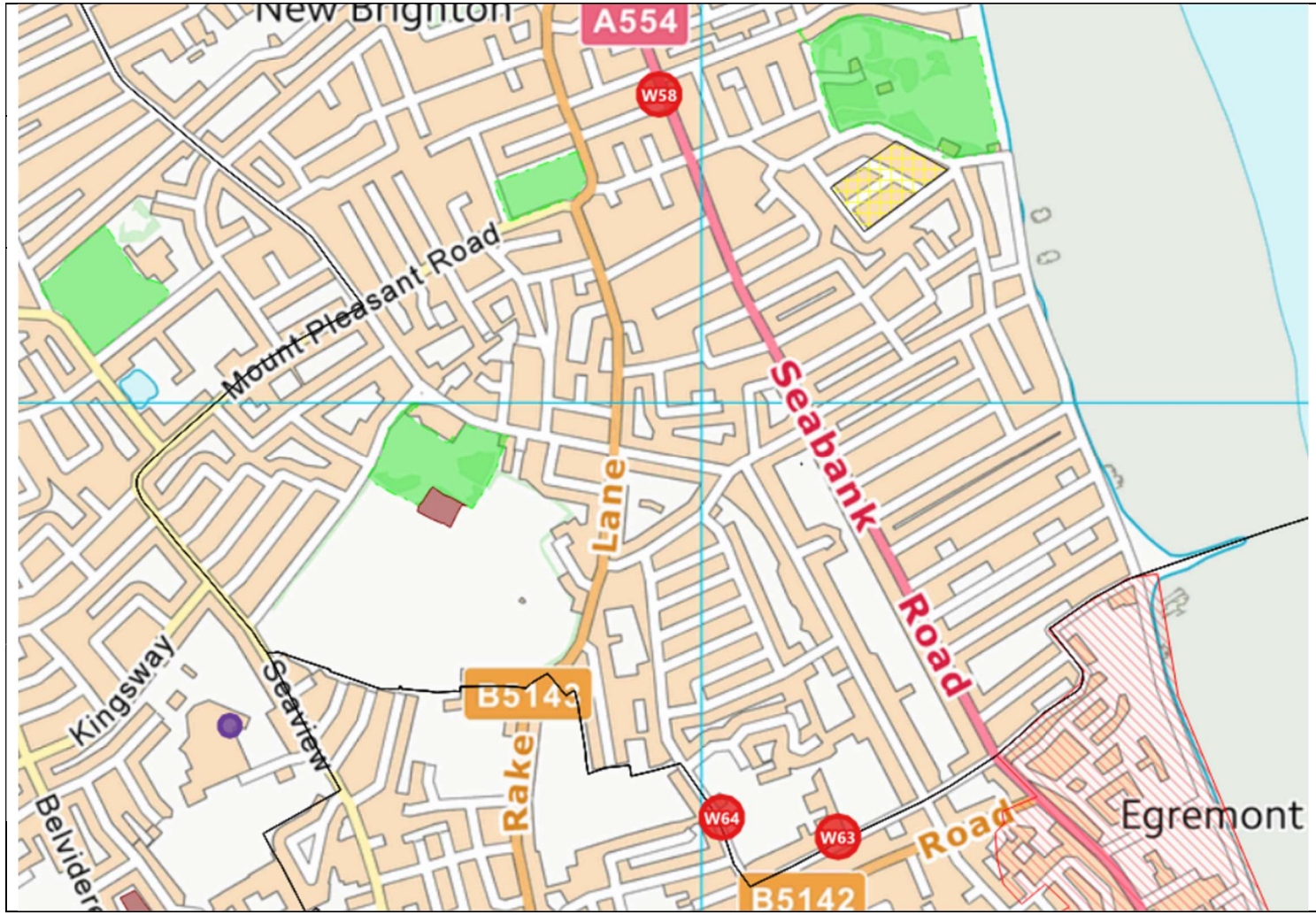
Location: Wallasey

Diffusion Tube Locations

W3/19 – Leasowe Road
W14/21 – Wallasey Road
W17 – St Albans Road
W41 - St Georges Road
W61 – Green Lane
W62 – Greenleas Road

Date: June 2025	Figure No. D6

Figure D.7 – Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

Location: Wallasey

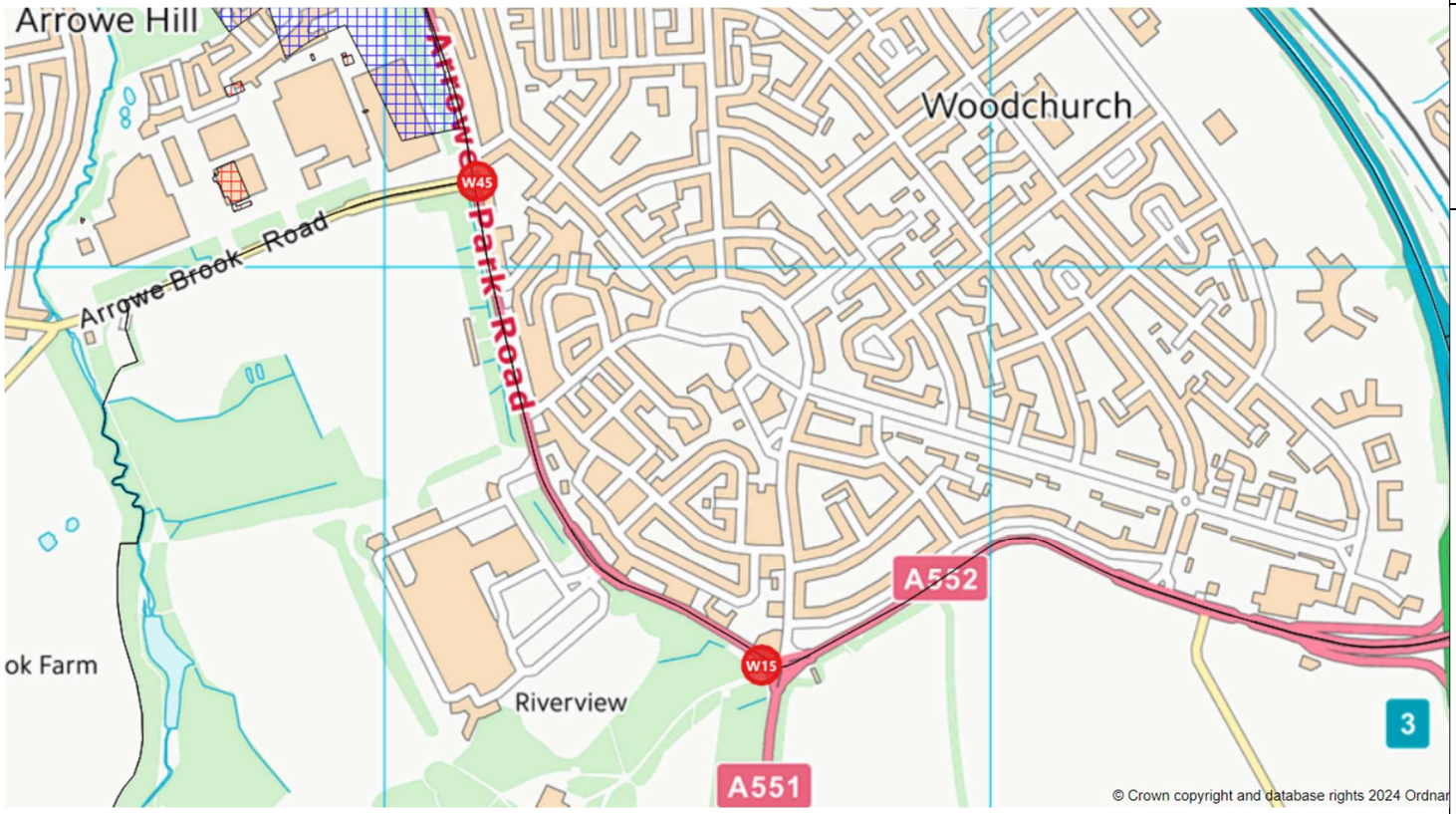
Diffusion Tube Locations

W58 – Seabank Road
W63 – Manor Lane
W64 – Withens Lane

Date: June 2025

Figure No. D7

Figure D.8 – Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

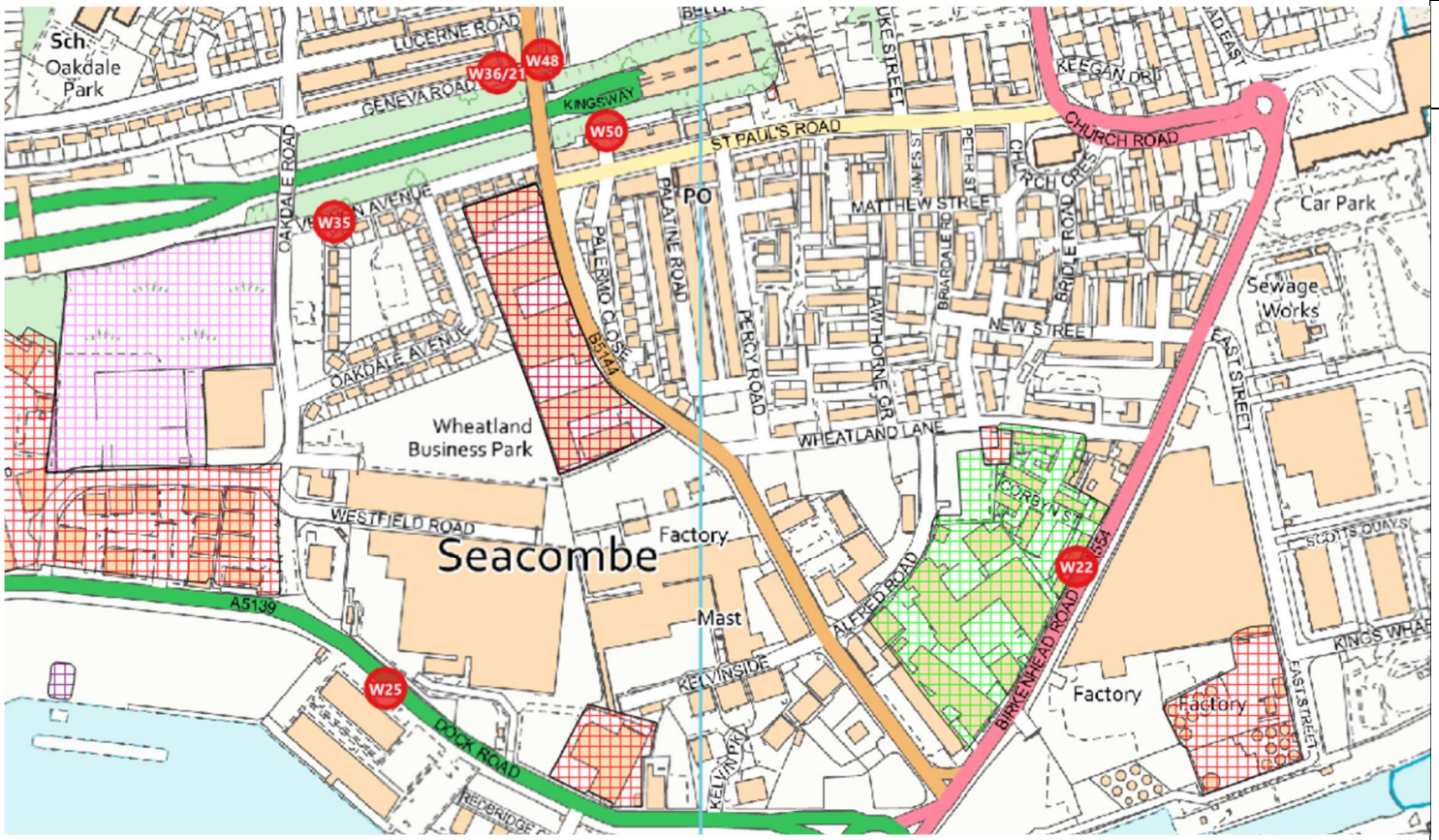
Location: Woodchurch/ Upton

Diffusion Tube Locations

W15 – Arrowe Park Road, Woodchurch
W45 – Arrowe Park Rd, Upton

Date: June 2025 | **Figure No. D8**

Figure D.9 – Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

Location: Seacombe / Poulton

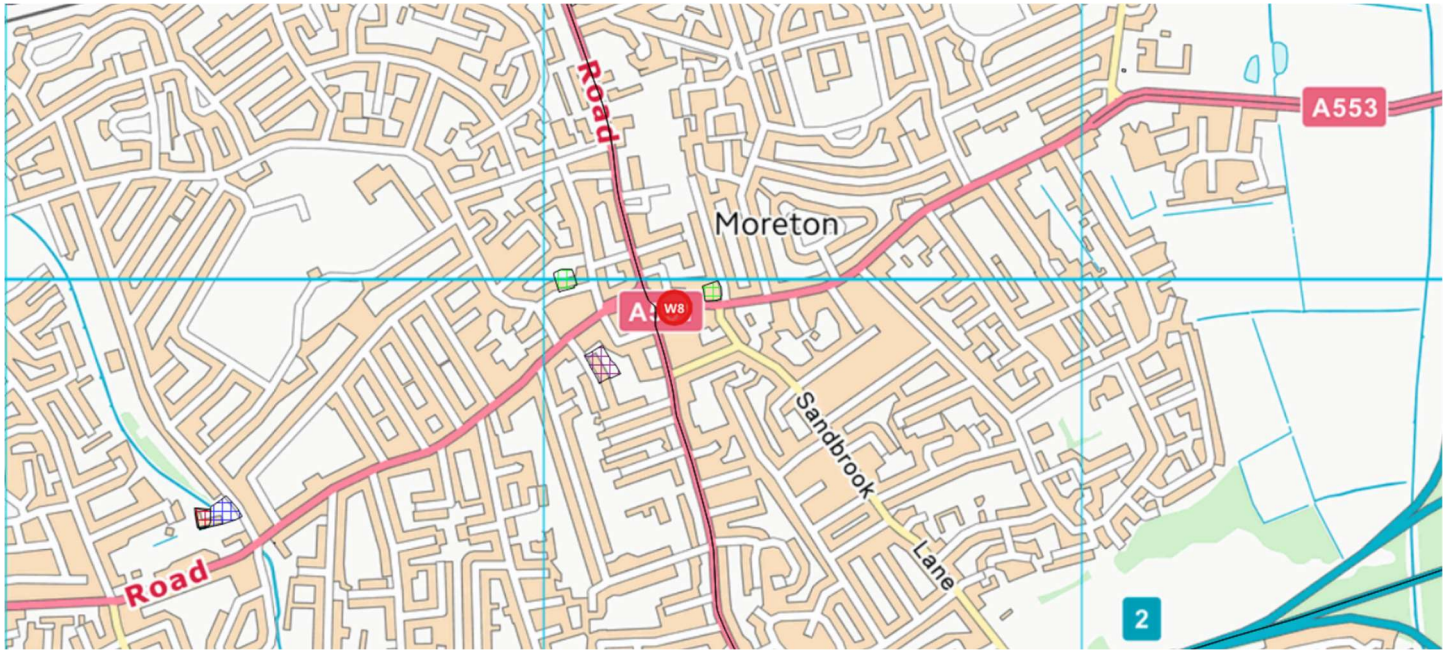
Diffusion Tube Locations

W22 – Birkenhead Road
W25 – Dock Road
W35 – Vernon Avenue
W36/21 – Geneva Road
W48 – Wheatland Lane
W50 – Parry Street

Date: June 2025

Figure No. D9

Figure D.10 – Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

Location: Moreton

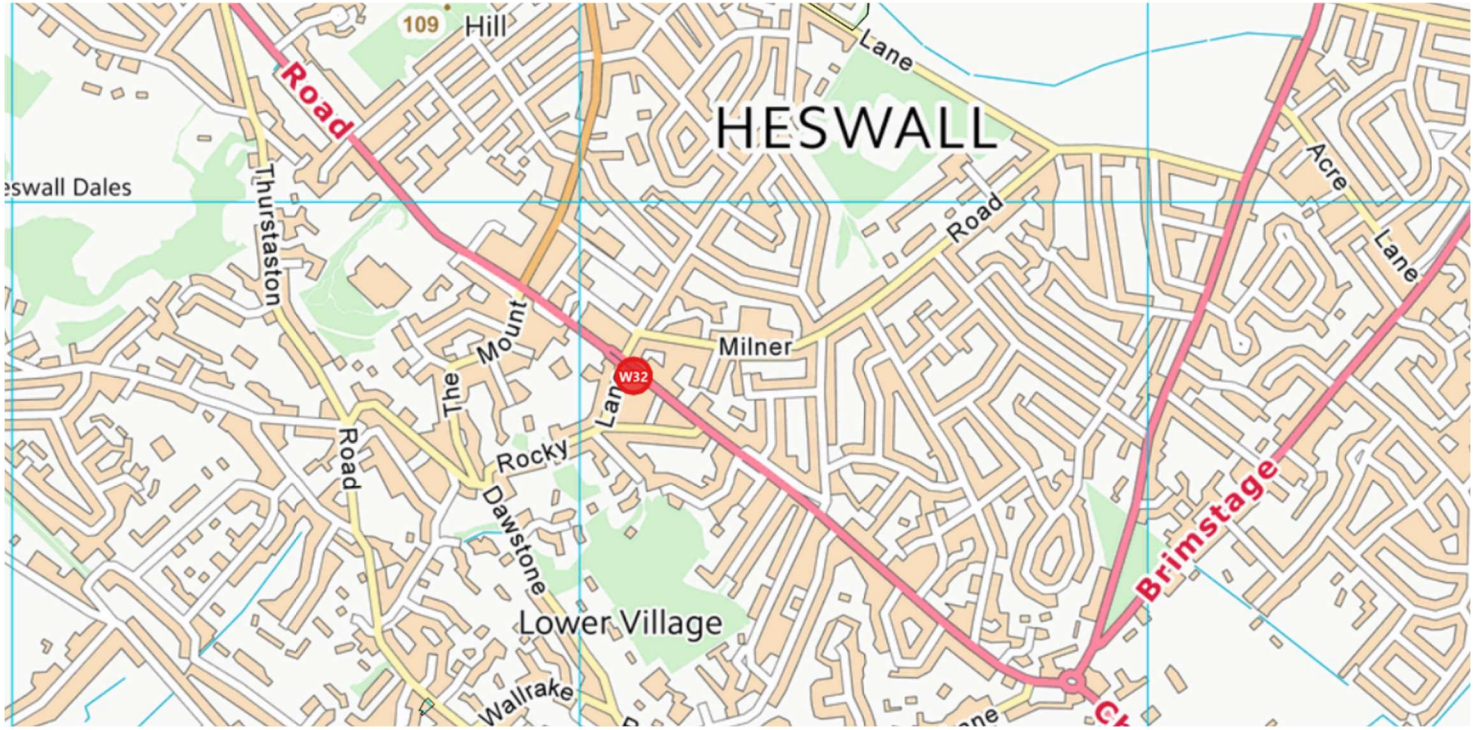
Diffusion Tube Locations

W8 – Moreton Cross, Moreton

Date: June 2025

Figure No. D10

Figure D.11– Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

Location: Heswall

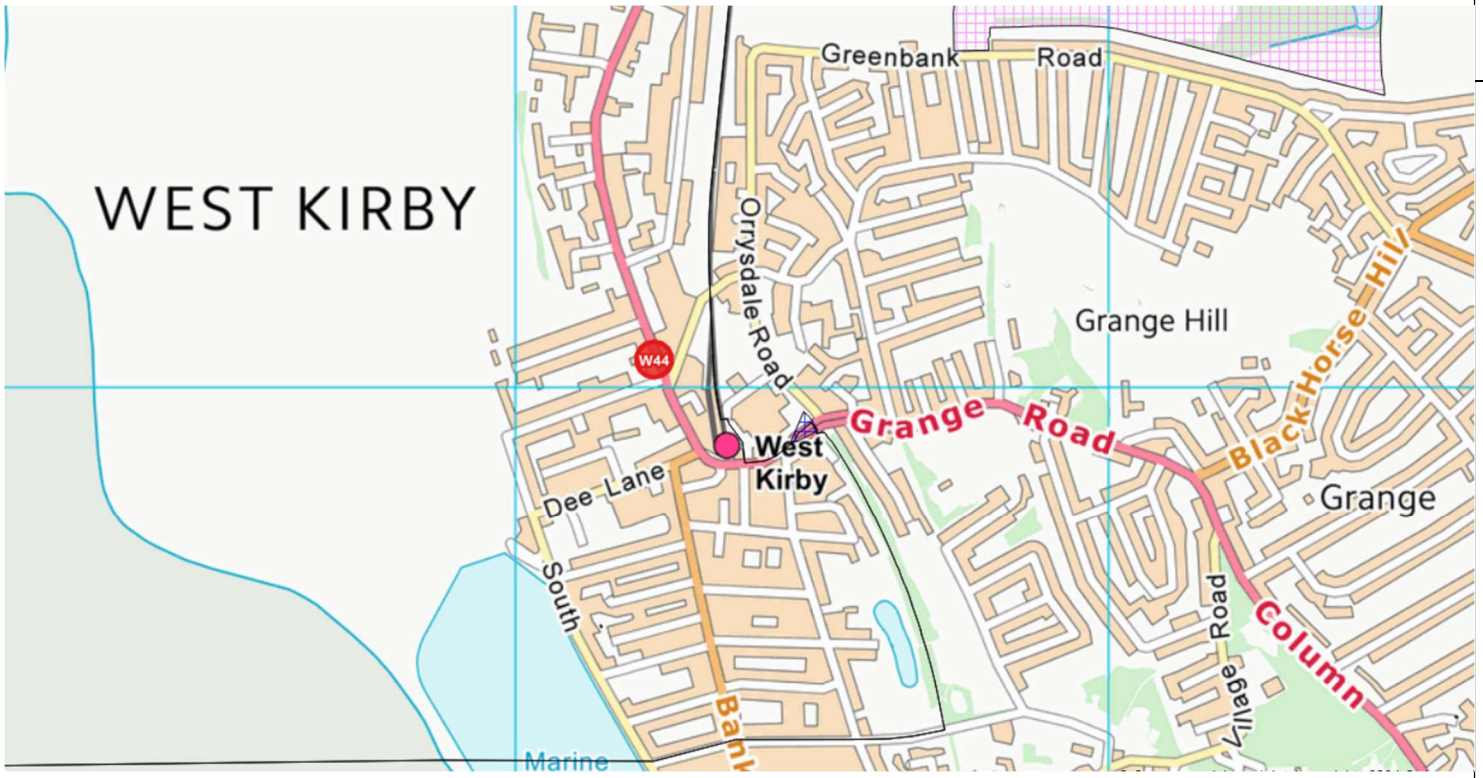
Diffusion Tube Locations

W32 – Telegraph Road, Heswall

Date: June 2025

Figure No. D11

Figure D.12 – Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

Location: West Kirby

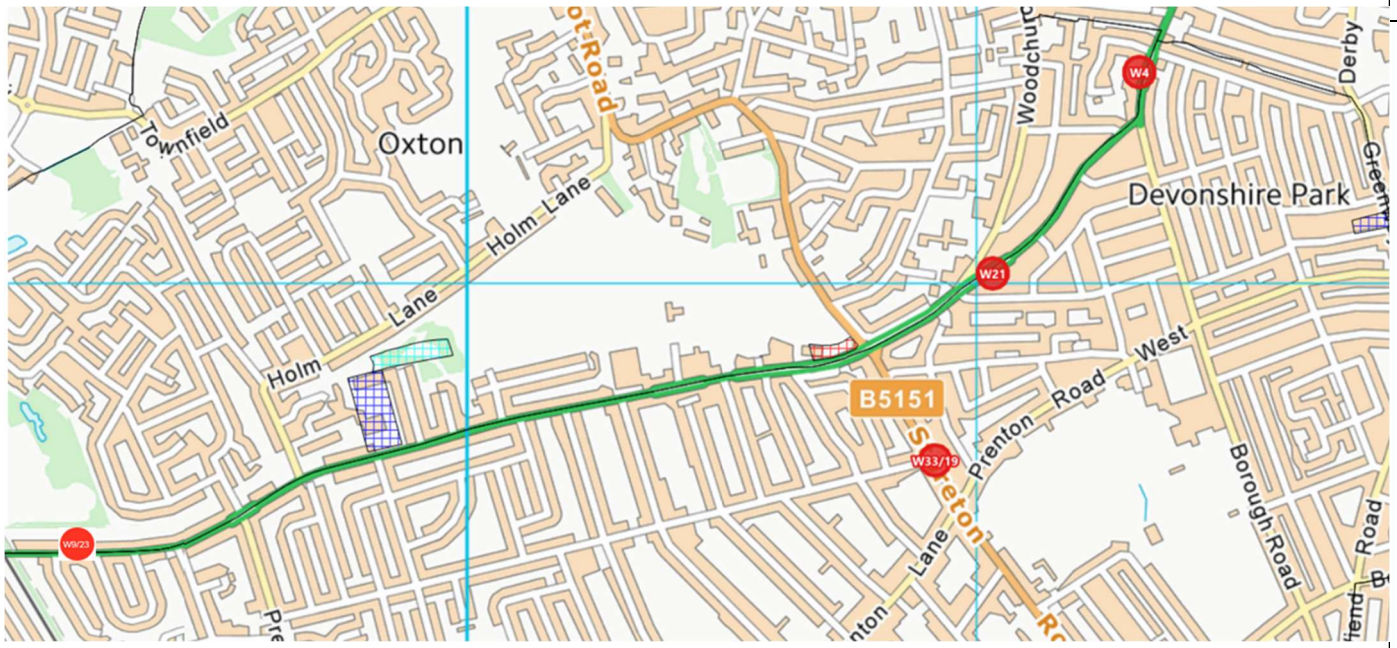
Diffusion Tube Locations

W44 – Meols Drive, West Kirby

Date: June 2025

Figure No. D12

Figure D.13 – Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

Location: Prenton

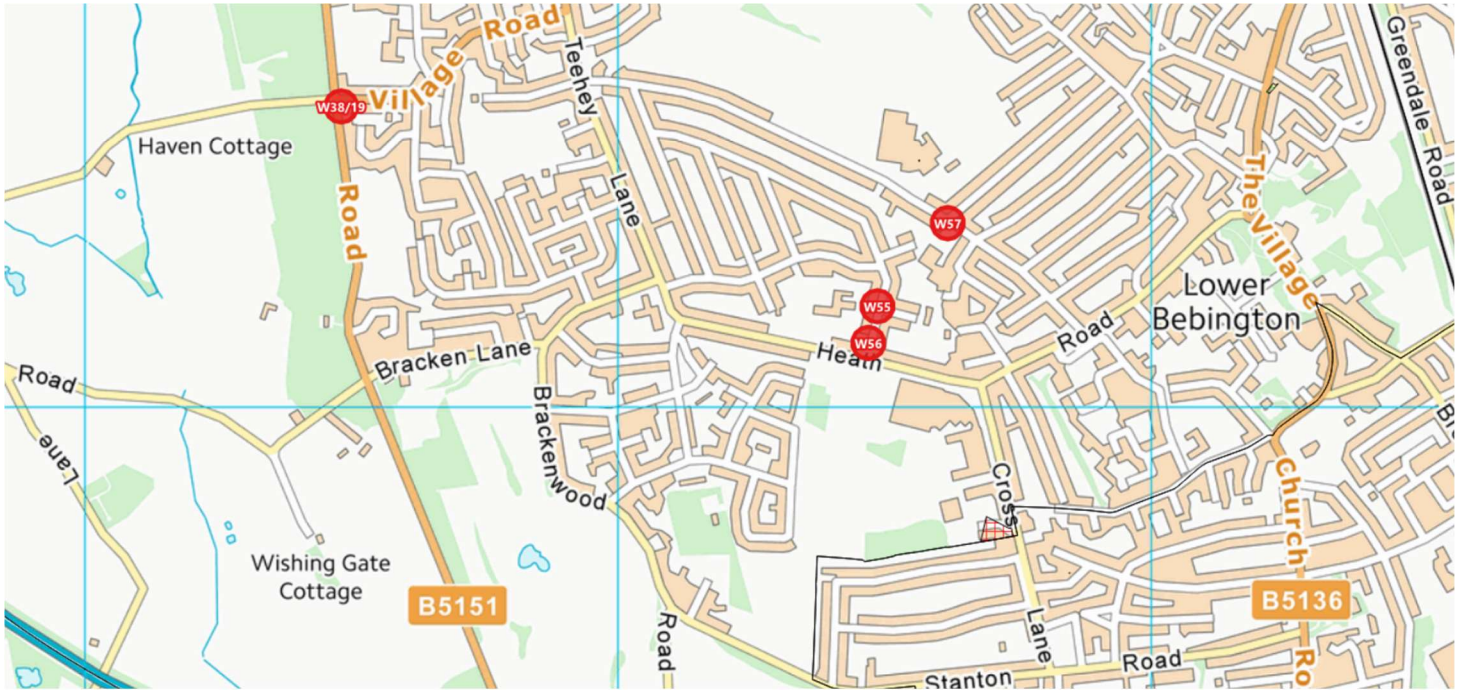
Diffusion Tube Locations

W4 – Borough Road
W9/23 – Woodchurch Road
W21 – Singleton Avenue
W33/19 – Storeton Road

Date: June 2025

Figure No. D13

Figure D.14 – Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

Location: Higher Bebington

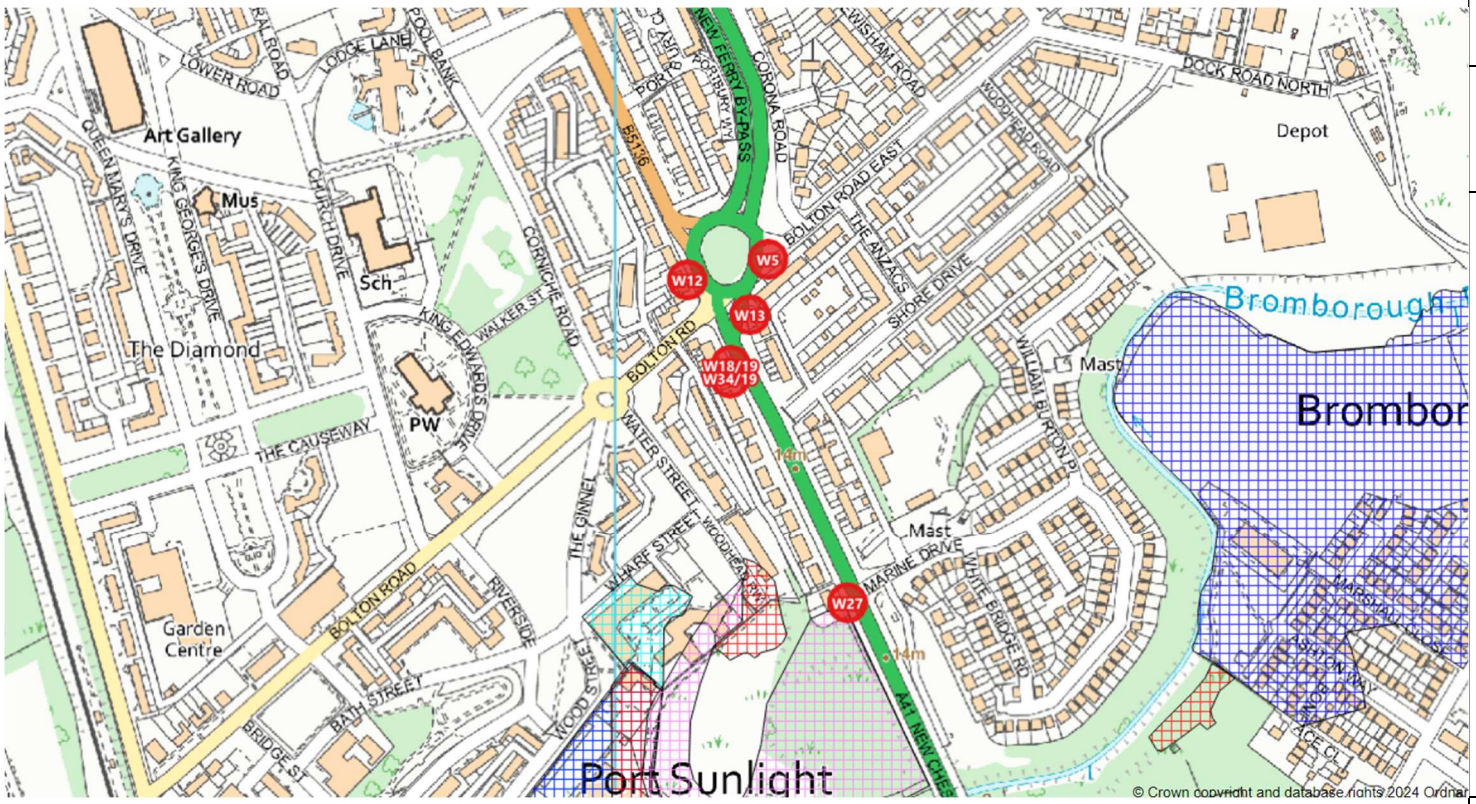
Diffusion Tube Locations

W38/19 – Mount Road
W55 – Norbury Ave
W56 – Norbury Ave
W57 – Pulford Road

Date: June 2025

Figure No. D14

Figure D.15 – Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

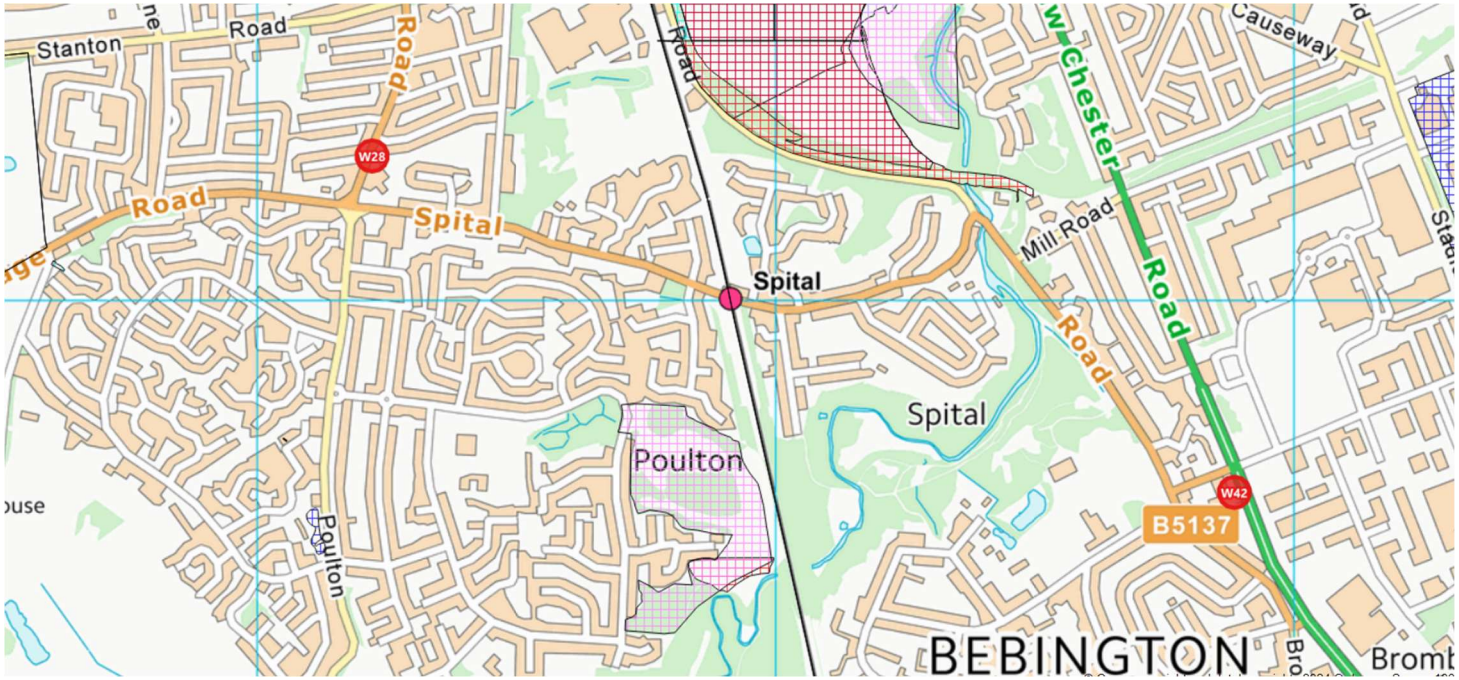
Location: A41 Port Sunlight

Diffusion Tube Locations

W5 – Bolton Road East
W12 – New Chester Road
W13 – New Chester Road
W18/19 – New Chester Road
W34/19 – New Chester Road
W27 – New Chester Road

Date: June 2025	**Figure No. D15**

Figure D.16 – Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

Location: Higher Bebington / Bromborough

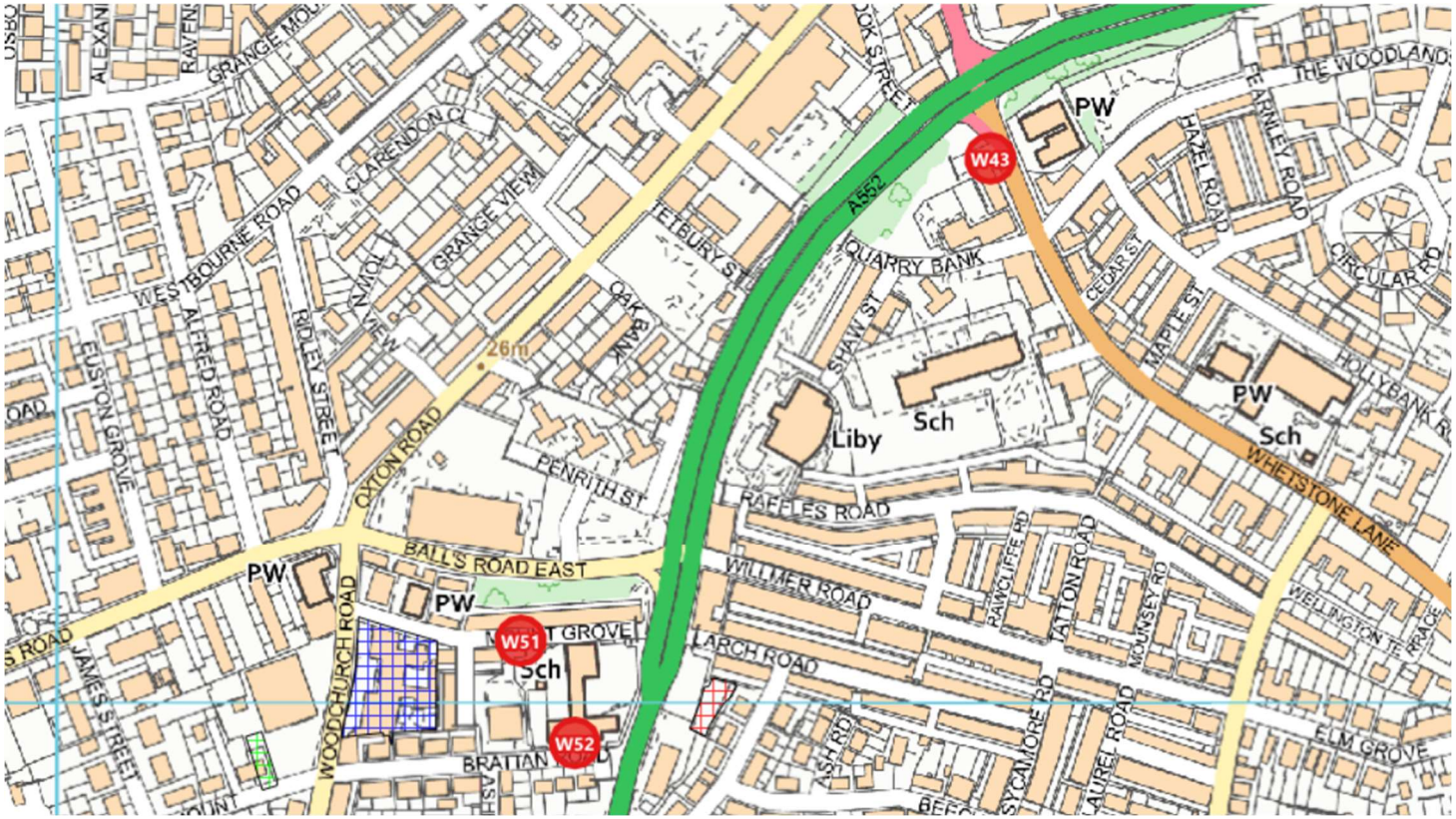
Diffusion Tube Locations

W28 – Church Road
W42 – New Chester Road, Bromborough

Date: June 2025

Figure No. D16

Figure D.17 – Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

Location: Birkenhead

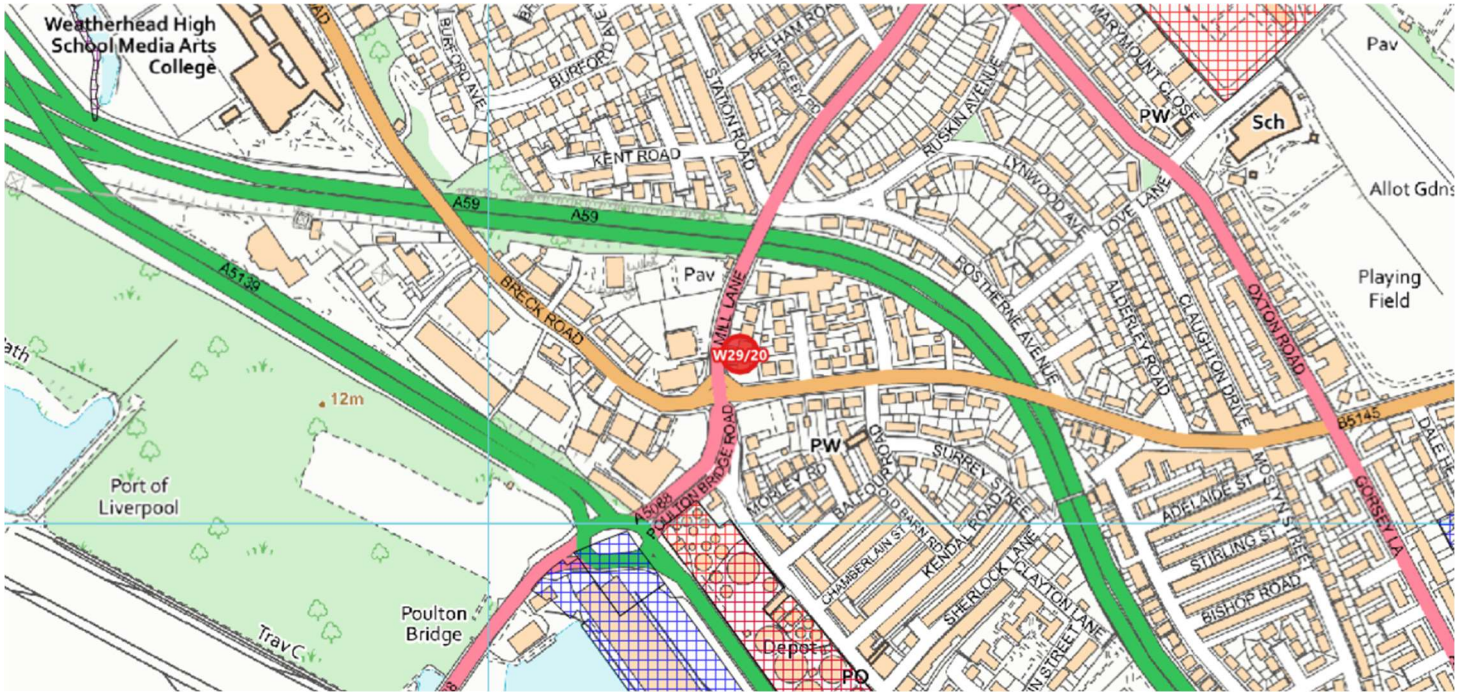
Diffusion Tube Locations

W43 – Whetstone Lane
W51 – Mount Grove
W52 – Brattan Rd

Date: June 2025 | **Figure No. D17**

‘’’

Figure D.18 – Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

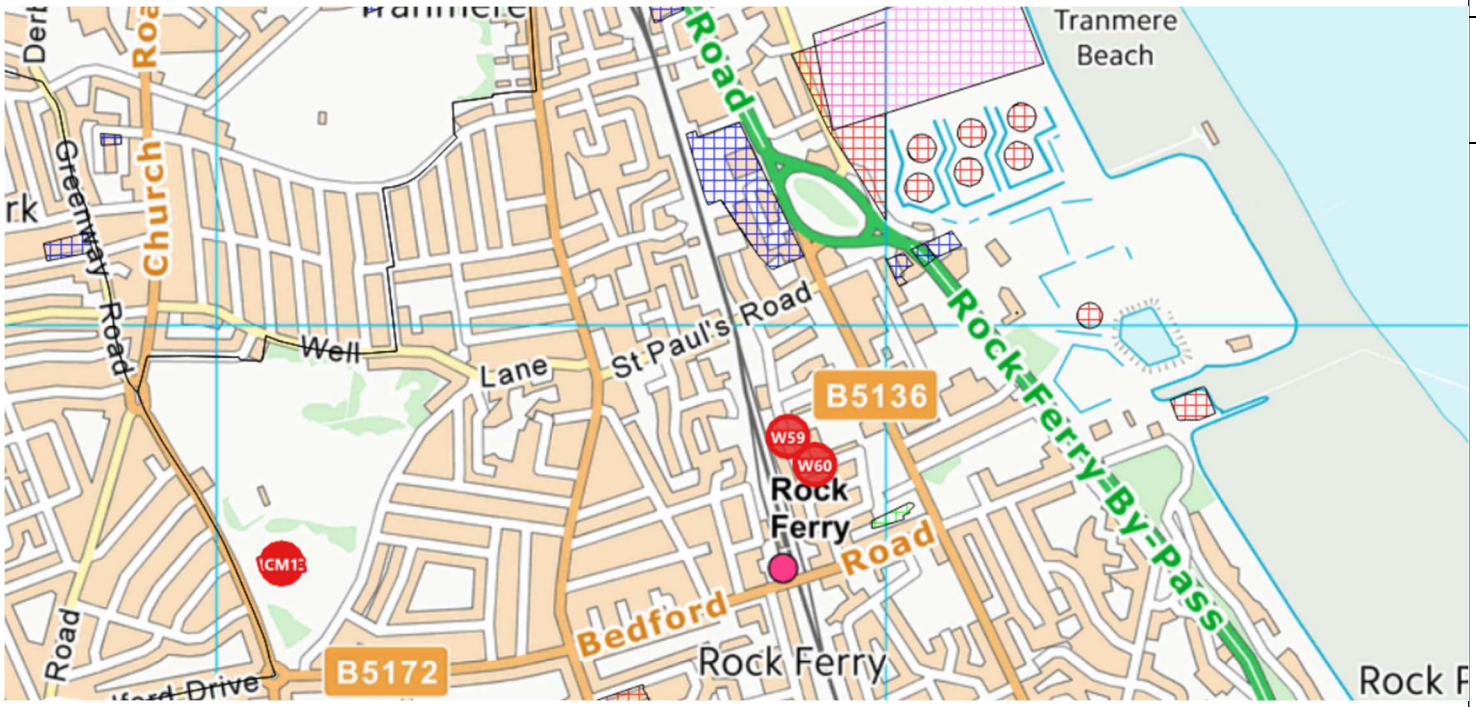
Location: Poulton

Diffusion Tube Locations

W29/20 – Mill Lane, Poulton

Date: June 2025	**Figure No. D18**

Figure D.19 – Map of Non-Automatic Monitoring Site



Legend

Diffusion tube location

Location: Rock Ferry

Diffusion Tube Locations

W59 – Lees Avenue, Rock Ferry Primary
W60 – Ionic Street, Rock Ferry Primary

Date: June 2025

Figure No. D19

Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[2]

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

[2] 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
AQTECH	Air Quality Technical Group
ASR	Annual Status Report
AURN	Automatic Urban Rural Network
BREEAM	Building Research Establishment Environmental Assessment Method.
BSIP	Bus Service Improvement Plan
CA	Combined Authority
CMCU	Central Management and Co-ordination Unit
CATN	Core Active Travel Network
CATP	Combined Authority Transport Plan
CRSTS	City Region Sustainable Transport Settlement
Defra	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
DLUHC	Department for Levelling up, Housing and Communities (renamed MHCLG in 2024)
EA	Environment Agency
ECEAP	Environment and Climate Emergency Action Plan
EU	European Union
FDMS	Filter Dynamics Measurement System
HVO	Hydrotreated vegetable oil
JSNA	Joint Strategic Needs Assessment
LAQM	Local Air Quality Management

Abbreviation	Description
LCR	Liverpool City Region
LCRCA	Liverpool City Region Combined Authority
LCWIP	Local Cycling and Walking Infrastructure
LSO	Local Site Operator
MHCLG	Ministry for Housing, Communities and Local Government
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
NPPF	National Policy Planning Framework
PHE	Public Health England
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
PHOF	Public Health Outcome Framework
PT	Proficiency Testing
QA/QC	Quality Assurance and Quality Control
SO_2	Sulphur Dioxide
UKHSA	UK Health Security Agency
UDP	Unitary Development Plan
UN	United Nations
WHO	World Health Organisation

References

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