COMMUNITY PDG

23 MARCH 2021

Air Quality Action Plan update

Cabinet Member(s): Cllr Dennis Knowles
Responsible Officer: Simon Newcombe, Corporate Manager for Public Health, Regulation and Housing

Reason for Report and Recommendation: To provide a progress report on Local Air Quality Management and the update to the combined Air Quality Action Plan for the Crediton and Cullompton Air Quality Management Areas.

RECOMMENDATION: That the PDG notes the progress made and endorses the plan to complete the Air Quality Action Plan update in 2021.

Relationship to Corporate Plan: The Air Quality Action Plan aligns with and directly supports a number of key themes in the Corporate Plan 2020-24. In particular, the priority given to the environment and aspirations towards sustainable communities and a sustainable planet. Furthermore, there is a relationship between Local Air Quality Management and Climate Change as set out below.

Financial and Policy Implications: The current and future updated plan encompass measures ranging from small-scale initiatives through to major infrastructure projects such as the Cullompton Town Centre relief road. As such, the plan will be delivered through a variety of different mechanisms including the Local Plan Review and planning obligations such as s106 in addition to Government infrastructure funds and the Devon County Local Transport Plan (LTP 3). There may also be opportunities to bid for future Air Quality Grant funding nationally though this is not certain.

As measures are formalised and updated then these will be further assessed and provisional implementation costs identified where these costs are not already known. Major infrastructure proposals for example are included in the Local Plan Review Infrastructure Plan which outlines estimated costs.

Specifically, the Cullompton Town Centre Relief Road has been awarded £10m funding from the Homes England Housing Infrastructure Fund towards the £15m scheme. The Council is required to part forward fund the project and the £5m balance for the Cullompton Scheme will need to be funded by the Council until such a time as the s106 monies can be collected from future housing development that is unlocked by the provision of the road.

The removal of the s106 pooling restrictions under the Community Infrastructure Levy Regulations from 1st September 2019 has allowed for s106 contributions to be pooled or collated from different developments. This has made the collection of s106 funds to deliver specific projects easier as the previous limit on pooling 5 or more obligations has now been removed.

Overall, greater clarity on funding for other specific measures and the plan overall will emerge once the update to the Air Quality Action Plan is complete following consultation with external partners such as Devon County Council.

Legal Implications: The adoption and implementation of an Air Quality Action Plan (where an authority has designated one or more Air Quality Management Areas) is a statutory requirement under Part IV of the Environment Act 1995 for Local Air Quality Management (known as the LAQM regime). Under the regime, Local Authorities (LA's) therefore have a duty to pursue measures which are designed to improve air quality. The thresholds for air pollution are set out in statutory UK Air Quality Objectives which in turn duplicate EU limit values and binding air quality standards.

These EU requirements are enshrined into UK law and furthermore the Localism Act 2011 allows the Government (DEFRA) to recharge LA's with the cost of meeting these standards if it chooses to do so.

The remodelled statutory Government guidance to the LAQM regime and the Clean Air Strategy place greater emphasis on delivery of effective intervention mechanisms to improve existing hot-spots and the need to mitigate for the effects of new development and public exposure to poor air quality.

Risk Assessment: In addition to meeting our statutory duties and the risk of financial penalties under the Localism Act 2011 if we fail to do so (see above), a failure to make improvements to air quality would be directly contrary to our adopted Public Health plan. Therefore, we would not address a priority health target locally. Furthermore, the successful implementation of an Air Quality Action Plan underpinning relevant Local Plan policies is essential to mitigate against the impact of significant new development district-wide and to deliver the wider community infrastructure benefits.

Given the inherent requirement to have planning obligation measures in place in order to deliver major parts of the plan then the successful implementation of the Air Quality Action Plan should be considered against the requirement to update the Supplementary Planning Document on Air Quality and Development (see Project 2, Annex 1).

Air quality has an increasingly high profile in terms of both local and national policy in addition to wider reporting of the issue across regional and national media. In turn this is generating public awareness beyond local communities within our specific AQMA areas.

Equality Impact Assessment: No equality issues specifically identified in this report. Nonetheless, whilst poor local air quality impacts everyone, air quality standards are health-based and designed to protect the most vulnerable persons including those who are young, elderly and/or have pre-existing disabilities arising from sensitive medical conditions. Consequently, the Council's Air Quality Action Plan seeks to proactively protect some of those residents with protected characteristics.

Impact on Climate Change: None directly arising from the report. The LAQM legislative regime does not include carbon dioxide or other major climate change gases. However, there will be impacting emissions from road transport and other relevant sources targeted within the Council's Air Quality Action Plan (AQAP) and consequently a potential surrogate benefit between tackling local air quality issues and climate change. However, it is also recognised that national policies have resulted in a consumer/manufacturer shift away from diesel to petrol (or petrol/hybrid) powered road vehicles due to local pollution concerns. This may have a negative impact nationally on carbon dioxide emissions due to the inherent better performance of modern diesel engines in this respect. Nonetheless, whilst there are measures in the MDDC AQAP promoting a switch to low-emission/non-combustion engine vehicles there are none directly targeting diesel vehicles in this context.

1.0 Air Quality as a Public Health concern

1.1 Poor air quality is the largest environmental risk to public health in the UK, as long-term exposure to air pollution can cause chronic conditions such as cardiovascular and respiratory diseases as well as lung cancer, leading to reduced life expectancy. It is the fourth greatest threat to public health after cancer, heart disease and obesity.

1.2 Nationally, the health cost of poor air quality is estimated at £8-20 billion each year and Public Health England estimate that long-term exposure to man-made pollution has an annual effect equivalent to 28-36,000 deaths (Committee on the Medical Effects of Air Pollutants). A recent European survey (European Heart Journal) has put forward an even higher UK figure of 64,000, meaning the impact is now similar to that of smoking.

1.3 Furthermore, for the first time in the UK (possibly the world) air pollution has been recognised as a cause of a person's death. In December 2020, Southwark

Coroner's Court in London found that air pollution "made a material contribution" to the death of nine-year-old Ella Adoo-Kissi-Debrah.

1.4 Ella had a rare type of acute asthma; she was particularly susceptible to the toxic gases and particles in air pollution. In his verdict, the coroner said the cause was "multi-factorial. It was down to both genes, and the environment". From a legal perspective, although this decision does not have any binding impact on other courts, it is still important as the first formal legal recognition of air pollution as contributing to the death of a particular individual.

1.5 In accordance with our legal duties, Mid Devon has declared Air Quality Management Areas in Crediton and Cullompton due to exceedances of air quality standards leading to the adoption and implementation of an Air Quality Action Plan. For context, Ella had lived near the South Circular Road in Lewisham and died in 2013, following an asthma attack. Pollution at this location also exceeded statutory air quality objectives, but at an order of magnitude higher than any levels recorded in Mid Devon.

2.0 Air Quality Action Plan Measures and activity during 2020

2.1 As previously reported to members in October 2019 (Community PDG), there are twenty-one measures identified in the current Air Quality Action Plan. The measures range from small-scale projects such as car clubs, to large infrastructure projects such as the Cullompton Town Centre Relief Road**.**

2.2 Planning obligation (s106) funding is a key mechanism in delivering many of the measures. There is ongoing dialogue between Public Health and the S106 Monitoring officer, other officers in relation to identifying new air quality projects and the release of funds for projects already earmarked.

2.3 As also previously reported to members, a number of projects were due to be completed in early 2020 designed to accelerate delivery of the wider plan overall and provide resilience/additional capability going forward. These were duly accomplished and were intended to inform a comprehensive update of the Action Plan later in 2020 however this was not possible due to the ongoing Covid pandemic. Nonetheless, those projects completed included:

- Review and redesign of our air quality monitoring network
- Commissioning 4 no. ‘AQ Mesh’ air quality monitoring devices. These are highly mobile, solar/battery powered lamp-post mounted instruments

capable of real-time monitoring 24/7/365 for nitrogen oxides and particulate matter. They provide a cost-effective but significant strengthening of our monitoring capabilities and will be used flexibly to support our development of Action Plan measures in each air quality management area and assessment work in relation to new major development proposals

- Crediton Traffic and Urban Realm Feasibility Study

- A comprehensive Low Emission Strategy for Cullompton – this will link to the assessment work on the town centre relief road and provide a wider plan for further improvements in the town

3.0 **Action Plan update 2021**

3.1 Due to the Covid pandemic, the planned update of the Action Plan and other related projects has been moved into 2021.

3.2 In November 2020, approval was granted to allocate circa £32k of s106 Air Quality project funding in order to deliver the projects and work plan for 2021 set out in detail within Annex 1, building on work completed 12-months previously.

3.3 In summary, Annex 1 sets out three interconnected projects or work-streams as follows:

- Project 1 – Air Quality Action Plan (AQAP) Update
- Project 2 - Update to the Supplementary Planning Document on Air Quality and Development
- Project 3 – Mid Devon Air Quality Sensor (monitoring) Data and Public Reporting

3.4 Due to the specialist nature of this work and the need for independent technical and quality assurance to meet Defra requirements, we have commissioned with Ricardo Energy and Environment to complete this work, supported by officers as required.

3.5 Ricardo have extensive experience in preparing AQAPs and SPDs for local authorities throughout the UK, including AQAPs recognised as examples of good practice by Defra and the Devolved Administrations. The proposed Ricardo project delivery team will be comprised of specialists, all of whom have worked on the previous LAQM work packages for MDDC, and have extensive experience in

supporting other local authorities across the UK in the development of AQAPs and associated LAQM work.

3.6 To date, Ricardo have just completed a working draft of the AQAP report which includes updated source apportionment analysis (detailed breakdown of pollutant sources for action planning purposes), review of existing policies and preparation of a provisional list of measures. This draft is currently with officers for fact checking and wider review. The next steps are to confirm the provisional list of measures and hold the core steering group meeting to assess which measures are taken forward in the AQAP process.

3.7 The specific make-up of the core steering group is currently under determination but it is intended that this will include officers from relevant internal services and external bodies (e.g. DCC Highways, Crediton and Cullompton Town Councils) and the Cabinet Member of Community Well Being.

4.0 Annual Status Report

4.1 Also under the LAQM regime is a requirement for an annual report. This provides an overview of air quality in Mid Devon District Council area during the most recent calendar year and is known as an Annual Status or ASR report and follows a prescribed format set by Defra.

4.2 The ASR report specifically fulfils the requirements of the formal regime set out in Part IV of the Environment Act (1995) and the relevant Statutory Policy and Technical Guidance documents. This is therefore a legally required document that must be submitted to Defra for formal review and approval.

4.3 The ASR is therefore a formal annual requirement showing the strategies employed by MDDC to improve air quality and any progress that has been made.

4.4 The 2020 ASR (for 2019) was completed against at extended August 2020 deadline and we are have received notice of the formal Defra review indicating they are satisfied with the report. All ASR and older air quality management reports can be viewed at https://www.middevon.gov.uk/residents/environment/air-quality/local-air-quality-management/.

4.5 The 2020 report concluded:

- For the first time since monitoring commenced, in 2019 nitrogen dioxide (NO_2) annual mean concentrations did not exceed formal Air Quality Standards (AQS) objective limits at any locations. However, sites within the Cullompton AQMA (both B3181/Fore Street) and within the Crediton AQMA (High Street, western end) were within 10% of the objective.
- NO_2 concentrations have been relatively stable in the last five-six years, however, decreases observed in 2019 followed previously reported increases in 2018 at the same locations. Data from Cullompton was also impacted in 2019 due to a lengthy road closure for essential gas main works.
- The ongoing sensitivity of town-centre locations within each AQMA to poor air quality and that there is no clear downward trend that can be reliably reported at this stage
- Concentrations of particulate matter continue to remain well below the AQS objective limits at Exeter Road within Crediton AQMA following completion of the major Lords Meadow Link road.

The report recommended:

- A requirement to continue to manage and mitigate air quality pressures arising from existing sources and new emissions arising from major planned development within the district.
- A further requirement to continue to review the monitoring locations across the district to ensure a good understanding, particularly following a full year of data from the new AQMesh sensors; and
- Continued requirement therefore to formally retain the existing AQMAs for nitrogen dioxide. Therefore, to deliver measures set out in the published Mid Devon District Council AQAP (2017) noting key progress and the requirement to provide a comprehensive update to the plan in as soon as possible, noting the unavoidable delay due to Covid.

4.6 It should also be noted that pollution levels in 2020 (provisional, unratified data) were substantially lower than recent, relatively stable figures would have suggested (-20 to -25%). No doubt this was largely due to impact of national lockdowns and other tier-based restrictions significantly reducing overall traffic volumes. As a result, the 2020 data cannot be considered representative of likely post-Covid air quality and the 2021 ASR report will have to account for this.

9.0 **Recommendation**

9.1 That the PDG notes the progress made and endorses the plan to complete the Air Quality Action Plan update during 2021.

Contact for more Information: Simon Newcombe, Corporate Manager for Public Health, Regulation and Housing snewcombe@middevon.gov.uk.

Circulation of the Report:

Cabinet Member for Community Well Being (Cllr Dennis Knowles)
Members of the Community Policy Development Group
All Leadership Team
All Group/Operations Managers

List of Background Papers:

MDDC and Crediton Town Council:

Mid Devon Air Quality Action Plan 2017-21
(https://www.middevon.gov.uk/media/345645/aqap-mid-devon-district-council-2017.pdf)

Cabinet 31st January 2019, 30th May 2019 - Housing Infrastructure Fund

Crediton Traffic and Urban Realm Feasibility Study (PJ Associates September 2018)

National legislation, Strategy and Guidance:

Local Air Quality Management legislation and regulations
(https://www.gov.uk/government/publications/2010-to-2015-government-policy-environmental-quality/2010-to-2015-government-policy-environmental-quality#appendix-5-international-european-and-national-standards-for-air-quality)

Local Air Quality Management Statutory Policy Guidance
(https://www.gov.uk/government/publications/local-air-quality-management-policy-guidance-pg09)
National Clean Air Strategy 2019 (DEFRA)
(https://assets.publishing.service.gov.uk/../clean-air-strategy-2019.pdf)

Air quality and public health:

Associations of long term average concentrations of nitrogen dioxide with mortality - A report by the Committee on the Medical Effects of Air Pollutants 2018 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/734799/COMEAP_NO2_Report.pdf)

European Heart Journal report on Cardiovascular Disease and Air Pollution 2019 (https://academic.oup.com/eurheartj/article/40/20/1590/5372326)

Annex 1 – 2021 Local Air Quality Management Projects

Introduction

Funding for these projects has come from the Crediton general air quality s106 funding pot. There are several legal reasons for this and it's also recognised that there are inherent parallel benefits to the Cullompton AQMA and the district generally. Nonetheless, it's important to set out how these projects will directly apply to the benefit of local air quality within Crediton and its air quality management area.

In particular, proposals provide for major update the district-wide Air Quality Action Plan and other policy work which contain general and specific measures with impact in Crediton. Examples include:

- Air quality Supplementary Planning Document setting out a mass-based emission assessment approach that will apply to major developments and schemes within Crediton and the measurement of mitigation measures/packages. It will also set out future s106 contribution formula and considerations in respect new and existing projects targeted to the town

- Development of specific project proposals in respect of the delivery of the Crediton Town Centre Traffic and Urban Realm Feasibility study and identified traffic management measures developed and tested during 19/20 – specifically these are four broad project schemes: Church Street to Charlotte Street, Union Terrace to the War Memorial, St Saviours Way to Union Terrace and Western Road to St Saviours Way

- Delivery of existing and new projects in respect of on-street EV charging infrastructure at public and taxi rank locations in the Crediton town centre

- Development of new technical licensing proposals to shift from current EURO emission standards with 'grandfather' rights to accelerate a shift ultra-low emission/EV taxi fleet as applicable to all operators but will pilot with Crediton based operators

- Commissioning of an updated detailed source apportionment of air quality as derived from home, farming, industry and transport emissions sources as specifically applied to Crediton area – this will take a combination of Crediton specific and national data to enable new targeted measures for the town to be developed. In line with the Government Clean Air Strategy (2019), there will be a new consideration around home sources and domestic solid fuel burning which has particular relevant to Crediton town centre as impacted by its valley and street canyon topography

- Management, quality assurance and verification of the x2 current MESH real-time 24/7/365 air quality monitoring stations (plus existing NOx tube network) within Crediton. This data will be publically disseminated via a dedicated UK website (note the proposal also cover the x2 monitors currently located in Cullompton but both dataset

require expert management to enable mutual local validation of baseline and trend before comparison with non-local UK reference sites)

- Development of links between Crediton specific local air quality management plan measure and the MDDC Climate Change Action Plan

Project 1 – Air Quality Action Plan (AQAP) Update

The current AQAP was produced in 2018 and is formally due a major update. This was due in 2019, however due to Covid-19 has been pushed back in 2021 for completion. The reasons for the required update are:

- Cyclical update reporting into Defra
- Update the technical assessment work underpinning the development of measure to meet updated Defra requirements. The current pollution source appointment work was last completed in 2010 and underpinned by monitoring and assumptions that are now out of date (see Project 2)
- Incorporate new measures identified following the 2019 work. These are required to continue the improvement of local air quality across the district to meet Air Quality Regulations. These are set in UK legislation and will continue to post-Brexit
- Development of further measures
- Link measures and funding to an updated Supplementary Planning Document (See Project 3)
- Develop links between the AQAP and the Council's emerging Climate Change Action Plan

This package of work will build on Ricardo's previous work in reviewing the current MDDC Air Quality Action Plan.

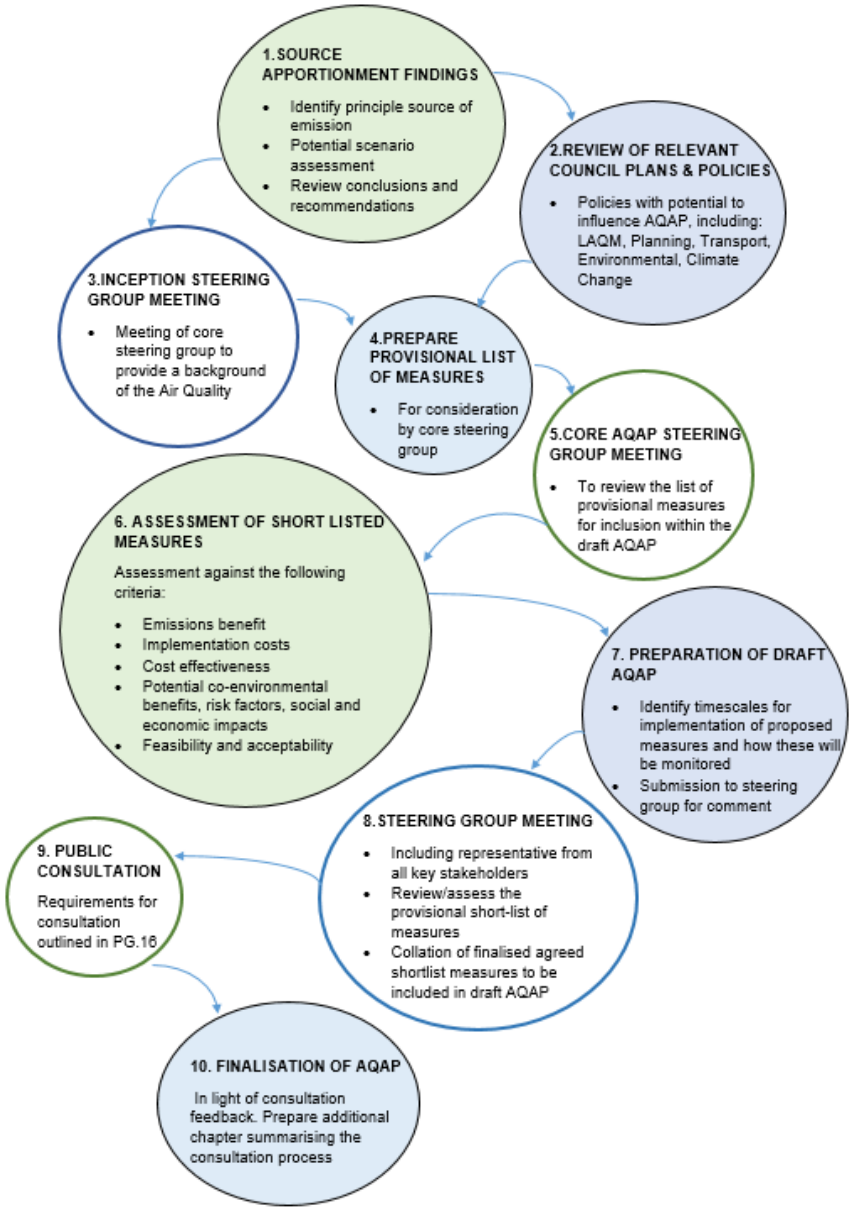
AQAPs are strategic documents in which the Council outlines measures it intends to take in pursuit of achieving the air quality objectives in the Air Quality Management Areas (AQMAs). Technical Guidance (TG16) recommends the following approach for the development of an AQAP:

1. Develop the AQAP in stages;
2. Undertake appropriate local monitoring and assessment (including modelling and source apportionment);
3. Decide what level of actions are required; what measures are already in place and what new measures could be considered;
4. Establish links to other key policy areas / strategies;
5. Establish a Steering Group with key stakeholder groups at an early stage;

6. Undertake measures selection and impact assessment;
7. Agree monitoring and evaluation of success, and annual review of progress;
8. Undertake consultation.

The proposed process for updating the Air Quality Action Plan for MDDC is presented in Fig. 1

Figure 1: Action planning process



Source Apportionment Analysis

The source apportionment analysis of air quality forms an integral part of the AQAP process and is crucial to the development of an effective and proportionate plan.

RapidAir® is unique to Ricardo and has been developed in response to their core work around air quality at local and national Government level. It has already been used to assess the impact on air quality of a proposed Traffic Management Scheme in Crediton and a Low Emission Strategy for Cullompton. Therefore, it is proposed to provide two sets of source apportionment depending on the information available:

- Source apportionment of the Defra background maps can be used to provide source apportionment of pollutants at the 1 km x 1 km scale, at agreed locations across Mid Devon. These locations will be agreed with the client prior to commencement of the project. Example locations could include Tiverton and/or areas adjacent to the M5.

- Source apportionment at locations within the Crediton and Cullompton AQMAs can be provided, making use of the emissions modelling outputs generated in the air quality modelling studies completed by Ricardo. We propose to provide source apportionment at NO2 hotspot locations within the Cullompton and Crediton AQMAs; this will include a breakdown of road sources in addition to the Defra background map source apportionment.

Following the source apportionment analysis, a summary of its conclusions with respect to source contributions will be prepared for inclusion within the draft AQAP. The conclusions of the source apportionment and the existing AQAP will be used to inform the preparation of the provisional list of measures for consideration by the AQAP Steering Group.

Review of relevant existing MDDC Policies

Air Quality Action Plans should take account of related plans such as the Local Transport Plan and the Local Plan/Local Development Plan, as ongoing activities that may contribute to improving air quality within the AQMA are likely to have an influence on the development of a successful AQAP. In addition, it is important that any existing commitments of MDDC are not conflicted by measures included within the draft AQAP.

Ricardo has already undertaken an extensive review of MDDC's air quality planning policies. This review included an examination of the Mid Devon Local Plan (consisting of the Core Strategy 2006 – 2026, Allocations and Infrastructure Development Plan Document, and Development Management Policies) as well as the Mid Devon SPD on Air Quality and Development and current Mid Devon AQAP. In addition, Ricardo will revisit the recently adopted Mid Devon Local Plan 2013 – 2033 and the latest Annual Status Report (ASR).

A summary of each of the relevant identified policies, highlighting potential overlaps with the draft AQAP, will be included within the draft report. In this section we propose to provide an overview of existing MDDC policies including further information on any new or developing MDDC policies that may influence the development of the AQAP.

Inception Steering Group Meeting

As shown in the flowchart, this section comprises a meeting of the core Steering Group to provide background information on the current air quality in Mid Devon. Ricardo has already undertaken the 2019 ASR for MDDC, as well as a review of MDDC's air quality monitoring programme and dispersion modelling for two villages in Mid Devon. Ricardo and the project team are therefore well informed regarding the current air quality in Mid Devon. The 2020 ASR will be reviewed to enable us to have the most up to date information.

Preparation of provisional list of measures for consideration by the Core AQAP Steering Group

A wide range of potential options may be available to MDDC and other stakeholders to improve local air quality within the designated AQMAs and wider area. Therefore, at the onset of the action planning process it is appropriate to consider all potential options. This will draw on the short list of measures Ricardo has already assessed as part of the Cullompton Low Emission Strategy3, some of which were shown to have wider benefits for the District.

Following a review of the source apportionment, current AQAP and relevant existing MDDC policies, a provisional list of potential measures for consideration by the Steering Group will be prepared. Whilst MDDC may not have the necessary powers to implement all such options we would expect them to work with, or encourage other organisations and agencies that have the capacity to take such options forward.

Upon completion, the provisional list of potential measures will be submitted to the Project Officer at MDDC prior to the proposed Steering Group meeting.

Core AQAP Steering Group Meeting to assess provisional list of measures for further inclusion within the draft AQAP

Following the preparation of the provisional list of potential measures for inclusion within the draft AQAP, we recommend that a meeting of the Core AQAP Steering Group is held at the earliest opportunity in order to undertake an initial appraisal of the measures. The main aim of this meeting would be to present the provisional list of measures for the consideration of the group and undertake an initial appraisal of each proposed measure.

We propose this meeting is hosted online via teleconference. Ricardo will be happy to provide support at this meeting and minute any comments of the measures to provide a summary of comments for inclusion in the draft Plan.

Assessment of short-listed measures

The shortlist of measures will be assessed against a wide range of criteria in order to assess their suitability for inclusion in the Plan. The proposed criteria against which options will be assessed are:

- Potential air quality impact;
- Implementation costs;

- Cost-effectiveness;
- Potential co-environmental benefits, risk factors, social impacts and economic impacts; and
- Feasibility and Acceptability.

The assessment of the potential air quality impact of the measures is a key aspect in that the AQAP must focus on prioritising options that improve air quality most effectively. The assessment is complex in that the detailed assessment of any given option could normally be subject to a study of its own requiring significant resources. This aspect of the Action Plan will incorporate the findings of the source apportionment. For measures where this is not applicable, a semi-quantitative assessment relying on a level of judgement will be adopted.

Preparation of draft Air Quality Action Plan

The next stage in the process is the preparation of the draft AQAP document including the short-list of proposed measures agreed at the previous steering group meetings. It will be the responsibility of MDDC to collate all feedback from steering group and stakeholders on the proposed list of measures.

There is also a need to demonstrate a clear project management approach to the implementation of the AQAP (and its associated measures) and hence targets and indicators, with associated timescales, should be developed for each measure adopted. To do this effectively, further discussion will be required with representatives from services/organisations responsible for the implementation of each of the proposed measures. These additional discussions will focus on the timescales for implementing different aspects of the proposed measures, and where possible, the identification of indicators to enable MDDC to demonstrate progress on the implementation of the AQAP in future years.

Public Consultation

The public consultation process primarily relates to the wider consultation process, including statutory consultees, the public and local businesses. Under the statutory guidance, local authorities are required to consult on the preparation of their AQAP. The aim of the consultation process is to provide consultees with the opportunity to provide opinions on what the Plan should include. It is recommended that consultation should be undertaken following development of the draft Plan.

The guidance states that authorities should decide on the timescale for consultation but recommends that no consultation exercise should last for fewer than six weeks. In addition, it notes that the consultation on the draft plan should include:

- Details of which pollutants the authority will look at and an indication of where they come from;
- The timescales for implementing each proposed measure; and
- Details of other organisations or agencies whose involvement is needed to meet the plan’s objectives and what the authority is doing to get their co-operation.

Local authorities across the UK have adopted a range of different approaches when undertaking consultation on their draft AQAPs. These have included the submission of the draft Plan to statutory consultees and relevant organisations, the preparation of draft Plan summary leaflets/questionnaires, and the hosting of public meetings or workshops. As part of this process we would also support MDDC in identifying a comprehensive list of consultees for the consultation process. Ricardo will work with MDDC to identify a comprehensive list of attendees following completion of the draft plan.

Finalisation of Air Quality Action Plan

Upon completion of statutory public consultation on the draft AQAP, it is feasible that some changes or modifications of the draft plan will be required. At this point, we propose to liaise with the coordinating officer at MDDC to confirm the required changes prior to amending the plan.

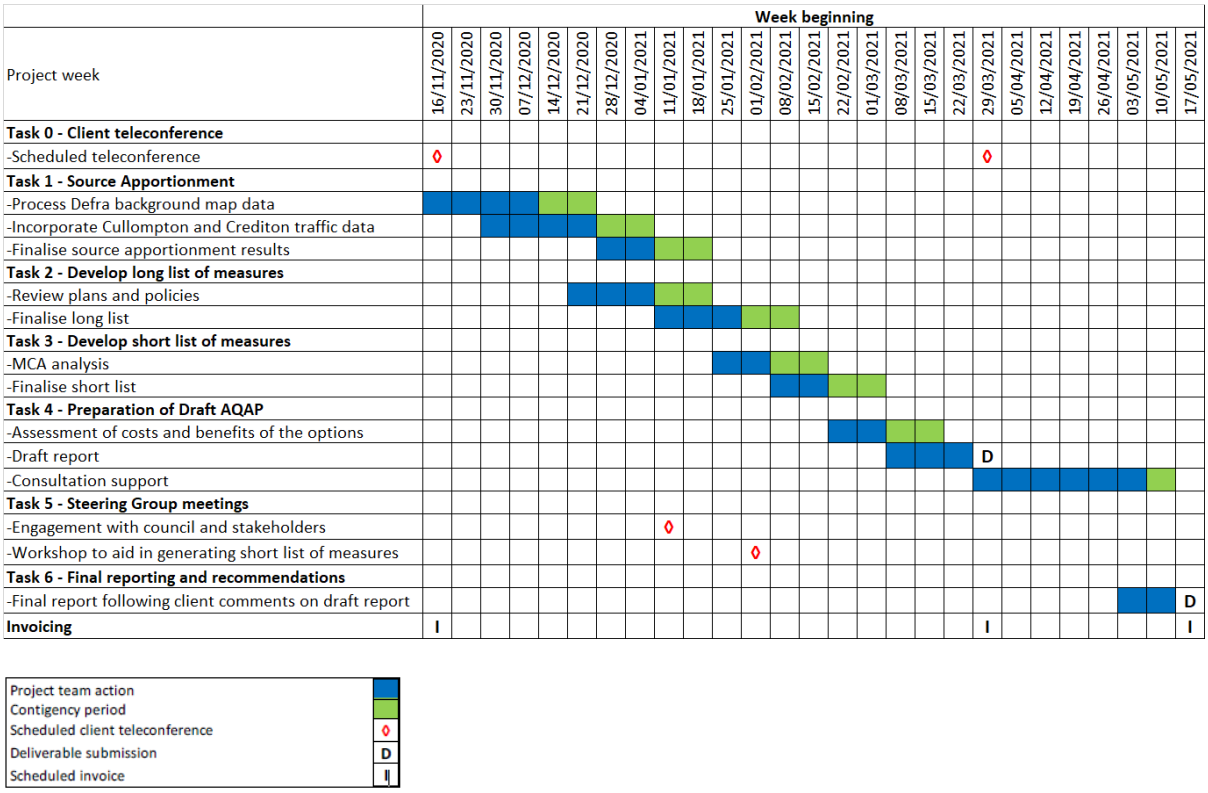
Following these discussions, Ricardo will make the agreed changes to the draft plan and also include an additional section summarising the consultation process undertaken by the Council and a brief summary of feedback comments received. Following completion, an electronic copy (MS Word) of the amended plan will be submitted to MDDC for comment. It will be the responsibility of MDDC to collate all feedback from the steering group and stakeholders, and provide Ricardo with one set of corrections / amendments to finalise the Air Quality Action Plan.

Air Quality Action Plan outline structure

The AQAP will have the following structure and content in order to meet the requirements outlined in TG16.

1. Introduction
2. Overview of Ambient Air Quality and Local Air Quality Management Process
3. Statement of the air quality issues in MDDC (including source apportionment)
4. Description of the adopted approach for developing the Air Quality Action Plan
5. Action Plan Options and Assessment (initial assessment and development of measures)
6. Methodology Utilised to Assess Shortlisted Measures
7. Action Plan - Including discussion of:
   a. The prioritisation of measures,
   b. Their anticipated impact on air quality within the AQMA,
   c. How measures will be funded,
   d. How MDDC will monitor and evaluate the effectiveness of the plan
8. List of useful references

Figure 2: Project schedule for update to the Air Quality Action Plan



Project 2 – Update to the Supplementary Planning Document on Air Quality and Development

This package of work will build on Ricardo's previous work in reviewing MDDC's current air quality planning policies.

The current Supplementary Planning Document on Air Quality and Development5 was created to aid developers to prevent/minimise adverse impacts on local air quality associated with their development and highlights suitable methods of mitigation expected by the Council. However, the SPD was published in 2008, prior to a number of key Council documents that supersede the referenced information in the SPD. As a result, it is understood that we must update the SPD to reflect the current plans and policies and include references to the latest technical guidance for air quality assessments.

Overview

The SPD on Air Quality and Development was extensively reviewed as part of the Ricardo report “Review of Mid Devon District Council’s Air Quality Planning Policies” and a number of improvements were suggested, including:

- It is recommended MDDC consider updating their system for classifying developments.
- It is recommended the SPD be updated to include references to the latest technical guidance for air quality assessments, including Technical Guidance 16 (TG16) and the Institute of Air Quality Management (IAQM)’s guidance for construction dust assessments.
- It is recommended MDDC develop a new emissions mitigation assessment, based on the latest Interdepartmental Group on Costs and Benefits (IGCB) Air Quality Damage Costs and Emissions Factor Toolkit (EFT).
- It is recommended the SPD be updated to reflect the latest IAQM Land-use and Development Control Guidance.
- It is recommended that Cumulative Impacts and Mitigation section of the SPD be updated to go further than suggesting a process for developments to provide financial contributions to AQAPs.
- Ricardo will update the SPD on Air Quality and Development to fulfil the improvements suggested above.

Proposed delivery

The proposed approach for this work is as follows:

- Arrange a kick-off call with the MDDC Project Officer (Public Health) and Forward Planning colleague to confirm the approach for completing the review. It is important a representative of the Forward Planning team join the call to ensure the relevant air quality planning requirements are reflected in the updated guidance.
- Complete a review of any additional documents not included in Ricardo’s “Review of Mid Devon District Council’s Air Quality Planning Policies” to identify the Council’s commitments relating to air quality for new developments. A preliminary review in support of this proposal has identified the following key additional areas that will need to be factored into the Guidance:

    - Mid Devon Local Plan Review (2013 – 2033) policies S1 (Sustainable development priorities), S11 (Cullompton), S12 (Crediton) and DM3 (Transport and air quality).
    - The current AQAP 2017 – 2021, and updated AQAP once prepared.
    - The recent Cullompton Low Emission Strategy.

- Ricardo will prepare an updated SPD that reflects the policies described above, as well as those previously reviewed. The SPD will also be updated to include the latest national requirements and guidance relating to the assessment of air quality impacts, applicable to development, including:

    - Local Air Quality Management – Technical Guidance (TG16)
    - Local Air Quality Management – Policy Guidance (PG16)

  - Environmental Protection UK & Institute of Air Quality Management – Land-Use Planning & Development Control: Planning for Air Quality (2017)
  - Institute of Air Quality Management – Guidance on the assessment of dust from demolition and construction (2014)
  - Institute of Air Quality Management – Guidance on the assessment of odour for planning (2014)

- The SPD will allow developers to categorise their development as either Minor, Medium or Major, fulfilling the suggested improvement for MDDC to update their system for classifying developments. This classification will determine the approach the developer must follow, and will describe:

  - How to determine when an air quality assessment is required.
  - How to undertake an assessment, including the latest tools available to support this.
  - Requirements for undertaking an assessment of emissions during construction and demolition activities.
  - How to determine the significance of air quality impacts relating to a development.
  - Recommendations for mitigation during construction/demolition and following the completion of a development.
  - How to quantify impacts on air quality and recommendations for offsetting those impacts.
  - A series of case studies illustrating how to categorise, assess, report and mitigate against the air quality impacts resulting from development.

- Ricardo will provide MDDC with a draft document for review. It is recommended at this stage we arrange a progress meeting with key representatives of the Council, including the Environmental Protection, Planning and Public Health teams, to discuss the updated Guidance and receive feedback.

- Following the progress meeting Ricardo will provide a final draft of the Guidance.

- Ricardo can also make arrangements to attend any further meetings/consultation events to discuss the updated SPD. A separate cost can be provided for this on request.

Figure 3: Project schedule for update to the Supplementary Planning Document

	Week beginning									
Project week	29/03/2021	05/04/2021	12/04/2021	19/04/2021	26/04/2021	03/05/2021	10/05/2021	17/05/2021	24/05/2021	31/05/2021
Task 0 - Client teleconference										
-Scheduled teleconference	◊							◊		
Task 1 - Review of additional documentation										
-Review updated Local Plan and any additional documentation										
Task 2 - Preparation of Draft SPD										
-Preparation of draft report								D		
Task 3 - Final reporting										
-Final report following client comments on draft report										D
Invoicing	I									I

Project team action	
Contigency period	
Scheduled client teleconference	◊
Deliverable submission	D
Scheduled invoice	I

Project 3 – Mid Devon AQ Sensor Data and Public Reporting

This package of work will build project the necessary local air quality monitoring sensor data for Project 1 and 2 above. It also builds on Ricardo's previous work in reviewing the air quality monitoring network across Mid Devon and providing key public reporting data via the Air Quality England website https://www.airqualityengland.co.uk/ (itself a current AQAP measure/commitment). This project will run from December 2020-December 2021.

This is a highly technical and resource intensive process which is essential in order to satisfy Defra technical and MCERT accreditation data requirements. Valid, quality assured air quality data must be used to underpin other AQAP and Local Air Quality Management work, otherwise false assumptions may be made and measures to improve air quality are at risk of being poorly targeted/ineffective. Furthermore, as the approved national air quality data resource for England, only robust datasets meeting quality assurance criteria can be published on the AQ England website.

This will provide for external, assured sensor monitoring services for the four AQ-Mesh monitoring located in Crediton and Cullompton. To maintain a key balance between data quality and value this will include:

Data Correction

Why do we need to correct the data? Sensor responses are indicative and are known to vary widely, even across the same make, model and pollutant batch. For example, when installed and run side by side PM10 measurements from one Sensor may record +45% and another may record -35% compared to the MCERTS analysers – therefore these inconsistences need to be accounted for in the data management process.

Co-location Correction

To account for the inconsistencies we advise each sensor is installed at a pre-existing 'Reference' monitoring station, to undertake characterisation and a quality control co-location study. The aims of these QC tasks is to assess and quantify how each sensor responds to ambient pollutants. The sensors will be co-located at the sample inlet of a monitoring station where approved MCERTs accredited instruments with full QA/QC and data management processing is applied. We have used several monitoring stations for this purpose, and so have established resources, with similar datasets having been recorded, which are available for QA/QC cross checks. The characterisation and co-location measurements obtained from this phase of the work programme will be used to establish correction factors for each pollutant for input to the quality control of each individual sensor for the measurement phase datasets. The co-location study is crucial to establish that the sensor responses for each pollutant track the reference instrument measurements

Hourly/daily data collection and checking

All incoming data from the Sensors will be automatically screened and checked prior to being released as validated provisional datasets. The data are screened and checked using specifically developed software algorithms that identify and report suspect data and equipment faults. The datasets are processed in near real time by applying the co-location scaling factor and is then screened for signs of equipment malfunctions and unusual events.

Both raw and scaled data are stored as separate database files (original raw data are retained at all times). Ricardo policy on data validation (adopted and proven within the national network) is that all data are assumed to be correct unless there is sound evidence to suggest otherwise. This prevents the validation process from erroneously removing important air pollution episode data. The automatic screening procedures, and the experience of our expert data management staff, will ensure that the highest quality data will be appended to each sites' database and be released for reporting as validated data. Post automated checking and scaling the datasets are dissemination on the **Air Quality England website**, this enables reasonably robust datasets to be published

Manual Daily Checking

The data checking team carry out manual daily data quality checks to ensure successful data acquisition and to investigate instances of suspect data. The daily checking log will be used during the ratification process for each pollutant. Any faults will be reported immediately to MDDC Public Health. Measurements across the Crediton and Cullompton sites will cross-compared for anomaly identification and local trend analysis recognising local network inter-relationships

Data Ratification

This is the compilation and checking of all site measurement datasets and information, and undertake pre-defined quality checks. In brief the main stages are as follows:

- Post ratification of the MCERTSs data, so 3-months in arrears, we use the ratified MCERTS data to re-process and QA/QC the Sensor data. As part of this process we re-

assess the correction factor for each pollutant and rescale the datasets as required, this is a time consuming process as each pollutant species from each Sensor unit will have a different scaling factors, there is considerable expertise involved in determining where the base line sits (this can change results by +/- 25% if not applied correctly). We then compare the measurements to other similar datasets to evaluate and address any inconsistencies.

- The datasets are then checked by a third party, and assuming all is as expected are then locked as ratified