



2020 Air Quality Annual Status Report (ASR)

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

June 2020

New Forest District Council

Local Authority Officer	Rachel Higgins
Department	Environmental and Regulation
Address	New Forest District Council Appletree Court Lyndhurst Hampshire SO43 7PA
Telephone	023 8028 5541
E-mail	rachel.higgins@nfdc.gov.uk
Report Reference number	NF/01/20
Date	June 2020

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 and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues because areas with poor air quality are also often the less affluent areas^{1,2}. The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion³.

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 176,800⁴ although the area also attracts local, national and international visitors throughout the year with over 13 million days visits made annually⁵. With 96%⁵ 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.

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

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

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

⁴ Environmental equity, air quality, socioeconomic status and respiratory health, 2010

⁵ New Forest National Park, Facts and Figures, 2007

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 Plan⁶ 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 modelling⁷ was undertaken in the New Forest and determined that compliance will be met by 2019 in a business as usual scenario. Furthermore, it has been concluded that the introduction of additional measures will

⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/633270/air-quality-plan-detail.pdf

⁷ <https://democracy.newforest.gov.uk/documents/s10445/Annex%20A%20to%20Air%20Quality%20Plan.pdf>

not bring forward compliance, therefore, New Forest District Council's preferred option is to continue with a business as usual scenario

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.

2019 was the fifth 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 at locations relevant for exposure.

Since the declaration of three AQMA's in 2005 in Fawley, Totton and Lyndhurst, New Forest District Council has worked hard to improve local air quality. Following monitored improvements in air quality, two of the declared AQMA's have subsequently been revoked (Fawley in 2013 and Totton in 2016), with Lyndhurst remaining. However, monitoring has continued throughout the District including those areas with revoked AQMA's.

Lyndhurst has monitored significant decreases in nitrogen dioxide concentrations of between 4-11µgm⁻³ over the last 8 or 9 years within part of the High Street (the annual mean objective for NO₂ is 40µgm⁻³), with no exceedances of the nitrogen dioxide annual mean objective being monitored in Lyndhurst over the past five years. However, whilst the decreases are noted and welcome, the cause of the decrease is not clear. Improvements have been made to the flow of traffic within Lyndhurst, but these came into effect in 2010 when the decrease in the monitored concentrations started but the continued decreases are difficult to explain, other than a generalisation that newer vehicles on the road may also be having a positive local impact.

As such it is concluded that there needs to be confidence that current nitrogen dioxide concentrations in Lyndhurst can be maintained over the long term.

Therefore, further work with our partners and the community will continue with the aim to reduce concentrations further in order to obtain the required confidence in the long-term concentrations for Lyndhurst before the Council considers revoking the current Air Quality Management Area. However, it is noted the evidence is supporting revocation in the near future should the current trend in monitored nitrogen dioxide concentrations continue.

Additional sites were installed in Lyndhurst towards the end of 2017 in response to monitoring along a Clean Walking Route from the main car park to St. Michaels and All Angels School. Nitrogen dioxide concentrations were shown to be about three times less than the concentrations measured with the Air Quality Management Area on High Street.

A number of monitoring locations were also installed 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 sufficient close to suggest that monitoring should continue.

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 guidance⁸ 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 2019;

⁸ Defra. Technical Guidance LAQM.TG16

- 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.

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 District, Town and Parish Council 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 has become 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.

Actions to Improve Air Quality

Lyndhurst

In order to reduce congestion and air pollution in the High Street in Lyndhurst, particularly within a street canyon, a new traffic light sequencing system has been installed. The aim of the system is to allow traffic to turn left from the High Street onto the northbound A337 out of Lyndhurst even when the southbound A337 traffic is passing through the junction on a green light. The traffic lights enable a green filter to work continuously (in the absence of approaching long vehicles or when the pedestrian crossings are not in use), therefore reducing congestion and pollution on the approach to the junction.

Whilst this system has been operational since 2010, it would appear that it has taken drivers a while to be aware of the new traffic system and to keep driving along the High Street. Observations made have concluded that congestion in Lyndhurst has reduced although there are still periods of congestion due to the numbers of vehicles driving into Lyndhurst or local incidents. New Forest District Council work with Hampshire County Council (the regulator for the road network) when issues arise with the traffic lights and flow of traffic, and typically the County Council reassess the lights and traffic system, making adjustments when required.

Without the filter lane in use



With the filter lane in use



During 2019 New Forest District Council updated the original Air Quality Action Plan (2008) for Lyndhurst⁹. 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. It should also be noted as part of the update additional monitoring is being installed in Emery Down (just outside Lyndhurst) in 2020 to assess whether increases in traffic in the local area is resulting 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 4-11µgm⁻³ decrease in NO₂ concentrations noted over an 8-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 2019.

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 Plan⁶ 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 been working 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.

⁹ http://www.newforest.gov.uk/media/39874/Air-Quality-Action-Plan-2019/Pdf/Air_Quality_Action_Plan.pdf

Detailed and complex local air quality modelling¹⁰ was undertaken in the New Forest and determined that compliance will 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 is to continue with a business as usual scenario

Working with Hampshire County Council and local schools to promote air quality locally

During 2019 New Forest District Council has been working with Hampshire County Council and local schools to promote and improve local air quality. In summary the work completed includes:

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

Continuing to promote a Clean Walking Route to school avoiding the current AQMA by:

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



¹⁰ <https://democracy.n>

[in.pdf](#)

- continuation of diffusion tube monitoring along the Clean Walking Route to show the differences in pollution levels when compared to the High Street; and,
- promoting anti-idling within Lyndhurst High Street including the use of a banner designed by local school children in 2017



New Milton Infants School

New Forest District Council has been working with New Milton Infants School and installed a mini monitoring scheme at and outside the school to determine nitrogen dioxide levels. It was agreed that the Council would provide the tubes, expertise in deciding the monitoring locations and assistance with interpreting the results, the school would change the tubes. The monitoring started in May 2018 and ran for a year. The results for the 3 locations varied between and approximately 12 and $15\mu\text{g m}^{-3}$, significantly below the objective value of $40\mu\text{g m}^{-3}$.

Conclusions and Priorities

Conclusions

Monitoring of pollutants within the New Forest district has not shown an exceedance of the Air Quality Objectives at any monitoring location. Decreases in nitrogen dioxide concentrations are observed within the AQMA in Lyndhurst however the Council needs to be confident that the monitored levels can be maintained over the long term. For example, the 2008 Action Plan was updated in 2019 and should help to build confidence in the evidence to support revocation of the Lyndhurst AQMA within the next few years.

Further monitoring has been and will be installed within the District to assess pollutant levels when circumstances or issues arise. For example, additional monitoring was installed towards the end of 2017 and in 2018 to obtain information on the A35 in Totton as part of the Clean Air Zone work, along a Clean Walking Route to school in Lyndhurst and in additional locations in Ringwood. Additional monitoring will also be installed in the Emery Down area (just outside Lyndhurst) in 2020 to assess nitrogen dioxide concentrations on a known 'rat-run' avoiding Lyndhurst.

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.

Priorities

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

- to develop a Clean Air Strategy for New Forest;

- to forward collaborative work on the updated Air Quality Action Plan for Lyndhurst;
- to forward collaborative work on the Southampton CAZ work; and
- to work regionally, pooling expertise and resource to forward local and national air quality issues and strategies.

Challenges

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

- to ensure the Council makes the best use of the resource available to move local air quality forward, and be prepared for the submission of significant planning applications; and
- to motivate local communities to change their behaviour to improve local air quality, particularly when air quality (outside of the known problem areas) is considered good.
- the long-term investment needed from multiple agencies to build a sustainable transport system.

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 links:

(3 routes throughout the New Forest) <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 healthy.
- 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.
- The New Forest Environmental Protection Liaison Committee holds an annual public participation meeting (usually in the Autumn) where members of the public can raise concerns directly with the Committee. The Committee includes local Councillors, Environmental Health, the Environment Agency, Hampshire County Council, Friends of the Earth and local industry. A link to the details of the Committee is listed below.

Contacts

- *Local Councillors*

Your local Councillor details can be found via the link:

<http://www.newforest.gov.uk/article/8129/Councillors-and-democracy>

- *New Forest District Council*

Your contact with regards to local air quality at New Forest District Council is:

Mrs Rachel Higgins
Environmental Protection
Environment and Regulation
Appletree Court
Lyndhurst
Hampshire
SO43 7PA

023 8028 5411

New Forest Environmental Protection Liaison Committee

Details of the committee can be found via the link:

<http://www.newforest.gov.uk/article/8129/Councillors-and-democracy>