

calendar year. A copy of the report can be found on line at <https://www.newcastle-staffs.gov.uk/all-services/environment/environmental-protection/air-quality-newcastle-under-lyme>

- 2.2 Previous assessments have identified nitrogen dioxide as the pollutant of concern, with a number of locations within the Borough exceeding the nitrogen dioxide annual mean objective.
- 2.3 This Annual Status Report considers all new monitoring data and assesses the data against the Air Quality Strategy (AQS) objectives. It also considers any changes that may have an impact on air quality.
- 2.4 The review of new diffusion tube monitoring data has not identified any locations outside of the four existing AQMA's, declared in December 2014 within the Borough where the AQS annual NO₂ objective was exceeded in 2017.
- 2.5 Monitoring of NO₂ concentration in the Air Quality Management Areas (AQMA's) and at a variety of locations across the Borough during 2017 shows, that there has been a general decrease in NO₂, with the majority of areas now being under the annual mean objective. There are however a number of hotspots within the Town Centre and Kidsgrove AQMA's.

Town Centre AQMA

- 2.6 Air Quality in this area is influenced by local road traffic and traffic utilising the major arterial routes, which converge on the town centre. There are a number of relevant receptors located at the back of pavement. The network is heavily congested at peak times of the day with high volumes of low speed mixed traffic. The town centre is experiencing a period of regeneration with provision for developments to provide around 3000 student bed spaces over the next four years. The Civic Offices site located on the Rycroft is destined to contribute towards a significant amount of accommodation as well as providing a mixed retail / leisure development. A number of office spaces are able to covert to residential use without requiring consideration of air quality. This has resulted in significant increases in the numbers of relevant receptors within the area where the Council is unable to influence development. In addition, the rural areas of the Borough are facing increased demands for applications for residential development, with people in these areas heavily reliant on cars to access services and employment opportunities within the town centre and wider areas.
- 2.7 NO₂ concentrations have generally decreased each year from 2012 onwards within the Town Centre. In 2017, sites DTK1, DT85 and DT102 had annual mean NO₂ concentrations in excess of the annual mean objective, with DT102 producing the highest reading across all of the AQMA's, with an annual mean of 60.4µg/m³. There are also a number of sites that remain within 10% of the annual mean, which are at risk of exceedance in future years.
- 2.8 This AQMA will remain in place until all sites measure an annual mean NO₂ concentration that is consistently below the annual mean legal objective

Porthill-Wolstanton-Maybank AQMA

- 2.9 Air Quality in this area is influenced by local road traffic and traffic utilising the junctions associated with the A500 dual carriageway. Relevant receptors in this location are mainly located at the back of footway. The main route through the area is single carriageway with traffic lighted junctions, signal controlled crossings, on street bus stops and significant sections of on street parking. Porthill Bank and Grange Lane are on significant gradients.
- 2.10 There has been a general decrease in NO₂ concentration at the diffusion tube monitoring sites within this AQMA. DT24 remains the highest annual mean NO₂ concentration within the Porthill-Wolstanton-Maybank AQMA, with the value for 2017 being 35.3µg/m³.

- 2.11 There are a number of works planned which may affect upon this location, this includes the Etruria Valley Development scheme, which sees changes to the Church Lane / Grange Lane junction the junction near to this site and a new access from Grange Lane into the City Centre via Etruria Valley. There are also planned improvement works by Highways England to the A500 between Wolstanton and Porthill. Both schemes are planned for delivery by 2020. They have the potential to increase traffic flow through this AQMA. Traffic modelling and the associated air quality impacts are currently being assessed by Highways England and Stoke on Trent City Council for their respective schemes. It is anticipated that this information will be available for inclusion in the next ASR.
- 2.12 Accordingly, the diffusion tube-monitoring network in this area will remain in place until the highway schemes have become embedded and there is confidence that NO₂ annual mean levels are consistently below the statutory objective.

Kidsgrove AQMA

- 2.13 Air Quality in this location is heavily influenced by traffic using the A34 Liverpool Road and local traffic accessing side roads from Liverpool Road within the centre of Kidsgrove. Relevant receptors are located back of footway and in close proximity to junctions and areas of congestion.
- 2.14 NO₂ concentrations have generally decreased each year from 2012 onwards within this AQMA. DT6 had the highest annual NO₂ mean concentration for this AQMA in 2017, with a value of 37.7µg/m³. DT64 had an annual mean which was within 10% of the annual mean objective.
- 2.15 The AQMA will remain in place until all sites measure an annual mean NO₂ concentration that is consistently below the annual mean legal objective.
- 2.16 Staffordshire County Council are planning a number of works in this area which area aimed at reducing congestion on Liverpool Road and hopefully this will have a beneficial effect on air quality.
- 2.17 Accordingly, the diffusion tube-monitoring network in this area will remain in place to monitor the success of the highway improvement works and until all sites measure an annual mean NO₂ concentration that is consistently below the annual mean legal limit.

Madeley AQMA

- 2.18 Air Quality in this location is heavily influenced by traffic using M6 motorway which runs within 20 metres of the nearest receptor at Collingwood 3 Newcastle Road.
- 2.19 The NO₂ concentration at this location in has been within 10% of the annual mean for the previous 4-year period between 2012 and 2015. NO₂ annual mean results at monitoring site DT3 (Collingwood 3 Newcastle Road) dropped dramatically in 2016 to 31.9 µg/m and was 31µg/m³ in 2017. It is however too early to say if this is likely to remain the situation moving forward.
- 2.20 Highways England are introducing smart managed motorways and hard shoulder running up to Junction 15 of the M6 (Stoke on Trent South) and from junction 16 (Stoke on Trent North and Crewe) through to junction 22. The stretch of motorway between junctions 15 and 16, which runs past experiences congestion at peak periods and may become a candidate for hard shoulder running and smart managed motorways in the future.
- 2.21 Based on the results since 2012 to present and potential future works to the M6 motorway this location will continue to be monitored for the near future.

Across the Borough of Newcastle under Lyme

- 2.22 There has been a general decrease in the annual NO₂ concentrations across the Borough over the past three years. This indicates that the strategies currently in place are already helping to reduce the NO₂ concentration within these areas of the Borough. However, work needs to be done to ensure that any further developments, or changes to the road networks across the Borough do not lead to an increase in the annual NO₂ concentration above the annual mean objective of 40µg/m³.

Particulate Matter (PM₁₀ and PM_{2.5})

- 2.23 Particulate matter, or PM, is the term used to describe particles found in the air, including dust, dirt and liquid droplets. PM comes from both natural and man-made sources, including traffic emissions and Saharan-Sahel dust. These particles can be suspended in the air for long periods of time, and can travel across large distances.
- 2.24 Particulate matter (PM₁₀) is measured using an automatic monitor located at Queens Gardens (Site CM1) within the Town Centre AQMA. Particulate matter (PM₁₀) levels within Newcastle-under-Lyme, continue to be well below the annual mean objective level of 40µg/m³, with the annual mean concentration for 2016 being 26µg/m³. Monitoring ceased at the end of 2016.
- 2.25 Based on data provided by the Public Health Directorate at Staffordshire County Council, manmade PM_{2.5} is estimated to cause some 60 deaths per annum for adults over 30 years of age within the Borough.
- 2.26 The Borough Council, along with the Staffordshire County Air Quality Group, is now looking at ways in which PM_{2.5} concentrations can be reduced at both a local and regional level.
- 2.27 The Borough Council, along with the Staffordshire County Air Quality Group and Staffordshire Public Health, is now looking at ways in which PM_{2.5} concentrations can be reduced at both a local and regional level.
- 2.28 **Proposed actions arising from the 2018 Annual Status Report are as follows:**
- a) Continue the current network of NO₂ diffusion tube monitoring in the District to identify future changes in pollutant concentrations;
 - b) Eco-Stars (Efficient and Cleaner Operations) Fleet Recognition Scheme
 - c) Involvement with planned road improvement works to the A500 at the Grange Lane junction, with Highways England
 - d) Managing planning applications pro-actively both at a County and Borough Planning level
 - e) Involvement in changes to traffic light sequencing, in conjunction with Staffordshire County Highways Department
 - f) Involvement with proposed changes to road layouts, with both Highways England and Staffordshire County Highways Department
 - g) Promotion of Health and Wellbeing Through liaising with Public Health colleagues
 - h) Developing an air quality strategy for the Borough
 - i) Developing air quality action plans for the four air quality management areas
 - j) Developing air quality planning guidance for developers looking to build within the Borough.
 - k) Inclusion of air quality related planning policies in the new Newcastle under Lyme and Stoke and on Trent local plan (scheduled for publication 2020)

3. Reasons for Preferred Solution

The Council is required to take the action outlined in this report in order to fulfil its statutory duties.

4. Outcomes Linked to Sustainable Community Strategy and Corporate Priorities

The action taken achieves the following priorities detailed within the Council Plan

- Priority 1 – A clean, safe and sustainable borough
- Priority 3 – A healthy and active community
- Council Plan Outcome 1.3 The negative impact that the Council, residents and local businesses have on the environment will have reduced

5. **Legal and Statutory Implications**

The Council is required to produce an annual status report in partial fulfilment of its duties under Environment Act 1995. Work is also progressing on the preparation of the statutory air quality action plans for the four Air Quality Management Areas. These will be the subject of a further report to this committee.

6. **Financial and Resource Implications**

Existing budgets will be utilised to fund the work identified in this report.

7. **Background Papers**

- Environment Act 1995 – Part IV
- Local Air Quality Management Technical Guidance (LAQM.TG.16) (available at <http://laqm.defra.gov.uk/documents/LAQM-TG16-April-16-v1.pdf>)
- Air Quality Reports completed since 1997 available from <https://www.newcastle-staffs.gov.uk/all-services/environment/environmental-protection/air-quality-newcastle-under-lyme>