



Air Quality Newsletter

March 2021

Why we monitor the air quality

The Public Protection Partnership measure air quality as it is a statutory requirement regulated by DEFRA to ensure the UK meets with the 'Air Quality Objectives' set by the EU Directive.

The team measure nitrogen dioxide (NO₂) in all three areas and PM₁₀ (particulate matter) in Bracknell Forest. They manage seven air quality management areas (AQMA), of which some have air quality action plans (AQAP) to reduce levels of pollution.

Each local authority has a duty to constantly review and assess the air quality within its area and compare pollution concentrations against a set of European and National air quality standards. Conventional vehicles (diesel and petrol engines) when their engines are running emit gases, which include, nitrogen oxides, particulate matter and carbon dioxide. Nitrogen Dioxide and particulate matter are identified air quality pollutants under the long-established air quality framework, owing to their impact on health. Carbon Dioxide is a greenhouse gas, which, when emitted in excess, in particular from anthropogenic activities, contributes to climate change.

Particulates are classified by their mass (PM₁₀ and PM_{2.5}), with the smaller particulates, PM_{2.5} being more harmful due to their ability to travel further into the lung. PM 2.5 is understood to have no safe limit for health, it is therefore beneficial to reduce levels at all locations, not just hotspots that break a set limit.

The team

The air quality is managed by the environmental quality team. They manage the air quality monitoring programme. They prepare and submit the AQSR (annual air quality status report) as well as, change the monthly diffusion tubes (approximately 130) renew the contracts, carry out projects, work with other services and partners who implement actions in the air quality action plan, apply for relevant grants, run competitions, answer queries from the public, parishes, members and councillors questions.

How we monitor the air

The borough wide NO₂ is monitored using diffusion tubes which are changed monthly. The data is collected and following bias correction the annual air quality status report is reported. The diffusion tubes are located in areas close to major sources of traffic pollution within the air quality management areas. We have four continuous monitoring sites (Twyford, Newbury and Wokingham) which all measure NO₂ every fifteen minutes which give us one hour and annual mean data. In addition the Bracknell site monitors PM₁₀. This data is published in the annual air quality status report. Which are available on our website here.

See [link here](#) for details of Annual Air Quality Status Report.



The impact of COVID-19 pandemic on air quality

As you would all expect the NO₂ levels were much lower for 2020. Throughout lockdown the officers continued monitoring. As scientists the air quality officers had a rare opportunity to actually measure the NO₂ with very little traffic. There has always been speculation that a reduction in traffic would reflect in a reduction in NO₂ and the team would be able to scientifically prove or disprove that theory.

As you can see from all the graphs (next page) the overall NO₂ was lower for 2020. This data is the only chance we have ever had, or likely to have, to measure the NO₂ with far fewer cars on the road. From the data we can conclude that vehicles are the greatest producers of NO₂ throughout PPP areas.

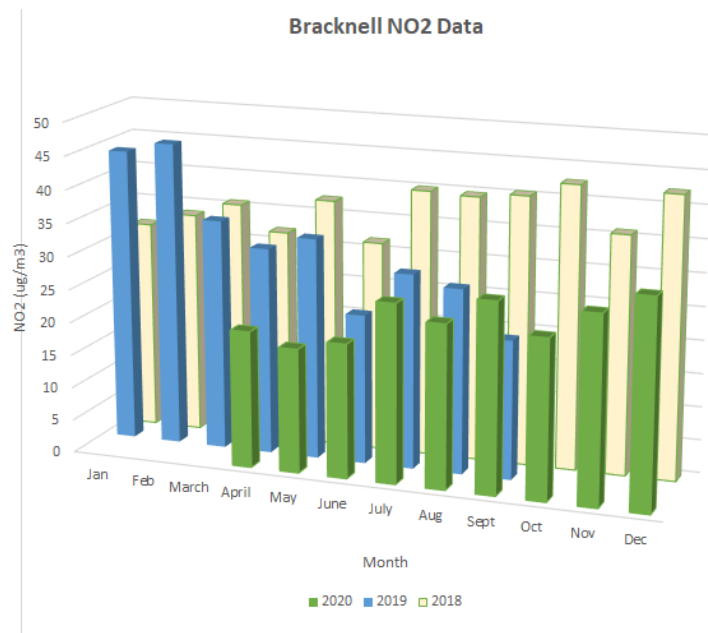
Twyford Cross Roads

The 2020 data shows that COVID has had a positive effect on the air quality in Twyford. The greatest decline of NO₂ was during the first lockdown. As lockdown restrictions were lifted and schools went back the levels, although increased still remained lower than 2019. We assume this is because more people are working from home and less people travelling around on a daily basis.

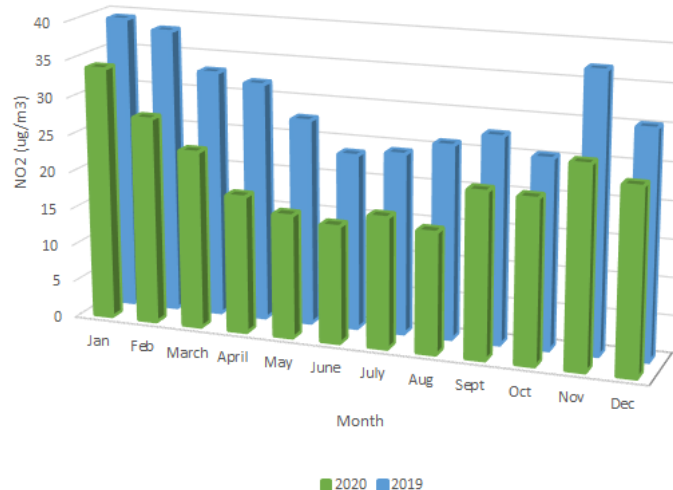
Wokingham Town Centre (Peach Street)

The 2020 data shows a decline of NO₂ compared to that of 2019, this is due to the reduction of the traffic on the road due to the lockdowns and the High Street being closed for a proportion of the year.

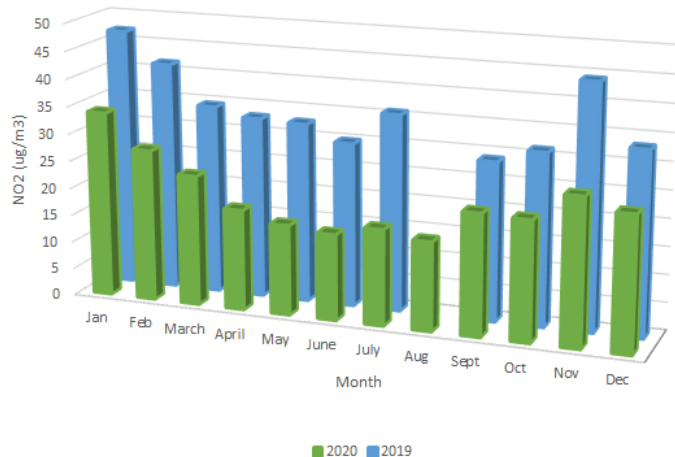
Bracknell NO2 Data



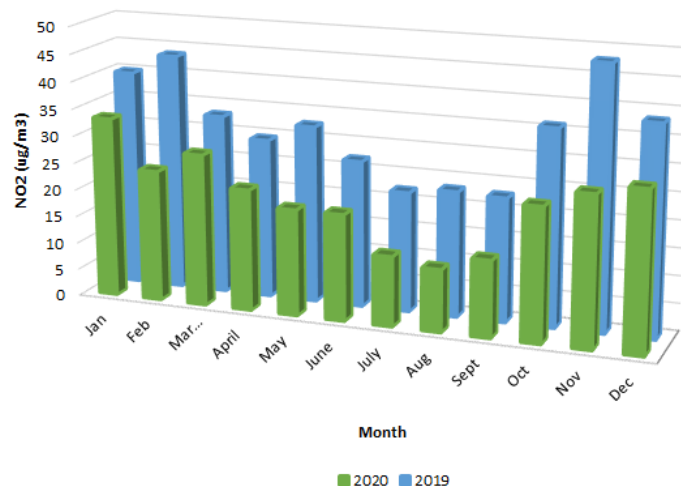
Twyford NO2 Data



Newbury NO2 Data



Wokingham NO2 Data



Bracknell (Downshire Way – M3/M4 corridor)

For this site we have included the 2018 data for comparison as due to the ongoing roadworks the unit was turned off for 6 months (3 at the end of 2019 and the first 3 months of 2020). In order to make a direct comparison of the impact of Covid we will need a calendar year of data with no Covid impacts (likely 2022) as the new road layout was completed at the beginning of 2020 (March). However looking at the data it shows that NO2 level is much lower than the 2018 data. The September 2020 levels show the NO2 increases above the 2019 levels. This may be due to commuter's car sharing less and being encouraged not to take public transport, the schools going back.

Newbury (A339 – Burger King Roundabout)

As you can see from the Newbury data for both 2019 & 2020 the 2020 NO2 levels are lower except for June and September. This increase coincides with lockdown restrictions been lifted. Schools were open and car sharing and the use of public transport was discouraged by the Central Government. However the levels are still well within the AQO.

Schools competition

PPP ran a competition for school children in Bracknell and West Berkshire in October 2020. This was to get the children to design an "Anti-Idling Poster" to be used as a banner outside schools around the areas involved. We were delighted that eight schools entered the competition, with twenty six posters submitted. There were six winners awarded to West Berkshire and six winners to Bracknell Forest.

The competition in Wokingham was run by the My Journey team as it linked well with other work being undertaken by them. The winning posters were produced into banners and PPP produced three banners, one for each area.

We understand that some of the children who submitted their designs to us have also been awarded a green 'Blue Peter' badge for helping the environment.

See below for the Bracknell Forest, West Berkshire and Wokingham schools banners.



Defra Grant of £259,000

PPP successfully bid for a DEFRA grant to provide support to local authorities to develop and/or implement measures that deliver air quality benefits in the near future. The value of the grant awarded is just over £259,000.

The purpose of the grant is to support projects that will develop solutions over the longer term by increasing awareness to encourage behavioural changes. Projects will specifically contribute to reductions in air pollutant emissions and/or concentrations in areas in current and projected exceedance of the legal limits.

Funding is awarded for approved projects that meet the grant objectives:

- To help deliver compliance in areas in current and projected exceedance of UK air pollution targets in the shortest possible time;
- To support LAs (particularly those with a Smoke Control Area) to reduce PM2.5 emissions from domestic wood and coal burning;
- To support projects which develop solutions over the longer term by increasing awareness to encourage behavioural changes.
- To support projects that align with the objectives of Defra's Clean Air strategy v. To support projects that reduce nitrogen dioxide (NO2) emissions
- To support innovative projects that can improve local air quality, especially in relation to delivering effective air pollutant emissions reduction measures, and to share this best practice.

A project plan is currently in development and more details on the specific activities will be available at a later date.

Anti idling areas

Agreement is being sought (agreed in Bracknell Forest on 9/2/2021) to enforce the provisions of the Road Vehicles (Construction and Use) Regulations 1986 in so far as they relate to idling of vehicles and where appropriate to do so to issue fixed penalty notices in accordance with The Road Traffic (Vehicle Emissions) (Fixed penalty) England Regulations 2002. This will permit officers of the Council (including officers from the Public Protection Partnership) and others so authorised to raise awareness, engage, educate and ultimately enforce the relevant legislation to tackle vehicle idling across the LA and carry out emissions testing within the Air Quality Management Areas.

These proposals are considered to complement the efforts to 'change habits' by people using vehicles in the local authority. It is to be stressed that the aim is to bring about change as part of a wider package of measures and not to be seen as a source of revenue generation. The penalties are such that the work is unlikely to achieve cost neutrality but will be seen as part of the Councils wider approach to improving air quality as part of its Climate Change strategy.

Air Quality Facts

The Public Protection Partnership team has over 80 years of air quality experience between them. That puts you in safe enthusiastic hands!

There are seven air quality management areas across the PPP areas.

There are four air quality continuous monitors in the PPP areas.

There are four air quality action plans running in PPP.

PPP comment on planning applications with regards to air quality to ensure new areas aren't created which will need air quality monitoring.

There are three officers that change over one hundred and thirty tubes, on a monthly basis, no matter what the weather!

PPP have secured funding for £259,000 to help understand PM2.5 and improve our air quality.

The PPP officers are passionate about improving air quality.