



2023 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 2023

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Executive Summary: Air Quality in Our Area

Air Quality in New Forest District Council

Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children, the elderly, and those with existing heart and lung conditions. There is also often a strong correlation with equalities issues because areas with poor air quality are also often less affluent areas^{1,2}.

The mortality burden of air pollution within the UK is equivalent to 29,000 to 43,000 deaths at typical ages³, with a total estimated healthcare cost to the NHS and social care of £157 million in 2017⁴.

The New Forest District covers 75,100 hectares (290 sq. miles) and has a diverse environment, including the New Forest (and associated New Forest National Park) that covers approximately three quarters of the district comprising of mainly protected heathlands and forests, a coastline of 64 km, areas of industry, towns and villages. Along Southampton Water much of the shoreline is influenced by urban and industrial development. The local landscape is dominated by a refinery, one of the largest in Europe, whilst other industrial processes include a number of energy recovery facilities and chemical installations. Furthermore, there are significant areas of sand and gravel extraction in the district to support local businesses.

¹ Public Health England. Air Quality: A Briefing for Directors of Public Health, 2017

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

³ Defra. Air quality appraisal: damage cost guidance, January 2023

⁴ Public Health England. Estimation of costs to the NHS and social care due to the health impacts of air pollution: summary report, May 2018

The total population of the District is 176,800 although the area also attracts local, national and international visitors throughout the year with over 13 million days visits made annually⁶. With 96% of visitors arriving to the New Forest in cars or coaches, in addition to the local industry, there is the potential for air quality issues relating to both traffic and industry.

The pollutants of concern in the New Forest district are nitrogen dioxide (NO₂), particulate matter (PM₁₀ and PM_{2.5}) and sulphur dioxide (SO₂). Traffic produces both NO₂ and particulate emissions, whilst the local industry may produce NO₂, particulate and SO₂ emissions.

In 2022 there was one Air Quality Management Area (AQMA) within the New Forest.

- **Lyndhurst** (High Street). Traffic related

Further information with regards to the AQMA can be found at:

<http://www.newforest.gov.uk/airquality>

The Lyndhurst AQMA was declared in 2008 for the likely exceedance of the annual mean air quality objective for NO₂. The AQMA will be revoked by 30 September 2023 as pollutant concentrations for nitrogen dioxide have met the Governments national objective levels for the past 8 years.

In 2017 New Forest District Council was named in the UK Air Quality Plan⁷ as having one road which was predicted to persistently exceed nitrogen dioxide EU limit values after 2020. This road is a short stretch (approximately 1km) of the A35 over the Redbridge Causeway into Southampton and is a location where the public has access. Southampton had already been identified in 2015 as an area which also has a number of roads which persistently exceed the EU limit values for nitrogen dioxide and therefore Southampton City Council had already progressed action in understanding the issues and forwarding further measures to improve local air quality.

The area identified in the New Forest was seen as an extension of the Southampton issue therefore Southampton City Council and New Forest District Council worked in partnership to develop a Clean Air Zone (CAZ) within Southampton to ensure compliance with the EU limit value is met in the shortest time possible. Detailed and complex local air quality modelling was undertaken in the New Forest and determined that compliance would be met by 2019 in a business as usual scenario. Furthermore, it was concluded that the introduction of additional measures would not bring forward compliance, therefore, New Forest District Council's preferred option was to continue with a business as usual scenario.

Monitoring since 2019 has shown that this stretch of road has not exceeded the EU limit values for nitrogen dioxide.

Monitoring - Lyndhurst

New Forest District Council undertakes automatic and non-automatic monitoring of NO₂, PM₁₀ and SO₂ at locations throughout the district and compares the results to the UK Air Quality Objectives. Air Quality Objectives are set for different pollutants and may include a number of objectives covering a variety of time periods, for example NO₂ has two objectives: an annual mean and an hourly mean.

2022 was the eighth consecutive year since monitoring began in 2002 (using the current monitoring methods) that there were no monitored exceedances of any of the Air Quality Objectives.

Lyndhurst has monitored significant decreases in nitrogen dioxide concentrations since monitoring began and within part of the High Street designated an air quality management area there has been no exceedances of the nitrogen dioxide annual mean objective (40 µg m⁻³) since 2014.

Confidence in the continued compliance supported a view to revoke the Lyndhurst AQMA once it could be established that traffic levels were approaching a 'back to normal' scenario post covid. With 2022 data reflecting 'normal' traffic flows, the Council engaged an air quality consultant to model the predicted NO₂ levels under likely and worst case scenarios to ensure no breach of the objective level is likely for

the foreseeable future. The results of this modelling did not indicate a breach of the air quality guidelines and subsequently the AQMA will be revoked in summer 2023. Further details on this procedure can be found in Section **Error! Reference source not found.**

Monitoring - Totton

A number of monitoring locations were also installed in 2018 along the A35 in Totton to corroborate results of the detailed CAZ air quality modelling work. Nitrogen dioxide concentrations were shown not to exceed EU Limit Values but were sufficiently close to suggest that monitoring should continue.

The data obtained from these tubes throughout 2022 is presented separately from the main data tables since its use was in conjunction with the Southampton CAZ work and not part of the LAQM process (see Appendix H).

Local Air Quality Management

New Forest District Council has a legal duty to continue to manage local air quality. The Council fulfils this duty by:

- following Local Air Quality Management guidance produced by Defra;
- continuously monitoring pollutants of interest at relevant sites including rural background, roadside and industrial locations;
- identifying new major sources of airborne pollution and assessing the impact on local air quality. It should be noted that no new major sources have been identified during 2022;
- working within other legislative parameters such as the planning regime and / or the permitting of industrial processes to assess the impact of development or industry on local air quality, and if appropriate, taking measures to reduce the determined impact;

- providing training and updates concerning local air quality to colleagues within the local authority, Council Members, Town and Parish Councils and members of the public; and
- working with our partners such as Hampshire County Council, the Environment Agency, local industry, district and National Park colleagues, local Council Members, neighbouring local authorities and Town and Parish Councils.

Working with our partners is vital if air quality is to be recognised as an important local issue that requires consideration and action. Some partners are legal regulators, for example Hampshire County Council regulate roads and transport in our district and the Environment Agency regulate the large industrial processes and therefore their involvement could ensure works are undertaken and / or funding is available for particular schemes.

Ensuring all partners are aware of the local air quality issues is also important, therefore New Forest District Council makes the effort to train and update partners on local air quality by attending relevant meetings and committees. Furthermore, Environmental Protection Officers work with other departments to ensure local air quality is discussed at the planning stages of a development or implementation of a scheme.

Air quality is not just a local issue because airborne pollution is not contained within district boundaries. Therefore, New Forest District Council also works with our five neighbouring local authorities when required to address air quality issues. This was of great importance during our collaborative working with Southampton City Council to progress the work on the Clean Air Zone to improve local air quality within the area as directed by Government, and in more recent years on a 'Burn Better' campaign to inform the public on pollutant issues concerning solid fuel burning.

Actions to Improve Air Quality

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

The Environmental Improvement Plan⁵ sets out actions that will drive continued improvements to air quality and to meet the new national interim and long-term PM_{2.5} targets. The National Air Quality Strategy⁶, published in 2023, provides more information on local authorities' responsibilities to work towards these new targets and reduce PM_{2.5} in their areas. The Road to Zero⁷ report details the approach to reduce exhaust emissions from road transport through a number of mechanisms; this is extremely important given that the majority of Air Quality Management Areas (AQMAs) are designated due to elevated concentrations heavily influenced by transport emissions.

During 2019 New Forest District Council updated the original Air Quality Action Plan (2008) for Lyndhurst⁸. As part of the update, additional monitoring was installed in Emery Down (just outside Lyndhurst) in 2020 to assess whether increases in traffic in the local area has resulted in exceedances of the air quality objective in locations adjacent to Lyndhurst.

Results from Emery Down showed low levels of NO₂ (<10 µg m⁻³) which are well below the objective level and do not support the continued monitoring of this vicinity. Monitoring at Emery Down will therefore cease in 2023.

⁵ Defra. Environmental Improvement Plan 2023, January 2023

⁶ Defra. Air Quality Strategy: Framework for Local Authority Delivery, April 2023

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

⁸ <https://www.newforest.gov.uk/airquality>

Overall monitoring in Lyndhurst has shown significant decreases in the annual mean objective for NO₂, with a 4-11 µg m⁻³ decrease in NO₂ concentrations noted over a 6 year period to date within part of the High Street. There have been no exceedances of the annual mean objective for NO₂ monitored in Lyndhurst during 2022.

Working collaboratively with Southampton City Council on delivering the Southampton Clean Air Zone (CAZ)

As previously stated, New Forest District Council was named in 2017 within the UK Air Quality Plan⁹ as having a one road predicted to persistently exceed nitrogen dioxide EU limit values after 2020. Following air quality modelling, it was determined that compliance within NFDC would be met by 2019 in a business as usual scenario. Accordingly, no further action was taken but the Council continue to monitor NO₂ along the A35 to ensure continued compliance.

Working with the Environment Centre (tEC) and other Local Authorities to promote the 'Burn Better' scheme

New Forest District Council is currently working with tEC and other Local Authorities to support residents in avoiding air pollution from household burning and improving air quality for their health, their community and the environment. The scheme promotes awareness of the air quality issues surrounding solid fuel burning and has focussed on bonfires and the use of solid fuel appliances such as wood burners and stoves to encourage residents to turn to other means of disposing of waste or heating their homes and to 'burn better' by burning appropriate material and 'ready to burn' fuels where there is no alternative means of heating.

As part of this project the team secured 4 Zephyr sensors which were deployed around the district to monitor pollution levels, specifically PM₁₀ and PM_{2.5}. The Zephyrs have been in use since October 2022 and the results are currently being

⁹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/633270/air-quality-plan-detail.pdf

assessed. The Council intends to use the data to provide advice and educational resources to residents on the impact of domestic burning.

Production of the air quality supplementary planning guide

A supplementary air quality planning guide has been produced to support applicants submitting planning applications and details the expectations required of them with regard to appropriate mitigation requirements to safeguard air quality during construction and upon completion.

Priorities

New Forest District Council has the following priorities with regards to local air quality:

- to forward the development of a Clean Air / Air Quality Strategy for New Forest;
- to work regionally, pooling expertise and resource to forward local and national air quality issues and strategies; and
- to continue to promote the 'burn better' scheme focussing on woodburning and bonfires in domestic properties.

Conclusions and Priorities

Monitoring of pollutants within the New Forest district has not shown an exceedance of the Air Quality Objectives (AQO) at any monitoring location.

2022 levels showed an overall marginal decrease of $0.4 \mu\text{g m}^{-3}$ in 2022 compared to 2021 (19.5 to $19.1 \mu\text{g m}^{-3}$). On an individual site basis, the largest increase in NO_2 concentration in 2022 ($2.1 \mu\text{g m}^{-3}$) compared to 2021 occurred at Site 13 (16 High Street, Lyndhurst) for which the concentration increased from $24.9 \mu\text{g m}^{-3}$ to $27.0 \mu\text{g m}^{-3}$ and remained significantly below the AQO. The largest decrease ($3.5 \mu\text{g m}^{-3}$)

occurred at Site 22 (A35, Baytree Cottage, B'th Road for which the concentration decreased from 21.6 $\mu\text{g m}^{-3}$ to 17.6 $\mu\text{g m}^{-3}$.

Continued compliance with the objective levels within the Lyndhurst AQMA is observed during 2022 which provides further evidence to support a case for the revocation of the AQMA. The AQMA in Lyndhurst will be revoked by 30 September 2023.

Further monitoring has been and will be installed within the District to assess pollutant levels when circumstances or issues arise. Additional monitoring was installed in the Emery Down area (just outside Lyndhurst) in 2020 to assess nitrogen dioxide concentrations on a known 'rat-run' avoiding Lyndhurst, in Fordingbridge to gather background data ahead of a proposed new housing developments and in Lymington close to a relocated bus depot. Results have demonstrated no exceedance of objectives levels in Emery Down and Lymington over the past 2 years. Given the very low levels of NO_2 monitored at these sites, continued monitoring in Emery Down and Lymington will cease in 2023.

It is noted that planning applications are expected to be submitted to the Council for proposed large developments over the forthcoming years. As such the associated work to assess the submitted plans and the impact on local air quality (including the potential impact on the Southampton Clean Air Zone) may be significant for the Department.

Local Engagement and How to get Involved

Everyone can take small steps to improve local air quality and improve their health, for example:

Vehicles

- Find out about your local public transport and car share schemes when travelling to work, school, business trips or weekends away.
- Find out about local bus services. For example, during the summer, bus companies in the New Forest operate hop on / off services throughout the district and to local beaches, often with offers to some local attractions. Details can be found via the following link:

<http://www.thenewforesttour.info/>

- Find out about cycle routes in your local area and across the New Forest - you may be surprised how easy it is to cycle to your destination rather than take your car.
- Use **My Journey Planner** website to identify transport options, routes (including fastest and quietest) and public transport details. This is an excellent and informative website giving the user great options to compare different journey options. Details can be found via the following link:

<https://journeyplanner.myjourneyhampshire.com>

- Turn off your engine when waiting at traffic lights, closed railway barriers or in traffic jams.
- Turn your vehicles air circulation from pulling in external air to re-circulating internal air to stop drawing the surrounding air pollution into your vehicle for you to breathe.
- Become an eco-driver for example by anticipating traffic flow, maintaining a steady speed at a low revs per minute (RPM) and shifting up through the gears early. This will not only reduce pollution from your vehicle but save on fuel consumption.
- Maintain your vehicle regularly, including checking tyre pressures monthly.

Get Active

- Leave your car at home and try walking to the local shops or school, even if it is just once or twice a week. If you can make it part of your normal routine, not only will you be reducing air pollution you will be more active and healthier.
- The majority of New Forest residents live within walking or cycling distance of open spaces. Explore walking and cycling routes you can take from your doorstep, get active and leave your car at home.

Plan ahead

- Take some time to plan ahead and consider the small steps you can take to reduce pollution, for example planning journeys that you can leave your car at home or car share with work colleagues or on the school run even it is just for one day a week or fortnight.
- When planning a walk, consider the route. It may be possible to take footpaths and streets away from busy high streets or areas of local traffic congestion therefore avoiding areas of higher air pollution.
- If you are buying or leasing a new vehicle (private or business) consider the vehicle emissions and fuel type in addition to the other typical considerations such as miles per gallon, insurance group and safety.
- Be aware of air pollution forecasts for your local area, particularly if you suffer from respiratory issues. The local forecasts can be found via the following link:

<https://uk-air.defra.gov.uk/>

Raising concerns

- New Forest District Council residents and businesses can raise concerns about air pollution directly with the Environmental Protection department or their local

Councillor; details and links are listed below. Officers may be able to offer advice or investigate your concerns further.

Local Responsibilities and Commitment

This ASR was prepared by the Environmental Protection Department of New Forest District Council.

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This ASR has been approved and signed off by:

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If you have any comments on this ASR please send them to eandr@nfdc.gov.uk at:

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