Special Environment and Sustainable Communities Overview and Scrutiny Committee

7 February 2025

Air Quality Management in County Durham

Report of Alan Patrickson, Corporate Director of Neighbourhoods and Climate Change

Electoral division(s) affected:

Countywide

Purpose of the Report

1. The purpose of the report is to provide members of the Environment and Sustainable Communities Overview and Scrutiny Committee (OSC) with an update on:

    - The results of air quality monitoring across the County, primarily focussing on Durham City, where an Air Quality Management Area has been declared for nitrogen dioxide.
    - An indication of projected concentrations of nitrogen dioxide.
    - The revised Air Quality Action Plan.
    - Future priorities in relation to air quality.
    - Traffic measures to support air quality management.

2. The update will specifically cover the following:

    (i) **A description of the air quality in relation to the results from the non-continuous monitors obtained during 2022, 2023 & 2024 at the 'hotspot' locations across Durham City.** These locations, from previous results, are identified as Gilesgate (the uphill section adjacent to the eastbound carriageway), New Elvet

(Church Street, close to the junction with Hallgarth Street), Crossgate (Sutton Street) and at Neville's Cross.

(ii) **A description of the air quality in relation to the results from the non-continuous monitors obtained during 2022, 2023 & 2024 at Menceforth Cottages in Chester le Street,** where previously an Air Quality Management Area (AQMA) was declared for nitrogen dioxide.

(iii) **The reporting of the annual review and assessment of air quality to DEFRA**. In the 2024 Annual Status Report, this comprised the progress with the review and revision of the Durham City Air Quality Action Plan, the priorities in relation to reducing $PM_{2.5}$, and the outcome of the monitoring during 2023.

(iv) The progress on the review and revision of the Durham City Air Quality Action Plan (AQAP).

(v) The projection of future air quality across the County with the emphasis on Durham City in relation to the declared Air Quality Management Area.

(vi) How traffic measures are being used to help improve air quality within the Durham City Air Quality Management Area and support wider air quality initiatives across the Country.

Executive summary

3. A briefing report was provided to the Environment and Sustainable Communities Overview and Scrutiny Committee (OSC) and an informal presentation to Members was given in April 2024. This updated Members on local air quality management across County Durham.

4. This report provides a further update on the monitoring of nitrogen dioxide across the County with the focus on Durham City where the Air Quality Management Area has been declared. The results for 2023 and 2024 are provided with reference to the highest mean levels for locations across Durham city. In addition, the 2022 results are also included by way of comparison.

5. The main air quality project since the previous briefing has been the Durham City Air Quality Action Plan. The progress on the Action Plan is, therefore, discussed with reference to the consultation completed, the prioritisation of the action measures and the latest feedback from DEFRA.

6. The Council is required to complete a report on the progress of air quality across the County and for this to be submitted to DEFRA. The feedback received from DEFRA on the 2024 annual report which included reporting on data obtained in 2023 is included.

7. The priorities in relation to air quality nationally include more focus on $PM_{2.5}$ (particles with a diameter of below 2.5 microns). The responsibilities of the Council in assisting with achieving the national emission target is, therefore, also included.

8. Finally, the traffic management team set out the principal traffic projects, many of which are linked to the action measures within the Durham City Air Quality Action Plan. The projects, therefore, support the improvement of air quality across Durham City and towards achieving compliance with the Air Quality Objective for nitrogen dioxide.

Recommendations

9. That Environment and Sustainable Communities Overview and Scrutiny Committee consider and comment on the information provided in the report and presentation.

10. That the Environment and Sustainable Communities Overview and Scrutiny Committee considers whether to include in its work programme for 2025/26 a further progress update on the management of air quality in County Durham.

Background

11. The last briefing report was provided to the Environment and Sustainable Communities Overview and Scrutiny Committee (OSC) on the 23rdNovember 2022. A further informal presentation was provided via Microsoft Teams on 25th April 2024. The report and the presentation updated Members on local air quality management across County Durham.

12. The informal presentation in April 2024 covered the following:

- The results for 2023 from the monitoring network used to measure nitrogen dioxide with the primary focus on the ‘hotspot’ areas within the Durham City Air Quality Management Area.
- Progress of the review of the Durham City Air Quality Action Plan.
- The outcome of the Local Engagement Event in Nov 2023 & details of further consultation (Statutory & Public)
- The requirements of changes made to the legislation that covers air quality.

- Details of further work, specifically the responsibilities in relation to $PM_{2.5}$(Particles below 2.5 microns in diameter.)
- Details of projects to provide a more sustainable transport network.

13. Since the informal presentation, the work on local air quality management has continued, and included the following:

(i) The monitoring of nitrogen dioxide and particulates (PM_{10} and $PM_{2.5}$) at locations across the County, but predominantly within Durham City.

(ii) The compiling and submission of the Annual Status Report 2024 to DEFRA, and

(iii) The completion of the review, the revision and submission of the revised Durham City Air Quality Action Plan to DEFRA.

14. This work is co-ordinated, and monitored under the governance of the established corporate steering group, which has Member representation and senior officers from the following service teams across the Council:

- Community Protection
- Spatial Policy
- Transport & Contract Services
- Low Carbon Economy Team
- Public Health
- Environment & Design Team

An Update on the Results of Air Quality Monitoring in 2022, 2023 and 2024

15. The annual mean results from the non-continuous monitoring of nitrogen dioxide 2024 are available from January to November. The highest results are presented together with the corrected results for 2023. It should however be noted that the 2024 results have not yet been corrected to take into consideration the potential error that may occur from this type of monitoring. The annual mean results for 2022 are included for comparative purposes.

16. The results are compared with the annual mean air quality objective for nitrogen dioxide of **40 µg/m^3**. There is a risk that the air quality objective may be exceeded when the measured level is within ten percent of the objective which is above **36 µg/m^3** and this has also been considered for the results obtained to date.

17. The highest measured levels of nitrogen dioxide across the County are at 'hotspot' locations in the areas in Durham City previously identified and are as follows:

(i) Properties on **Gilesgate** close to the uphill eastbound carriageway. The highest annual mean measured level at a receptor at this location is **42.6 µg/m³** which exceeds the annual mean objective **(40 µg/m³)**.
The measured level is above **36 µg/m³** in 2023 at a further receptor at this location which indicates there is a risk that the annual mean objective will be exceeded.

(ii) Properties on **Church Street**, New Elvet close to the junction with **Hallgarth Street**.

The measured level is below the annual mean objective **(40 µg/m³)**.at the receptors on both Church and Hallgarth Streets in both 2023 and 2024. There is one receptor, close to the junction with Hallgarth Street, that is close to 36 µg/m³ which, if above, once the results have been corrected, indicates that there is a risk that the annual mean objective will be exceeded.

(iii) Properties on **Sutton Street** and **Colpitts Terrace**, Crossgate. There is a risk that the air quality objective will be exceeded at one receptor on Sutton Street in 2024. The measured annual mean level is above **36 µg/m³** at this location.

(iv) There are two monitors at Neville's Cross, one of which is adjacent to the carriageway and the other is at the nearest receptor to the carriageway.

18. The annual mean results for both 2023 and 2024 are below the annual mean air quality objective. The corrected measured annual mean in 2023 for the monitor adjacent to the carriageway was above 36 µg/m³ and therefore indicates a risk that the objective will be exceeded. This is not at a location that is representative of exposure at a residential property.

19. The annual mean measured levels in 2022, 2023 and 2024 of nitrogen dioxide at both receptors at **Menceforth Cottages** in Chester le Street are well below the air quality objective and the level at which there may be a risk of exceeding the air quality objective.

20. The annual mean measured levels in 2022, 2023 and 2024 of nitrogen dioxide at other sites that are representative of exposure to residential receptors across the County are below the Annual Mean Air Quality Objective and the level at which there may be a risk that the objective will be exceeded.

21. The highest level of nitrogen dioxide measured by the continuous air quality analyser expressed as a mean, is **39.5 µg/m^3** in 2023 which is close to but below the limit. The analyser is located on **Leazes Road at Framwellgate** and not at the façade of a residential property.

The Annual Air Quality Status Report

22. The annual Air Quality Status Report 2024 that incorporates and reports on the monitoring results obtained in 2023 was submitted to DEFRA. The progress on the review and revision of the Durham City Air Quality Action Plan was also set out in the report that included the 21 new action measures together with the approach towards tackling emissions of $PM_{2.5}$.

23. The feedback on the appraisal of the annual Air Quality Status Report 2024 has been received. The report is **accepted** as providing a detailed representation of the local air quality across the County. Following the introduction of the Environment Act 2021 it is now required that the date for the completion of an action measure is included in the Action Plan and therefore this will be the case in the reviewed and revised Plan.

The Review & Revision of the Durham City Air Quality Action Plan

24. The review and revision of the Durham City Air Quality Action Plan has been completed. The revised Plan was submitted to DEFRA on Thursday 19th December 2024 for further appraisal and notification that this had been **accepted** was received on Friday 24th January 2025. The feedback received from DEFRA following the submission of the draft Durham City Air Quality Action Plan in February 2024 has been addressed in the further revised plan.

25. A public consultation has been undertaken over an 8-week period commencing May 2024. Feedback from the consultation exercise was reviewed by the Air Quality Corporate Steering Group, along side the feedback from the Local Engagement Event and Statutory Consultees. As a result, 2 new actions were identified, some of the original actions were re-worded and one was deleted.

26. There are 23 action measures within the Action Plan which have been prioritised in relation to air quality benefits (reductions of nitrogen dioxide), costs, feasibility (timescale & whether funded) and support (based on the outcome of the consultation). These were then subsequently ranked 1 to 9, with 1 being the highest priority.

27. The lead officer and department responsible for delivering each action measure are also detailed in the plan, together with the estimated cost and timescales of implementation.

28. A key factor in determining the success of the implementation of the action plan is establishing action measures that are integrated with other strategies, policies and plans developed elsewhere within the Council. Examples of this include the Regional Transport Plan and the Climate Emergency Response Plan, both of which incorporate actions that will also be beneficial for air quality.

29. The action plan measures have therefore been identified through internal and external consultation together with discussions at meetings of the Air Quality Corporate Steering Group. A focus has been placed on strategic action measures on targeting air quality across the Air Quality Management Area rather than on localised areas.

30. The progress on the Air Quality Management Plan will be closely monitored by the Air Quality Corporate Steering Group. Details will also be required to be included in the Annual Status Report.

31. Since DEFRA have accepted the final plan, the intention will now be for the Council to formally adopt the document.

Legislation update-requirements for Fine Particulates ($PM_{2.5}$)

32. Since the last report, legislation has been introduced in relation to the target and objective for fine particulates ($PM_{2.5}$ – particles that have a diameter less than 2.5 microns). This comprises of a Population Exposure Reduction Target and an air quality annual mean of 10 µg/m^3 as a target to be met by 2040.

33. The review of the Air Quality Action Plan has included the modelling of the levels of $PM_{2.5}$ across the Durham City Air Quality Management Area and its environs. **This shows that there are 3 receptors at which the predicted levels of $PM_{2.5}$ will exceed the proposed air quality target of 10 µg/m^3 in 2024.** The air quality target is an annual mean to be achieved by 2040. The location of these exceedances is at Gilesgate, close to the roundabout.

34. The sources contributing towards elevated levels of $PM_{2.5}$ are the same as for nitrogen dioxide but with the addition of petrol cars. There are action measures within the revised Plan that will assist with reducing levels of $PM_{2.5}$ as well as nitrogen dioxide.

35. It is the expectation of DEFRA that Local Authorities progress measures that will reduce and minimise emissions of $PM_{2.5}$.
There is already a section within the annual air quality status report that focuses on $PM_{2.5}$ and the measures the Council is taking to reduce levels of this pollutant. The annual review and assessment of air quality will therefore require consideration of the impact of $PM_{2.5}$ across the County and, if necessary, the implementation of further monitoring and/or modelling.

Traffic Measures

36. Several action measures identified in the AQAP are already coming to fruition with transport investments at Sniperley P&R, increased usage of ZEV on bus routes through high emission areas, and the use of smart traffic signal technology to manage traffic congestion and prioritise bus movements along radial routes into Durham City.

37. As part of Durham's ongoing transport pipeline, we will ensure that further measures identified in the AQAP are incorporated into transport projects and these schemes are prioritised appropriately to support wider air quality initiatives across County Durham.

38. Increasing the priority given towards exacerbating underlying air quality issues on the local highway network is welcome but it should be noted that this is likely to alter the nature of traffic mitigation measures secured through the development management process. These mitigation measures are likely to be less focussed on increasing local highway capacity to ease congestion and be more targeted on embedding sustainable travel behaviour and improving active travel infrastructure that connects to new developments.

39. Transport measures to improve air quality typically fall within one of the four categories below:-

    a. Creating the opportunity for alternative more sustainable travel choices
    b. Dynamic management of the highway network
    c. De-carbonisation of the transport network
    d. Incentives that support sustainable travel behaviour

40. A combination of schemes within Durham City are contributing to improving local air quality. These span each of the above categories and include, development of a City Centre Active Travel Network,

expansion of Sniperley P&R site, ITS upgrades along the A690 corridor, bus priority measures at traffic signals along key radial routes, the upgrade of 32 buses to ZEV, and provision of 121 new EV chargers across 57 locations.

41. Further proposals are in development that will build upon on these projects both in Durham City and across the wider County. These are likely to form part of County Durham's transport scheme pipeline which will be seeking significant funding from the NECA City Regions Sustainable Transport Settlement (CRSTS-2) from 2027/28.

Conclusions

42. The main areas of work for completion in respect of Local Air Quality Management during the next 12 months are identified as follows:

(i) The preparation and submission, to DEFRA, of the Air Quality Status Report 2025.

(ii) The adoption and implementation of the Durham City Air Quality Action Plan.

(iii) The review and assessment of fine particulates ($PM_{2.5}$) across the County taking into consideration the requirements of secondary legislation.

Background papers

None

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Appendix 1: Implications

Legal

The Council is legally required, under the Environment Act 1995 (As Amended), to implement the air quality improvement actions in an Air Quality Action Plan to demonstrate that it is achieving and then maintaining levels of air quality pollutant in compliance with the air quality objectives.

Finance

There are cost implications with the implementation of the air quality improvement measures incorporated within the Durham City Air Quality Action Plan. The source of the pollution is from vehicle emissions and therefore the majority of the actions are traffic improvement measures. Although there are capital funds to support some of the traffic projects there is not for other projects, and these would need to be met from the Local Transport Planning budget or other relevant external funding streams.

There are also cost implications with the ongoing requirement to carry out monitoring of the air quality pollutant (nitrogen dioxide) and 'indicators' e.g. traffic volume flow rates following the implementation of the action measures. A revision of the existing network of monitors that measure air quality pollutants (nitrogen dioxide) is likely to be required going forward.

Staffing

Officers in the Environment Protection Team will be required to plan and then undertake monitoring at locations across the County with a particular focus on the Durham City Air Quality Management Area. The arrangements for the implementation of the action measures are detailed within the Durham City Air Quality Action Plan. This will require the allocation of staff resources in these sections to ensure the actions are prioritised alongside other work commitments.

Meetings of the Air Quality Corporate Steering Group will be required on a regular basis.

Consultation

The Council is legally required to consult, under Schedule 11 of the Environment Act 1995, following the completion of Local Air Quality Management projects. The requirements are to consult with statutory consultees comprising of neighbouring local authorities, DEFRA, the Highways Authority, the Environment Agency and organisations/associations that represent business interests in areas to

which the project relates. This has been carried out for the Durham City Air Quality Action Plan.

The main purpose of previous consultation was to obtain feedback on the air quality improvement action measures that have been included in the Durham City Air Quality Action Plan.

Equality and Diversity / Public Sector Equality Duty

Local Air Quality Management focusses on improving or reducing the impacts of air quality. Therefore, the completion of air quality projects and especially the implementation of the Durham City Air Quality Action Plan will have a beneficial impact irrespective of the background of the residents of the properties of the areas to which the projects relate. This has been considered in the preparation of the Air Quality Action Plan with a specific section on the impact of air quality across Durham City taking into consideration the socio-economic status of different areas.

Human Rights

Not applicable

Climate Change

Many of the action measures in the Durham City Air Quality Action Plan that are targeted towards reducing levels of nitrogen dioxide will also be beneficial for reducing carbon emissions. There is a link to the latest Climate Emergency Response Plan (CERP3) in the Durham City Air Quality Action Plan.

Crime and Disorder

Not applicable

Accommodation

Not applicable

Risk

To fail to carry out this duty may lead to judicial proceedings being taken against the Council and/or intervention by the Secretary of State. In addition, there is a new Office of Environment Protection, introduced under the Environment Act 2021, whose function is to oversee and monitor the performance of Local Authorities' in discharging their air quality management duties.

Procurement

It may be necessary to purchase further monitoring equipment and/or consultancy services to enable the Council to complete air quality projects

going forward. The purchase of further monitoring equipment or consultancy services, if required, will be undertaken in accordance with the applicable Council procurement policies and procedures.