POLICY OVERVIEW COMMITTEE
10 September 2019

AIR QUALITY ANNUAL STATUS REPORT 2019

1. Summary

1.1. To provide Members with information on pollution levels across the Borough and within the four declared Air Quality Management Areas and an update on the Council's Air Quality Action Plan.

1.2 To provide for Members' information the Council's Air Quality Annual Status Report.

2. RECOMMENDATION(S)

2.1 That Members note the contents of the report together with the 2019 Annual Status Report attached as Appendix A.

3. Background and Discussion

3.1. Air Pollution is increasingly recognised as a contributing factor to the onset of chronic health conditions including respiratory disease, heart disease and cancer. Air pollution particularly impacts upon children and older people or those with existing health conditions.

3.2. It is estimated by Public Health England that by 2035 the health and social care costs of air pollution in England could reach £5.3 billion. Poor Air Quality may also result in up to 2.5 million more new cases of coronary heart disease, stroke, lung cancer and child asthma resulting from poor air quality.

3.3. Local Air Quality is comprised of two components; background pollution and that from localised sources. Localised sources include emissions from road vehicles and transport as well as any localised industrial sources. Background pollution is heavily influenced by large scale pollution which transverses boundaries and includes sources such as wood burning fireplaces, agricultural and industrial sources (including intercontinental sources).

3.4. Air pollution is also heavily influenced by prevailing climatic conditions. Air quality is generally worse in periods of still weather when there is less dispersion of pollution by wind. During warmer months secondary pollutants such as Ozone are formed when Nitrogen Dioxide reacts with sunlight. When Ozone reacts with particles in the air (particularly in urban areas) smog can occur. In winter, cold air (temperature inversion) can trap emissions at ground level.

3.5. At a local level, pollution levels in Dartford Borough are heavily influenced by the strategic and local road networks including the A282/

M25 & A2 (managed by Highways England) and local roads (managed by Kent County Council).

3.6. The strategic roads are major traffic arteries for passenger and freight vehicles moving East/West and North/South throughout the county. These roads are heavily used by vehicles not stopping in the Dartford Area. Traffic flows along these routes are heavily influenced by obstructions at the Dartford Crossing along the M25 and along the A2.

3.7. During periods of congestion on the strategic road network, increased pressure is placed on local roads which are used as 'cut-through's'. This stop-start traffic generates increased emissions making pollution in residential areas away from the major roads worse.

3.8. Part IV of the Environment Act 1995, places a statutory duty on local authorities to periodically review and assess the air quality within their area. Where it appears that the air quality objectives will not be met by the designated target dates, local authorities must declare an Air Quality Management Area (AQMA) and develop action plans in pursuit of those objectives.

3.9. Dartford Borough Council currently has four AQMAs within the Borough, the first of these was declared in 2001 along part of the A282 tunnel approach road for predicted exceedance of the NO_2 and particulate matter (PM10) annual mean objectives.

3.10. In 2006 three additional AQMAs were declared. Two for exceedance of the NO_2 annual mean objective in the areas of Dartford Town and approach roads, and Bean Interchange. A third AQMA was declared along the A226 London Road for exceedance of the NO_2 and PM_{10} annual mean objectives.

3.11. Dartford Borough Council monitors compliance with the following National Air Quality Objectives:

- Particles (PM_{10})- 50ug.m^3 measured 24hr mean, not to be exceeded more than 35 times per year.
- Particles (PM_{10})- 40ug.m^3 measured as an annual mean
- Nitrogen Dioxide (NO_2)- 200 ug.m3 measured as a 1 hour mean, not to be exceeded more than 18 times per year.
- Nitrogen Dioxide (NO_2)- 40 ug.m3 measured as an annual mean.

3.12. These objectives are those most commonly associated with emissions from traffic which modelling has shown to be the dominant source of air pollution within the borough.

3.13. The Council does not currently monitor particles smaller than PM_{10} and does not have equipment capable of assessing $PM_{2.5}$. Local Authorities are however expected to work towards reducing emissions of $PM_{2.5}$ as

particles of this size are known to have a clear link to adverse health. The Council is currently developing a new Air Quality Action Plan which will include appropriate measures to reduce $PM_{2.5}$ as well as other priority pollutants.

3.14. The Annual Status Report (ASR) is a report produced for Defra annually as part of the Council's Local Air Quality Management responsibilities. The purpose of the ASR is to report on progress in achieving reductions in concentrations of emissions relating to relevant pollutants and to identify new or changing sources of emissions.

3.15. The ASR shows that in 2018 NO_2 pollution levels were generally higher than the previous year, going against the downward trend that had been observed in previous years (and reported in the 2018 ASR). It is believed that this increase may be due to unfavourable climatic conditions.

3.16. The Council monitors air quality using 3 Automatic Monitoring Stations (Town Centre, Bean Interchange and St Clements Roundabout) and a network of passive diffusion tubes sited at 53 locations throughout the borough

3.17. One of the three automatic monitoring stations was out of operation for much of 2018 as it needed to be relocated due to the junction improvement works at St Clements roundabout. Therefore in 2018, the Council has been unable to report data from this location. However, works to this junction are now complete and the station has been reinstated.

3.18. PM_{10} levels can only be monitored at the automatic monitoring stations but remained well below objective levels in 2018 at the Town Centre and Bean Interchange sites. In addition air quality at both stations complied with the 1 hour mean NO_2 objective.

3.19. NO_2 levels continue to be in excess of annual mean national objective levels at 15 of the 53 monitored locations. All these locations are within existing AQMAs.

3.20. The highest pollution level recorded in the borough was 57.9 $ug.m^3$. This was measured at Overy Liberty on the corner of East Hill in the Town Centre.

3.21. Exceedances of the objective level continued to occur close to the A282. However, whilst pollution levels marginally decreased on the Eastern side of the carriageway they increased on the Western Side. Overall pollution levels however remained broadly similar and the change is thought to have been caused by an increase in easterly winds.

3.22. NO_2 continued to exceed objective levels at the Air Quality Monitoring Station at Bean. Pollution levels at Hope Cottages (DA70), Little Dale (DA72) and Ightham Cottages however remain, as in 2017, below the objective level.

3.23. Exceedances of the objective level were also monitored at the junction of Princes Road and Lowfield Street; adjacent to the parade of shops on West Hill and on the London Road at Swanscombe.

3.24. When a Local Authority has declared an Air Quality Management Area it has a statutory duty to produce an Air Quality Action Plan (AQAP) detailing measures aimed to improve air quality.

3.25. The current Air Quality Action Plans for Dartford were produced in 2001 and 2009 and are no longer considered fit for purpose. Many of the measures highlighted in the plans have either been carried out or have been deemed not to be viable following assessment.

3.26. Whilst improvement in levels of air pollution have been seen across the borough in the last ten years, pollution levels remain high and above air quality objectives at many road side locations. A new air quality action plan is therefore required to set out new measures to seek further improvements.

3.27. The production of an AQAP is a multi-stage piece of work which requires the use of complex computer modelling that cannot be carried out internally by Officers.

3.28. Officers have therefore engaged the services of a specialist Environmental Consultant to produce a new AQAP on our behalf.

3.29. In order to fully understand the problems and causes of local pollution the first stage of this process will consist of an air quality review of the current road network including a source apportionment exercise to identify the sources of pollution in the local area. This will also include a review of the existing AQMAs to determine if some of them can be reduced or revoked to reflect the improvements that have been seen since they were declared.

3.30. Officers have already undertaken a rudimentary source apportionment exercise for Dartford Town Centre. This has identified that the biggest source of NO2 pollution (33%) is from Diesel Cars. A further 29% is from buses and coaches and 26% from Light Goods Vehicles. HGVs account for only 7% of NO2 emissions.

3.31. The second stage is to carry out an options appraisal of potential measures to determine the best actions for emissions reduction. These options will be assessed using computer modelling (scenario testing) to quantify the reductions of pollution levels associated with their implementation.

3.32. Any viable measures identified through this process will be then be consulted upon. This will allow Members, residents, and other stakeholders an opportunity to consider the implications of any suggested measures and will allow the Council to determine which actions the Council will then seek to implement.

3.33. Through the engagement process it is hoped that any identified measures will be able to gain political and community buy-in which will lend credibility and impetus to them being carried out.

3.34. As it should be possible to quantify potential improvements in Air Quality resulting from each measure, the implementation of actions will allow the Council to demonstrate compliance with its legal obligations.

3.35. Once clear measures have been identified, it may be possible to identify additional funding streams to allow them to be implemented (i.e. via DEFRA grants, Government Funding or via developer contributions such as CIL).

3.36. In the interim period, before our AQAP is completed, Officers continue to take measures to either improve air quality or ensure that existing levels are not made worse.

3.37. All planning applications within the borough are considered in the context of any air pollution which may arise from additional traffic movements. Additionally, residents of new developments are protected from exposure to existing poor air quality through the implementation of design measures.

3.38. Although now a member of the London Air Quality Network, the council continues to work with the Kent Air Quality Partnership and participate in county wide initiatives aimed at reducing pollution. This also includes promoting policy and guidance such as the Partnership's planning Guidance Mitigation document for developers.

3.39. Officers continue to work with other council departments including planning to promote measures to reduce pollution and are currently developing draft Electrical Vehicle charging guidance for developers.

3.40. Work has been undertaken with Kent County Council and local bus companies to reduce pollution around schools by preventing vehicle idling. It is anticipated that this work will continue and the scope will be widened to include education of parents during school pick up times as well as engaging with children to drive changes in behaviour.

3.41. In 2018 a successful trial of a fully electric bus was carried out on FastTrack route A. It is anticipated this route will be fully electric by 2022.

3.42. As one of the key stakeholders, a number of council departments and working groups have assisted in the development of the Kent and Medway Energy and Low Emissions Strategy which is currently out for consultation until the 23rd September 2019. The aim of the strategy is to identify and prioritise action to reduce harmful emissions that contribute to climate change and poor air quality leading to impacts on people's health. Once the strategy has been finalised, the Council will look to adopt and promote the various themes and measures to bring about improvements to our environment at a local and county level.

3.43. Officers will continue to engage with KCC and Highways England in relation to major projects such as the Lower Thames Crossing, Ebbsfleet and Bean Interchange junction improvements.

3.44. Finally, Officers in Environmental Health continue to enforce legislation that can have an impact on air quality such as reducing pollution from construction sites and ensuring rules within smoke control areas are complied with, responding to complaints about domestic bonfires and utilising enforcement powers to ensure compliance with legislation.

4. Financial, legal, staffing and other administrative implications and risk assessments

Financial Implications	None arising from this report.
Legal Implications	As set out in the body of the report.
Staffing Implications	None specifically.
Administrative Implications	None specifically.
Risk Assessment	No uncertainties and/or constraints.

5. Details of Exempt Information Category

Not applicable

6. Appendices

Appendix A – 2019 Annual Status Report

BACKGROUND PAPERS

Documents consulted	Date / File Ref	Report Author	Section and Directorate	Exempt Information Category
		Nick Chapman/James Fox	EH (Strategic)	N/A