

REGENERATION, CULTURE AND ENVIRONMENT OVERVIEW AND SCRUTINY COMMITTEE

11 AUGUST 2022

FOUR ELMS HILL AIR QUALITY ACTION PLAN

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Summary

The purpose of the report is to present the Air Quality Action Plan (AQAP) for the Four Elms Hill Air Quality Management Area (AQMA) to the Committee. The Committee is asked to recommend the AQAP to the Cabinet for approval. The AQAP has been produced to satisfy the requirements of the Environment Act 1995.

1. Budget and policy framework

- 1.1. The Four Elms Hill Air Quality Action Plan supports the delivery of the Council's strategic priority '*Medway: A place to be proud of*' and the key outcome of a '*clean and green environment*'.
- 1.2. The Four Elms Hill Air Quality Action Plan also supports the Climate Change Action Plan and is a measure within the Action Plan. Climate Change is now one of the Council's core values which underpins and frames our choices and decisions.

2. Background

- 2.1. 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.
- 2.2. The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion.
- 2.3. All councils must regularly assess the air quality within their area for key pollutants, comparing their findings against the relevant air quality objectives.

- 2.4. If the air quality objectives are not achieved the local authority is required to declare an AQMA and then develop and implement an AQAP, which sets out the actions that will be taken to improve air quality in the AQMA.
- 2.5. In 2010 Medway Council designated three AQMAs due to annual mean concentrations of nitrogen dioxide exceeding the air quality objectives. Having identified and designated the AQMAs the Council produced an AQAP that details the steps to be taken to reduce nitrogen dioxide to below the objective levels.
- 2.6. Medway declared its fourth AQMA, at Four Elms Hill, Chattenden in 2017, following a Detailed Assessment published in 2016. Again, this was due to exceedances of the nitrogen dioxide annual mean objective. The AQAP has been produced as part of our statutory duties required by the Local Air Quality Management (LAQM) framework. It outlines the actions we will pursue to improve air quality within the Four Elms Hill AQMA.
- 2.7. Following the declaration of the Four Elms Hill AQMA the Council has a legal duty to develop an AQAP and at all stages of its production communication with DEFRA has been undertaken.
- 2.8. The source apportionment work carried out in the development of the AQAP has identified the key priority sources for the Four Elms Hill AQMA as being:
 - Priority 1 Emissions from Heavy Goods Vehicles (HGVs)
 - Priority 2 Emissions from diesel cars; and
 - Priority 3 Emissions from Light Goods Vehicles (LGVs)
- 2.9. The AQAP includes 16 measures to improve air quality. Future Annual Status Reports (ASRs) will provide regular annual updates on the implementation of these measures to DEFRA. The measures can be considered under the following broad topics:
 - Alternatives to private vehicle use
 - Freight and delivery management
 - Policy guidance and development control
 - Promoting low emission transport
 - Promoting travel alternatives
 - Public information
 - Transport planning and infrastructure
 - Traffic management
 - Vehicle fleet efficiency
- 2.10. Air quality dispersion modelling has been carried out for three of the measures included in the AQAP to quantify the air quality improvements that may be realised in the AQMA if these measures were to be implemented. The three measures selected for dispersion modelling that target the sources of emissions in the AQMA are:

- HIF (Housing Infrastructure Fund) relief road
 - Zero emission buses through the AQMA
 - Zero emission HGVs and LGVs through the AQMA
- 2.11. Predictions of the concentrations of the key pollutants nitrogen dioxide (NO₂) and particulates (PM_{2.5} and PM₁₀) have been made using traffic data from the implementation of the emerging new Local Plan as a large area of residential and employment land has been allocated for development on the Hoo peninsula, which will lead to additional traffic passing through the AQMA.
- 2.12. The findings from the dispersion modelling exercise indicates that with the HIF relief road and zero emission buses only passing through the AQMA, concentrations of nitrogen dioxide are predicted to still exceed the nitrogen dioxide annual mean air quality objective at Four Elms Hill.
- 2.13. It should be noted that the HIF relief road will alleviate some of the additional traffic created by the emerging new Local Plan growth, however it is not currently proposed for HGVs and buses to have access to the relief road. Without this the only option available will be to tackle the emissions of these vehicles travelling through the AQMA, for example by a transition over to zero emission technologies (e.g. battery electric and hydrogen fuel cell) and/or by reducing the number of vehicles passing through the AQMA.
- 2.14. Modelling of zero emission HGVs and LGVs shows this measure has the largest impact on predicted concentrations of nitrogen dioxide. As a result, substantial air quality improvements could be achieved, with concentrations likely to comfortably meet the air quality objectives.
- 2.15. The remaining measures contained in the AQAP could be expected to have some positive benefits for local air quality, however the nature of these measures makes quantification through dispersion modelling difficult and highly assumptive.
- 2.16. Levels of particulate matter in the AQMA are predicted to achieve the respective air quality objectives in all situations, however measures that also result in a reduction in levels of these pollutants can be associated with positive public health benefits due to their non-threshold nature.
- 2.17. As part of the statutory consultation process, we were required to consult a range of stakeholders on the AQAP including:
- the Secretary of State
 - the Environment Agency
 - the highways authority
 - all neighbouring local authorities
 - other public authorities as appropriate, such as Public Health officials
 - bodies representing local business interests and other organisations as appropriate

Consultation with the above stakeholders has been undertaken, and this also included the local community and other relevant stakeholders.

- 2.18. A progress report (ASR) is submitted to DEFRA every year detailing progress against measures in the AQAP. Once an AQMA has measured levels of pollutants that are below the objectives consistently for a number of consecutive years, the Council can revoke the AQMA designation.

3. Advice and analysis

- 3.1. Production of an AQAP for the Four Elms Hill AQMA is a statutory duty. The AQAP contains a range of measures aimed at tackling air quality in the AQMA. The proposed measures have been developed through internal and external stakeholder engagement, and the Environmental Protection Team have undertaken the required statutory consultation process with external organisations.
- 3.2. Under Section 85 of the Environment Act 1995 the Secretary of State (SoS) has the power to instruct local authorities to take action where any part of its statutory duties for local air quality management are not being fulfilled, this includes giving directions to the local authority to produce and implement an AQAP.
- 3.3. Medway has a positive record with DEFRA in relation to its ongoing air quality management duties, and in recent years has received positive feedback for its “good and thorough work”.
- 3.4. Whilst examples of the SoS directing local authorities are rare, there are wider implications in not maintaining a positive record of meeting our local air quality management duties which is now a criterion for being able to apply for funding for air quality projects through the DEFRA air quality grant programme.
- 3.5. The AQAP has been produced following an external stakeholder engagement exercise, the input of internal Medway Council teams and a statutory consultation process. Adoption of the AQAP is necessary so that Medway’s air quality management statutory duties continue to be met.

4. Risk management

- 4.1. In the event the SoS exercises its powers to direct local authorities, Medway risks significant reputational damage and would lose its positive record under the local air quality management framework. Medway would become ineligible to apply for funding under the DEFRA air quality grant programme. Measures included in an AQAP are given higher priority for funding under the air quality grant programme.
- 4.2. The Environmental Protection Team has recently been successful with two applications for air quality grant funding and has received over £127,000 under this year’s programme to deliver actions that sit in the 2015 AQAP. One

of these projects would also deliver against a measure included in the Climate Change Action Plan.

Risk	Description	Action to avoid or mitigate risk	Risk rating
If the AQAP is not adopted, the SoS could direct Medway to meet its statutory duties in relation to the AQMA for Four Elms Hill	It is a duty for the local authority to comply with any direction given to it in relation to the provisions of the Environment Act 1995. Directions are made publicly available and so could cause significant reputational damage. Medway would also be unable to apply for funding for air quality projects through the air quality grant programme. The grant programme can be used to deliver measures in an AQAP.	Overview and Scrutiny Committee recommends Cabinet approves adoption of the AQAP	C2

5. Consultation

5.1. In developing the Four Elms Hill AQAP, we have worked with the local community and relevant Medway Council departments to identify possible action plan measures. We have undertaken the following:

- Engagement Survey in February 2019
- Medway Council workshop in July 2019
- Follow up Medway Council workshop in September 2021
- Circulated the AQAP for internal comments (11 November 2021- 03 December 2021)
- Revised the AQAP taking into account internal comments (December 2021)
- Statutory consultation (7 March-24 April 2022)
- Updated the AQAP taking into account comments from Defra (May-June 2022)

- Evaluated the consultation survey results and included a further measure (June 2022)
- 5.2. Stakeholder views on the AQAP measures were obtained via an online questionnaire. A total of 59 questionnaire responses were completed by responders to the consultation. We also received written responses from three statutory consultees; DEFRA, Natural England the UK Health Security Agency (UKHSA), and a further three written responses from local residents.
 - 5.3. DEFRA accepted the AQAP, however a number of recommendations were made, including carrying out further monitoring and updating the source apportionment modelling. In response, additional monitoring has already started at three additional sites in/near to the AQMA, and the modelling in the draft action plan has been updated in light of their response comments. Further additional information has been included in the action plan to aid understanding. For example, additional information from the source apportionment has been included in Table 5.1 of the AQAP.
 - 5.4. Natural England has recommended that a holistic approach to considering transport generated air quality for human and ecological receptors forms a key part of the AQAP. It should be noted that an AQAP is focussed on the protection of human health, but opportunities to benefit habitats can be explored during implementation of the action plan.
 - 5.5. UKHSA comments included recommendations to strengthen the public health case for action in the action plan, to continue engagement across the Council, and ensure that measures are reflective of wider government objectives around PM2.5. UKHSA also recommended that a behavioural approach is taken in respect of any awareness raising campaigns. The recommendations on engagement, alignment with government objectives and awareness raising will be considered during implementation of the action plan. Unfortunately, it has not been possible to provide additional information on the public health case for action (for example in Section 3.1 of the AQAP), however this can be explored further during implementation of the action plan.
 - 5.6. A copy of the online questionnaire results is included in Appendix 3. The communications team supported the consultation on social media, and regularly promoted it. Direct emails and letters were sent to a significant number of stakeholders. The Environmental Protection Team have reviewed the survey results and do not believe any changes should be made to the measures in the revised AQAP as the consultation responses showed a general broad support for the proposed measures.
 - 5.7. In addition to asking for views on the proposed measures in the AQAP, the survey asked responders what other actions should be considered. A large number of responses were received to this open ended question which are summarised below. Responses have been aggregated under a range of general themes for simplicity.

Theme	Number of responses
No further/reduced development on the peninsula	29
Alternative routes for traffic/new road	19
New river crossing	3
Improve bus services	3
Cleaner buses	2
Reduce HGV/traffic flows	1
Reduce/enforce speed limits	16
Move Norse depot	2
Reduce/better planned roadworks	2
Cancel HIF/relief road	2
More pollution monitoring	3
Ban HGVs	1
Cycling/walking infrastructure/routes	2
Barriers, tree/shrub planting	5
Better planning of developments	5
Retain/improve green spaces	4
Improve public transport	2
Traffic management schemes/improvements	6
Low emission zone	2
Workplace parking levy to fund air quality projects	1
Ban wood/biomass burning	2
Increase uptake of EVs	2
Ban Uber	1
Improve local facilities	1
E-scooters	2

5.8. Whilst a measure for *No further/reduced development on the peninsula* is not feasible in the context of the ongoing local plan work, some clear themes are evident.

5.9. *Alternative routes for traffic/new road* could have a benefit for local air quality if this reduced traffic flows, and thereby emissions, through the AQMA. The AQAP modelling for this measure shows the HIF relief road will have no significant impact on the AQMA. Measures should therefore be focussed on reducing emissions of the vehicle fleets passing through the AQMA.

5.10. A number of respondents referred to issues with speeding on Four Elms Hill and requested that limits are lowered/enforced. Speed has an important part to play in vehicle emissions. Slowing down traffic may increase emissions, as can speeding up traffic, but it should be possible to model the impact on emissions, and concentrations before any interventions are considered. Other factors that would have to be taken into consideration include road safety impacts. An additional measure has been included in Table 5.1 of the AQAP to:

- Investigate the impact of traffic speed on air quality in the AQMA and the feasibility of speed limit changes and/or enforcement to reduce emissions

In parts of Wales, average speed cameras are used to reduce speed variability and vehicle emissions. This can be investigated further should modelling scenarios demonstrate significant potential emissions reductions and air quality improvements in the AQMA through this measure.

- 5.11. The next stage in the process is seeking support of the Regeneration, Culture and Environment Overview and Scrutiny Committee and approval from the Cabinet. The Environmental Protection Team are working to the following timetable as previously agreed with DEFRA.

Timetable for the Production of an Action Plan for the Four Elms Hill AQMA

Action	Date
Engagement with local Community including businesses, residents, local groups etc...on what measures they think would work in the area this will also include relevant stakeholders (including internal departments within the council)	January/February 2019 (4 week engagement exercise)
Production of Action Plan	April 2019- November 2021 (delay due to Local Plan/LTC – AQ modelling issues raised by Highways England)
Internal Consultation on Action Plan	November 2021
External Consultation on Action Plan	7 March 2022 to 24 April 2022
Review of Consultation Comments and any amendments undertaken.	April/May 2022
Consideration by Overview and Scrutiny Committee	11 August 2022
Approval from Cabinet	23 August 2022
Submission of Action Plan to DEFRA	August/September 2022

- 5.12. Should the Overview and Scrutiny Committee or Cabinet be of the view that approval and adoption of the AQAP be delayed then we will need to seek agreement from DEFRA if this affects the above timetable and compliance with our statutory duties. DEFRA have approved the AQAP so further delays are unlikely to be acceptable as this will delay implementation.

6. Climate change implications

- 6.1. The Climate Response Team works alongside the Environmental Protection Team, and there is a significant area of overlap in the measures that can be taken to tackle both of these important environmental issues.
- 6.2. The AQAP complements the climate change action plan in many areas, and there are expected co-benefits for public health and the environment in tackling air quality and climate change in a co-ordinated manner. The Climate

Response Team have had direct input in developing the measures within the AQAP.

7. Financial implications

- 7.1. Implementation of the AQAP will be delivered through existing budgets and external funding opportunities (e.g. the DEFRA Air Quality Grant Fund).

8. Legal implications

- 8.1. The Council has a statutory duty under the Environment Act 1995 to develop and implement an AQAP for the Four Elms Hill AQMA

9. Recommendation

- 9.1. The Committee is asked to recommend the Four Elms Air Quality Action Plan, attached at Appendix 1 to the report, to Cabinet for approval.

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Appendices

Appendix 1 - Medway Four Elms Hill Air Quality Action Plan June 2022
Appendix 2 - Diversity Impact Assessment
Appendix 3 - Consultation results

Background papers

[Environment Act 1995](#)
[Medway Air Quality Action Plan 2015](#)
[Medway Climate Change Action Plan](#)
[Medway Council Plan 2022 to 2023](#)