# Appendix E: Defra Approval Report and Appraisal including DC response.

The Action Plan sets out information on air quality obtained by the Council as part of the Local Air Quality Management process required under the Environment Act 1995 (as amended by the Environment Act 2021) and subsequent Regulations.

This Appraisal Report covers the Air Quality Action Plan (AQAP) for 2022 – 2027 submitted by Dorset Council (DC) in relation to the Chideock Air Quality Management Area (AQMA), a village spanning the A35. This replaces the previous AQAP, published in 2008. Projects delivered through the past AQAP include a number of feasibility studies, in conjunction with National Highways, largely focussing on HGV movement, and latterly using speed limits to control traffic flow.

AQMAs have been declared by the Council in Chideock in 2007, and High East Street, Dorchester in 2009. In Dorchester, the annual mean objective for $NO_2$ has been met at all monitoring locations since 2015. There are, however, monitoring locations with concentrations within 10% of the annual mean objective of 40µg/$m^3$ so whilst this AQMA has not yet been revoked, it is likely to be revoked in the near future based on further monitoring. For this reason, Dorchester is not explicitly included in this Action Plan, but it is considered that it will benefit from the wider measures included in the AQAP in any case.

The AQAP uses the Defra report template and follows the general structure of the template well, and is concise, well presented and clearly formatted.

The Council discusses air quality in the Chideock AQMA in some detail. Modelling work undertaken by independent consultants in 2018 concluded that in 2017, there were exceedances of the annual mean $NO_2$ objective at approximately half the properties within the AQMA along the A35. Further monitoring undertaken by National Highways in 2019 indicated further elevated concentrations in the vicinity of the AQMA, along the same road. In 2020, there was one location monitored in exceedance of the objective, N144 at Hill House.

The AQAP sets out the public health context in detail, citing the COMEAP report stating there is evidence associating $NO_2$ with health effects, including premature death. Public Health Dorset have drafted a Joint Strategic Needs Assessment which is being used to support Dorset Council and Bournemouth, Christchurch and Poole Health & Wellbeing Boards to identify key issues and develop Joint Health and Wellbeing Strategies.

A number of local and national scale policy documents are also referenced in the Plan. On a national scale, the Air Quality Strategy and Clean Air Strategy are referenced, as well as the Road to Zero Strategy, showing the AQAP is cognisant of wider policy.

At a more local scale, the South West Peninsula Route Strategy highlights that congestion along the A35 may increase with planned growth in nearby towns, which is of concern for the AQMA. The Road Investment Strategy 2 includes a new study to look at routing from the M4 to Dorset Coast. The current Local Transport Plan runs until 2026 and includes a focus on reducing levels of pollution in the AQMAs across Dorset, through two specific policies.

Alongside this, Local Plan policies are presented, such as Policy Env16, which stipulates that development proposals will only be permitted provided they do not generate unacceptable pollution or detrimental emissions, unless appropriate mitigation can be demonstrated. The Council has also begun to work on a new Dorset-wide Local Plan, which has a similar environmental policy within it.

Climate change is also referenced in the AQAP, as DC declared a Climate Emergency in 2019.
Source apportionment of $NO_2$ was also carried out as part of the 2018 assessment. The largest proportion, approximately half of the total road $NO_x$ emissions, came from cars, with LGVs the second most significant emitters.

The required reduction in road $NO_x$ emissions was calculated as per the methodology prescribed in LAQM.TG(16) Box 7.6. The maximum percentage reduction in road $NO_x$ required to meet the objective was 44%, which is a relatively large reduction. However, this is based on 2017 data so should now be improved, with lesser reductions required to achieve the objective. That said, the calculations could also be presented for the more recently collected monitoring data as presented in Table 2, which present some extremely elevated concentrations and therefore potentially more significant challenges.

The following priorities to target have been set in the AQAP, namely:

- The majority of emissions arise from cars and LGVs;
- There is no decipherable contribution from point sources or industry;
- There is a small contribution from buses and HGVs;
- Congestion and delay are expected to increase (according to the South West Peninsula Route Strategy and in the short term as the restrictions on foreign travel mean more people will be holidaying in the UK); and
- At some isolated locations (e.g. at N14), exceedances of the objective are considerable and are unlikely to be resolved in the next few years.

A number of existing or historic schemes and funding streams via both National Highways and the County Council are highlighted within the AQAP, which based on the evidence provided have served t help continue to improve air quality.

On an individual measure basis, five measures have been taken forward in the Plan. These are generally focused on transport, with traffic management, promoting low emission transport and travel alternatives prioritised. The measures mention some on-going traffic related projects on the A35 and promoting behavioural change through the Transforming Cities Fund.

A further two measures focus on policy and guidance, through the Local Plan and the control of domestic emissions through solid fuel burning policies.

Additional measures have been added post consultation with Chideock Parish Council, specific and local to the AQMA. This includes more targeted road signage and a new footpath / cycleway.

The Council is also considering adopting a Supplementary Planning Document (SPD) on Air Quality, which is designed to support measures to mitigate against and even improve air quality impacts from new developments. Conditions are to be used to ensure that the SPD is delivered in full and can also be used to relate to the other AQAP measures.

The target reductions of pollution within the AQMA for all measures were not specified, as they were not supported by dispersion modelling. It is still not clear therefore which of the measures are intended to contribute the most to bringing about any reductions required to achieve compliance (based on the 2017 concentrations presented).

Details of the steering group responsible for the AQAP's development have been provided, though this was not formally designated. The intention to continue to discuss the progress of the AQAP is mentioned, though the regularity of such meetings is not.

Whilst considered as a draft AQAP, statutory consultation has been undertaken, some details of which have been populated within Appendix A. As mentioned, this includes heavy reliance on the response of Chideock Parish Council which has helped to improve the local focus of the measures included.
Several measures not pursued have also been presented within Appendix B. These include consideration of a bypass, which was considered too expensive for this specific AQMA and charging zone, which is not feasible.

Overall, the AQAP appears well considered and commensurate with the level of exceedance in the AQMAs and is therefore accepted. Specific commentary to inform the Final AQAP and future updates is provided overleaf.

The Council should take on board the following considerations when publishing the AQAP, and in any future updates.

## Commentary

- The AQAP would benefit from the inclusion of a figure demonstrating the AQMA extent(s) covered in the Plan.

  DC response: The figure has now been added to the Plan as Figure 1.

- The AQAP outlines the extent of air quality monitoring well, within section 2. The tables should still be updated with more recent data from 2020 and 2021 though, including the application of the appropriate bias adjustment factor for 2020, which is now available.

  DC response: Updated figures have been included in Tables 1 and 2

- Reference to the most recent air quality information within the recent ASR could also be added.

  DC response: Updated information has been included in the narrative of Chapter 2.

- Accepting 2020 as an anomalous year, the concentrations reported by the National Highways monitoring in 2019 are generally elevated as compared to the Council's own monitoring. Consideration should be given to either increasing monitoring in this AQMA, as changes in concentrations appear to highly localised, or updating the dispersion modelling in line with more recent data. The outcomes of this enhanced study might inform the need for the strengthening of measures.

  DC response: Our ongoing monitoring locations now include all of the National Highways monitoring points of 2019. Please note that the National Highways monitoring locations are not all representative of relevant public exposure.

- The source apportionment could now be updated, as the data are several years old. The AQAP does well to consider total $NO_2$ concentrations, but the local and regional background contribution split could also be demonstrated, for a clearer understanding of the make-up of total ambient concentrations to which residents are exposed.

  DC response: It is not considered cost effective at this stage to update the modelling, and a lack of recent traffic data (DfT traffic data in Chideock are estimated based on a 2017 count), mean that traffic data would need to be collected before any further work could be undertaken.

- The modelling study should be included as an item in Appendix C to help better understand the process in how the concentrations used for the reduction calculations has been reached.

  DC response: Now included as Appendix C

- The AQAP still determines qualitatively that the actions are likely to be effective, but doesn't accurately quantify any of the specific measures' impacts, which would help the reader to understand the relative merits of particular interventions. As per paragraph 2.71 of LAQM.TG(16), an AQAP should contain quantification of the emission impacts of measures as a minimum. This could be aided by dispersion modelling to consider the reduction in $NO_2$ concentrations.

  DC response: The measures included in the Action Plan are largely strategic in nature, and therefore very difficult to quantify, as the Action Plan outlines. Specific measures which have been investigated by Highways England, have been quantified in relation to impacts on traffic, and these studies are outlined in section 5.1.

- The fact that the Local Plan highlights potential growth in traffic along the A35 is a concern that could be more directly addressed within the AQAP. Some form of assessment of these likely impacts would be beneficial, as this has the potential to offset any improvements made by the AQAP.

  DC response: For reasons outlined above, it is not considered cost effective to undertake modelling at this stage, although it will be considered in the future. Baseline traffic data would need to be collected prior to any modelling, and a traffic assessment undertaken to estimate the additional trips on the A35 from Local Plan allocations. This would take considerable resource.

- The measures are generally more strategic in nature, with the potential exception of the A35 improvements and the considerations added after the Chideock Parish Council consultation responses. Some more specific, local measures may bring further benefits, and these could be more explicitly referenced, as a separate measure, within Table 5.

  DC response: The local measures highlighted have been incorporated within Action 1.

- The measures would also benefit from a more detailed cost/benefit analysis, as it is currently unclear to the lay person which of the measures will be most cost effective, and which will achieve the greater pollutant reductions.

  DC response: For the strategic measures, as outlined above, because specific impacts are difficult to quantify, a detailed cost/ benefit is also difficult to include. Where possible (i.e. the specific measures for Chideock) a cost has been provided, but for the more strategic measures, this will depend over what timescale and to what level they are implemented. There is no requirement in guidance for a detailed cost/ benefit analysis.

- That said, the AQAP does provide an estimated cost range for the measures taken forward and identifies multiple sources of funding which have previously been utilised in order to implement the listed measures, giving greater confidence that direct air quality improvements will be achieved.

- The environmental externalities of the measures are also not discussed in detail and could be considered where possible.

  DC response: Some consideration has been given, refer to page 33

- Whilst Appendix A has been completed, this could be more extensively populated, with the specific responses to consultation and where and how these have been addressed within the document.
  DC response: Specific responses have now been incorporated into Appendix A.

- More information could be provided around the Steering Group and the governance of the AQAP through implementation. Details of future meetings and recorded actions might be included.

  DC response: The steering group will evolve over time. Agendas will be set for meetings and minutes documented.

This commentary is not designed to deal with every aspect of the Action Plan. It highlights a number of issues that should help the local authority in maintaining the objectives of its Action Plan, namely the improvement of air quality within the AQMA.

**Issues specifically related to this appraisal can be followed up by returning the attached comment form to Defra, Welsh Government, Scottish Government or DOE, as appropriate**

For any other queries please contact the Local Air Quality Management Helpdesk:
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