



2022 Air Quality Annual Status Report (ASR)

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

Date: June, 2022

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Executive Summary: Air Quality in Our Area

Air Quality in New Forest District

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 28,000 to 36,000 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 64km, 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.

The total population of the District is 176,800⁵ although the area also attracts local, national and international visitors throughout the year with over 13 million days visits

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, July 2021

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

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

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made annually⁶. With 96% of visitors arriving into the New Forest in cars or coaches, in addition to the local industry, it is not surprising the New Forest district has some current or potential 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.

As a result of identified local air quality issues, the New Forest currently has one declared Air Quality Management Area (AQMA) for the likely exceedance of the annual mean air quality objective for NO₂:

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

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

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

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 modelling⁸ was undertaken in the New Forest and

⁶ New Forest National Park, Facts and Figures, 2007

⁷ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/633270/air-quality-plan-detail.pdf

⁸ <https://democracy.newforest.gov.uk/documents/s10445/Annex%20A%20to%20Air%20Quality%20Plan.pdf>

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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

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.

2021 was the seventh 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 of between 4-11 µg m⁻³ over the last 8 or 9 years within part of the High Street (the annual mean objective for NO₂ is 40 µg m⁻³), with no exceedances of the nitrogen dioxide annual mean objective being monitored in Lyndhurst over the past seven years.

Confidence in the continued compliance supports a view to revoke the Lyndhurst AQMA if data continues its downward trend. 2020 data had been significantly impacted by Covid 19 and so the Council delayed consideration of revoking the AQMA until more normal circumstances had returned when an analysis of data based on a 'back to normal' scenario could be undertaken. The 2021 data indicates that levels are now approaching pre pandemic levels but, crucially, remain below air quality objectives. Revocation of the Lyndhurst AQMA will be reviewed during 2022.

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

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concentrations were shown not to exceed EU Limit Values but were sufficient close to suggest that monitoring should continue.

The data obtained from these tubes throughout 2021 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 I).

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 guidance⁹ 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 2021;
- 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, take 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.

⁹ Defra. Technical Guidance LAQM.TG16

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 officer's 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 and will continue to improve due to national policy decisions, there are some areas where local action is needed to improve air quality further.

The 2019 Clean Air Strategy¹⁰ sets out the case for action, with goals to reduce exposure to harmful pollutants. The Road to Zero¹¹ sets out 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

¹⁰ Defra. Clean Air Strategy, 2019

¹¹ DfT. The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018

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(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 Lyndhurst¹². This update outlines those options which have been implemented, those which were removed and outlines a number of 'softer' options to forward to hopefully maintain the improvements monitored in nitrogen dioxide concentrations. 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.

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 9-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 2021.

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 Plan¹³ as having a one road 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 seen as an extension of issues identified in Southampton in 2015.

As such New Forest District Council and Southampton City Council have worked in partnership to deliver a Southampton Clean Air Zone to ensure compliance with the EU annual mean limit value for nitrogen dioxide on this road in the shortest possible time, and by 2020 at the latest. This requirement has been placed on the Council's by Government.

¹² <https://www.newforest.gov.uk/airquality>

¹³ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/633270/air-quality-plan-detail.pdf

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Detailed and complex local air quality modelling¹⁴ was undertaken in the New Forest and determined that compliance would be met by 2019 in a business as usual scenario.

Furthermore, it has been concluded that the introduction of additional measures will not bring forward compliance, therefore, New Forest District Council's preferred option was to continue with a business as usual scenario.

NFDC has worked with Hampshire County Council and local schools to promote and improve local air quality. Previous collaborations include:

St. Michael's and All Angels Infant School – Lyndhurst

Promotion of a Clean Walking Route to school avoiding the current AQMA by:

- working with the school to promote the route, including officers attending school assembly and presenting certificates to children walking the Clean Walking route;

¹⁴ <https://democracy.newforest.gov.uk/documents/s10445/Annex%20A%20to%20Air%20Quality%20Plan.pdf>



- o promoting anti-idling within Lyndhurst High Street including the use of a banner designed by local school children in 2017



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Whilst these schemes have not been progressed through 2021, it is hoped Local Authority involvement will continue in 2022.

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

NFDC 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 campaign 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.

As part of this project the team has secured a number of Zephyr sensors which can be deployed around the district to monitor pollution levels, specifically PM₁₀ and PM_{2.5}. The results will be used to provide advice and educational resources to residents in the impact of domestic burning. This work was commenced during 2021 with the sensors likely to be in place by the summer of 2022 and operational for 2 years.

Production of the air quality supplementary planning guide

A supplementary air quality planning guide has been produced to support applicants submitting planning applications and state expectations regarding appropriate assessment of local air quality in terms of the planning regime and mitigation requirements. This document should be ratified by Council members and available for use in 2022.

Priorities

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

- to complete the development of an air quality supplementary planning guide / document to support applicants submitting planning applications and state expectations regarding appropriate mitigation requirements;

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- to forward the development of a Clean Air Strategy for New Forest;
- to forward collaborative work on the updated Air Quality Action Plan for Lyndhurst;
- 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' campaign.

Conclusions and Priorities

Conclusions

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

2021 levels generally show an increase on the preceding years results but crucially are generally lower than the 2019, pre covid, levels. The average NO₂ concentration for all diffusion tube sites not in the CAZ decreased by about 6.2 µg m⁻³ from 2019 to 2020 (23.9 µg m⁻³ to 17.6 µg m⁻³) but have risen by about 1.8 g m⁻³ to 19.5 µg m⁻³ in 2021.

On an individual site basis, the largest increase in NO₂ concentration in 2021 (7.1 µg m⁻³) compared to 2020 occurred at Site 48 (A35) for which the concentration increased from 29.1 µg m⁻³ to 36.2 µg m⁻³. The next highest increase occurred at Site 28 (93 Commercial Road) for which the concentration increased from 17.6 µg m⁻³ to 23.3 µg m⁻³ and remained significantly below the AQO.

Continued compliance with the objective levels within the Lyndhurst AQMA is observed during 2021, providing evidence to support a case for the revocation of the AQMA which will be considered during 2022.

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 station. Results have demonstrated no

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exceedance of objectives levels in Emery Down and Lymington over the past 2 years. Given the very low levels of NO₂ monitored at these sites, continued monitoring is likely to cease in 2023.

It is noted that planning applications are expected to be submitted to the Council for proposed large developments (identified Strategic Sites in the Local Plan) 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.

Priorities

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

- to assist in the development of an air quality supplementary planning guide / document to support applicants submitting planning applications and state expectations regarding appropriate mitigation requirements;
- to forward the development of a Clean Air Strategy for New Forest;
- to forward collaborative work on the updated Air Quality Action Plan for Lyndhurst;
- 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' campaign.

Local Engagement and How to get Involved

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

Vehicles

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- 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://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

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- 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 street 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.

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Local Responsibilities and Commitment

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

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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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