



2016 Air Quality Annual Status Report (ASR)

West Dorset District Council

In fulfilment of Part IV of the
Environment Act 1995
Local Air Quality Management

December 2016

West Dorset District Council

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|-------------------------|--|
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Executive Summary: Air Quality in Our Area

Air Quality in West Dorset

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^{1,2}.

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion³.

Air quality in West Dorset has been assessed and has been found to be broadly very good due to the predominantly rural environment. However, in certain locations - parts of Chideock, Dorchester and Bridport - air quality has been found to be close to, or exceeding the objective level for nitrogen dioxide (NO₂), the main source of pollution being from road traffic. This is due to vehicle emissions and other factors including type and number of vehicles; their speed; congestion and local topographical circumstances. As a result of this, an Air Quality Management Area, (AQMA), was declared in Chideock in 2007 and High East Street, Dorchester in 2009.

Monitoring results for 2015 continue to exceed the annual objective for nitrogen dioxide in East Road, Bridport and Main Street, Chideock. There are no other exceedences of the air quality objectives in any other area of West Dorset.

Areas that exceed the annual objective for nitrogen dioxide in Chideock are already within an Air Quality Management Area and an action plan is in place to improve air quality to comply with the objective.

There is no AQMA in Bridport. Following a Detailed Assessment of nitrogen dioxide in Bridport in 2011, the Council resolved not to declare an AQMA but continue monitoring to check future levels of NO₂ here. There are no plans to review this decision at present.

¹ Environmental equity, air quality, socioeconomic status and respiratory health, 2010

² Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

³ Defra. Abatement cost guidance for valuing changes in air quality, May 2013

Results for 2015 in Dorchester show the annual mean for NO₂ was met at all monitoring locations both within and outside of the AQMA. West Dorset District Council will continue to monitor at these locations in 2016, to establish if there is a downward trend that may indicate revoking the AQMA sometime in the next 2-3 years.

Further information about air quality in West Dorset is available at:

<https://www.dorsetforyou.gov.uk/airquality/west>

Actions to Improve Air Quality

Local Priorities and Challenges

West Dorset District Council are working proactively with Development Control and local businesses by way of the permitting regime and Dorset County Council to ensure that air quality is continually reviewed. In addition, West Dorset District Council are involved with plans for a pan-Dorset PM_{2.5} project with Dorset Public Health.

How to Get Involved

Dorset For You website <https://www.dorsetforyou.com/409048> includes measures the public can actively use to improve air quality within the area, these include matters such as interactive cycle maps, adult cycle training and walking routes and trails.

Table of Contents

| | |
|---|-----------|
| Executive Summary: Air Quality in Our Area | i |
| Air Quality in West Dorset..... | i |
| Actions to Improve Air Quality..... | ii |
| Local Priorities and Challenges..... | ii |
| How to Get Involved..... | ii |
| 1 Local Air Quality Management | 1 |
| 2 Actions to Improve Air Quality | 2 |
| 2.1 Air Quality Management Areas..... | 2 |
| 2.2 Progress and Impact of Measures to address Air Quality in West Dorset..... | 2 |
| Local Transport Plans and Strategies | 17 |
| Local Transport Plan 3 2011 – 2026 | 17 |
| Travel choice | 17 |
| Local Sustainable Transport Fund | 17 |
| Climate change strategies | 17 |
| West Dorset District Council Carbon Management Plan (CMP) | 18 |
| Nottingham Declaration | 18 |
| Planning Applications..... | 18 |
| Air Quality Planning Policies | 18 |
| 2.3 PM _{2.5} – Local Authority Approach to Reducing Emissions and or Concentrations..... | 21 |
| 3 Air Quality Monitoring Data and Comparison with Air Quality Objectives and National Compliance | 22 |
| 3.1 Summary of Monitoring Undertaken | 22 |
| 3.1.1 Automatic Monitoring Sites | 22 |
| 3.1.2 Non-Automatic Monitoring Sites..... | 22 |
| 3.2 Individual Pollutants | 24 |
| 3.2.1 Nitrogen Dioxide (NO ₂)..... | 24 |
| Trends in Annual Mean Nitrogen Dioxide Concentrations measured at Diffusion Tube Monitoring Sites..... | 27 |
| Appendix A: Monitoring Results | 30 |
| Appendix B: Full Monthly Diffusion Tube Results for 2015 | 40 |
| Appendix C: Long Term Diffusion Tube Monitoring in West Dorset | 43 |
| Appendix D: Supporting Technical Information / Air Quality Monitoring Data QA/QC | 46 |
| Appendix E: Map(s) of Monitoring Locations | 50 |

| | |
|---|-----------|
| Appendix F: Maps of AQMA Boundaries..... | 52 |
| Appendix G: Summary of Air Quality Objectives in England | 54 |
| Appendix H: Summary of Previous Review and Assessment | 55 |
| Glossary of Terms | 58 |
| References | 59 |

List of Tables

| | |
|--|----|
| Table 2.1 – Declared Air Quality Management Areas..... | 2 |
| Table 2.2 – Progress on Measures to Improve Air Quality..... | 3 |
| Table A.1 – Details of Automatic Monitoring Sites..... | 30 |
| Table A.2 – Details of Non-Automatic Monitoring Sites..... | 31 |
| Table A.3 – Annual Mean NO ₂ Monitoring Results..... | 37 |
| Table A.4 – 1-hour Mean NO ₂ Monthly Results..... | 39 |
| Table B.1 – NO ₂ Monthly Diffusion Tube Results - 2015..... | 40 |
| Table D.1– Summary of Bias Adjustment - Roadside..... | 47 |
| Table D.2 – Estimate of Annual Mean for Diffusion Tube 716 Dorchester Maumbury Road (Using Box 7.10 in LAQM.16) | 49 |
| Table G.1 – Air Quality Objectives in England..... | 54 |

List of Figures

| | |
|---|----|
| Trends in Annual Mean Nitrogen Dioxide Concentrations Measured at Diffusion Tube Monitoring Sites: | |
| Figure 3.1 – Chideock..... | 27 |
| Figure 3.2 – Dorchester..... | 28 |
| Figure 3.3 – Bridport..... | 29 |
| Figure E.1 – Map of Automatic Monitoring Site..... | 50 |
| Figure E.2 – Maps of Non-Automatic Monitoring Sites..... | 52 |

1 Local Air Quality Management

This report provides an overview of air quality in West Dorset during 2015. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995) and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by West Dorset District Council to improve air quality and any progress that has been made.

The statutory air quality objectives applicable to LAQM in England can be found in Table G.1 in Appendix G.

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority must prepare an Air Quality Action Plan (AQAP) within 12-18 months setting out measures it intends to put in place in pursuit of the objectives.

A summary of AQMAs declared by West Dorset District Council can be found in Table 2.1. Further information related to declared or revoked AQMAs, including maps of AQMA boundaries are available online at

<https://www.dorsetforyou.gov.uk/airquality/west>

Table 2.1 – Declared Air Quality Management Areas

| AQMA Name | Pollutants and Air Quality Objectives | City / Town | One Line Description | Action Plan |
|-----------------|---------------------------------------|-------------|---|---|
| AQMA Chideock | NO ₂ annual mean | Chideock | Properties along the A35 in Chideock. The AQMA was amended in 2011. | https://www.dorsetforyou.gov.uk/airquality/chideock |
| AQMA Dorchester | NO ₂ annual mean | Dorchester | Residential properties along High East Street, Dorchester. | https://www.dorsetforyou.gov.uk/airquality/dorchester |

2.2 Progress and Impact of Measures to address Air Quality in West Dorset

West Dorset District Council has taken forward a number of measures during the current reporting year of 2015 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2. More detail on these measures can be found in their respective Action Plans.

Table 2.2 – Progress on Measures to Improve Air Quality

| Measure No. | Measure | EU Category | EU Classification | Lead Authority | Planning Phase | Implementation Phase | Key Performance Indicator | Target Pollution Reduction in the AQMA | Progress to Date | Estimated Completion Date | Comments |
|-------------|--|---|--|----------------|---------------------|--|--|--|--|---------------------------|----------|
| 1 | Road Traffic Management To implement the Dorchester Transport & Environment Plan (DTEP) | Policy Guidance and Development Control | Regional Groups Co-ordinating programmes to develop Area wide Strategies to reduce emissions and improve air quality | DCC | May 2013 - Nov 2014 | Phase 1 – Nov 2014 Phase 2 – Nov 2015. | Reduce air pollution, reduce congestion, reduce traffic noise, improve safety. | N/A | DTEP was due to commence in 2013, however due to financial constraints at County level this has now been postponed until November 2014 for the implementation of Phase 1, the phase that applies to the AQMA. Funding has been approved for Planning, Phase 1 and Phase 2. DTEP still not started, awaiting information from DCC on this matter. | Unknown | |

West Dorset District Council

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|-------------|---|---|--|----------------|----------------|----------------------|--|--|--|--|----------|
| 2 | Road Traffic Management To undertake an air quality assessment of the proposed DTEP scheme | Policy Guidance and Development Control | Air Quality Planning and Policy Guidance | WDDC, DCC | 2012 | | Quantify likely improvements on air quality. | N/A | Modelling of the scheme was undertaken by White Young Green in 2011. This showed that with the implementation of DTEP, air quality within High West Street and High East Street would reduce by 50% and 20% respectively. However further modelling will be required in 2013 to take into account of amendments in the scheme. | Completed 2013, outcome was amendments would improve NO ₂ . | |

West Dorset District Council

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|-------------|---|--------------------|---|----------------|----------------|----------------------|--|--|--|---------------------------|----------|
| 3 | Road Traffic Management A35 Weymouth Road Roundabout and Stinsford Roundabout improvements. The carriageway widths will be widened to 3 lanes on both A35 approaches and to 2 lanes on the approach from Dorchester. | Traffic Management | Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane | HA | Spring 2011 | 2012 | Reduce congestion and delay, improve the flow on the Dorchester bypass, encourage use of the bypass instead of cutting through the town, improve safety. | N/A | Completed in May 2012. The roundabout has been increased from 50m to 56m and widened to provide traffic splitter islands for entry path curvature. A new additional lane has also been provided for left turn traffic from A35 to A354 Weymouth Road. The roundabout has been increased from 50m to 56m and widened to provide traffic splitter islands for entry path curvature. A new additional lane has also been provided for left turn traffic from A35 to A354 Weymouth Road. | Completed in May 2012. | |

West Dorset District Council

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|-------------|--|-------------------------------------|---|----------------|----------------|---|---|--|---|---------------------------|----------|
| 4 | Road Traffic Management To promote and expand, where feasible, the Park & Ride services and investigate the potential for a new site in Dorchester. | Alternatives to Private Vehicle Use | Bus based Park & Ride | WDDC | 2012, 2013 | Temp park and ride July-Sept for the Olympic period. 2014 - Permanent site proposal through the Local Plan. | Reduce traffic in the town centre. | N/A | A new Park and Ride site south of Dorchester is being proposed through the emerging local plan will be linked to DTEP. This plan will be out for consultation in Oct13, with an aim to be adopted by Feb 2014. Permanent site not been implemented yet. | | |
| 5 | Road Traffic Management To investigate the improvement of signage to encourage the use of the Dorchester bypass rather than High West/East Street | Traffic Management | UTC, Congestion management, traffic reduction | HA | 2012 | | Reduce traffic in the town centre, reduce congestion in the High Streets, reduce pollution. | N/A | Improved signage new road scheme was undertaken with the improvements undertaken in action 3. HA have no further plans to increase road traffic signs here. However will be reviewed when DTEP is in place. Linked to DTEP. | Unknown. | |

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|-------------|--|----------------------------------|--|----------------|----------------|----------------------|---------------------------|--|--|---------------------------|----------|
| 6 | <p>Reduce Vehicle Emissions</p> <p>Replace older bus fleets with cleaner more efficient buses.</p> | Promoting Low Emission Transport | Company Vehicle Procurement - Prioritising uptake of low emission vehicles | DCC | Ongoing | 2011 – 2026 | Reduction in emissions | N/A | <p>In March 2011 the Department for Transport awarded a £166,600 Green Bus Fund grant to the WDDC, DCC and Duchy of Cornwall partnership to purchase two electric powered buses. The two Optare Solo electric buses are currently running from Poundbury to Dorchester every 30 minutes and will produce estimated diesel fuel savings of £25000 over five years compared to two diesel-powered buses. The buses will make carbon emission savings of around 39 tons per year compared to diesel buses, producing a minimum impact on the environment. Some electric buses in place.</p> | | |

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|-------------|--|--------------------|----------------------|----------------|----------------|----------------------|--|--|---|---------------------------|----------|
| 7 | <p>Reduce Vehicle Emissions</p> <p>Provision of Real Time Passenger Information on buses, at bus stops and other key locations, on the web and via text messaging along key routes, including Dorchester</p> | Public Information | Via other mechanisms | DCC | 2012 | 2012 | Encourage better use of buses, potentially fewer car journeys, reduced CO2 emissions | N/A | This has been completed along the Dorchester/Weymouth corridor as part of the Weymouth Transport Package. | Completed 2012 | |
| 8 | <p>Reduce Vehicle Emissions</p> <p>The provision of real-time car park information in Dorchester</p> | Public Information | Via other mechanisms | DCC, WDDC | 2012 | 2015 | Reduced journey time, reduced emissions and congestion | N/A | In July 2012 the Local Sustainable Transport Fund (LSTF), awarded DCC 200K for variable messaging signage and car parking guidance in Dorchester. This will be implemented from 2013. | Completed 2012 | |

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|-------------|---|--------------------------|--------------------------------------|----------------|----------------|----------------------|--|--|--|---------------------------|----------|
| 9 | <p>Reduce Vehicle Emissions</p> <p>Ensure that air pollution from DCC's own activities is reduced</p> | Vehicle Fleet Efficiency | Driver training and ECO driving aids | DCC | Ongoing | Ongoing | Reduced CO ₂ emissions, potential financial savings | N/A | <p>Expansion of the use of bio-diesel by County Council Fleet vehicles. Encouraging the uptake of clean, low carbon vehicles and fuels, including increasing the availability of low carbon fuels locally.</p> <p>Development of a safer driving policy for County Council staff, including fleet and lease drivers, that teaches and promotes safer eco-driving techniques.</p> | Unknown | |

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|-------------|--|--------------------------|--------------------------------------|----------------|----------------|----------------------|--|--|--|---------------------------|----------|
| 10 | <p>Reduce Vehicle Emissions</p> <p>Ensure that air pollution from WDDC's own activities is reduced by: Continuing drive to better fuel efficiency, engine emission standards and emission controls on council owned and leased vehicles; Monitoring the implementation of the Carbon Management Plan to reduce emissions resulting from both business travel and travel to work.</p> | Vehicle Fleet Efficiency | Driver training and ECO driving aids | WDDC | Ongoing | Ongoing | Reduced pollution from WDDC vehicles, additional travel time | N/A | <p>Through the CMP a car share scheme between West Dorset and Weymouth Councils has been implemented and a minibus scheme between the two councils has also been introduced. Other actions include the use of pool cars and bicycles for staff and flexible working practices.</p> | Unknown | |

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|-------------|---|----------------------------------|--|----------------|----------------|----------------------|---|--|---|---------------------------|----------|
| 11 | <p>Reduce Vehicle Emissions</p> <p>Continue promoting Carshare Dorset</p> | Promoting Travel Alternatives | Other | DCC | N/A | Ongoing | Potential for reduced car ownership, reduced CO ₂ emissions, potential financial savings for users | N/A | DCC are continuing to promote carshare Dorset and currently have over 3000 members and will be integrated with Travel Dorset. In July 2012 money was awarded from the LSTF to promote CSD on the Weymouth-Dorchester corridor. Roadside boards currently being renewed and a radio campaign will be undertaken. | Unknown | |
| 12 | <p>Reduce Vehicle Emissions</p> <p>To explore working with larger vehicle operators in Dorchester to explore the feasibility of improving their own emissions and minimise vehicle movements.</p> | Promoting Low Emission Transport | Company Vehicle Procurement - Prioritising uptake of low emission vehicles | DCC, WDDC | 2013 | 2014 | Reduced traffic in the town centre, reduced CO ₂ emissions | N/A | The Freight Strategy encompasses an overall but does not specifically target Dorchester. Due to the Olympics in 2012, work in this area was postponed. However, WDDC will be engaging with businesses that operate larger vehicles in 2013-14. This will be explored with DCC as part of DTEP. | Unknown | |

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|-------------|--|---|---|----------------|----------------|----------------------|---|--|--|---------------------------|----------|
| 13 | Take account of Air Quality issues in tendering process (where relevant) | Policy Guidance and Development Control | Sustainable Procurement Guidance | DCC/WDDC | Ongoing | Ongoing | Protect air quality when letting contracts for goods and services | N/A | WDDC includes environmental performance in their procurement policy and practices | | |
| 14 | Refer to AQMA as an issue in developing the Local Development Framework and in bringing forward Local Transport Plan improvement schemes | Policy Guidance and Development Control Traffic Management | Air Quality Planning and Policy Guidance Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane | WDDC (DC) | 2012-2013 | 2014 | Reduce the potential for increased air pollution from development | N/A | The current joint West Dorset District Council and Weymouth and Portland Borough Council Local Plan contains policies covering air quality and was adopted by the Council in October 2015. This Local Plan sets out a long term planning strategy for the area up to 2031 and includes detailed policies and site proposals for housing, employment, leisure and infrastructure. DTEP is included in the Local Plan. | | |
| 15 | Ensure that the AQMA is taken into account as a material consideration in Development Control. | Policy Guidance and Development Control | Air Quality Planning and Policy Guidance | WDDC (DC) | Ongoing | | Reduce the potential for increased air pollution from development | N/A | Air Quality is a material Planning consideration and is referred to in the current Local Plan. | | |

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|-------------|--|---------------------------------|--|----------------|----------------|----------------------|---|--|---|---------------------------|----------|
| 16 | To continue to monitor for NO2 in High East Street and Dorchester until the annual objective has been met and the AQMA revoked. | Public Information | Other | WDDC (EH) | Ongoing | Ongoing | Provide good air quality information. Be able to target specific areas of concern | N/A | Monitoring continues and there are no plans to make any changes | | |
| 17 | Road Traffic Management Detailed modelling of HGVs going through Chideock, including various HGV reduction scenarios. | Freight and Delivery Management | Route Management Plans/ Strategic routing strategy for HGV's | DCC, WDDC | | | | N/A | Detailed air quality modelling concluded that removal the larger HGVs (A5 and A6) would reduce NO ₂ concentrations by approx 18% | Completed 2011 | |
| 18 | Road Traffic Management Seek to secure voluntary agreement with Freight Transport Association (FTA) to encourage HGVs from using A35. | Freight and Delivery Management | Route Management Plans/ Strategic routing strategy for HGV's | HA | | | | N/A | In 2011 the HA undertook a reliability study of using the alternative route – M3/A303. The findings have been sent to the FTA. WDDC have suggested that the Parish Council may wish to carry forward this work. | Ongoing | |

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|-------------|--|---------------------------------|--|----------------|----------------|----------------------|---------------------------|--|---|---------------------------|----------|
| 19 | Road Traffic Management Questionnaire to all members of the FTA to find out who uses the A35 and what would encourage them not to use the A35 | Freight and Delivery Management | Route Management Plans/ Strategic routing strategy for HGV's | HA | | | | N/A | Questionnaire sent out. 73% responded out of these use the A35 for local deliveries, cost and time were the major factors to encourage using the alternative route. | 2012 completed | |
| 20 | Road Traffic Management Check routes taken by continental HGV's | Freight and Delivery Management | Route Management Plans/ Strategic routing strategy for HGV's | HA | | | | N/A | Study undertaken by WDDC showed 27% HGV traffic not local, to target this group. | 2011 completed | |

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|-------------|---|---------------------------------|--|----------------|----------------|----------------------|---------------------------|--|---|---------------------------|----------|
| 21 | <p>Road Traffic Management</p> <p>Review reliability of M3 / A303 and A31 / A35 routes between Southampton and Honiton (Issues: distance, journey times, fuel costs, carbon emissions).</p> | Freight and Delivery Management | Route Management Plans/ Strategic routing strategy for HGV's | HA | | | | N/A | <p>Review has been completed. The results of the study concluded that:the A303 route is approximately 27 miles longer, the average journey times are very similar, ranging from 120 minutes to 127 minutes (this is an average for all vehicles). Over the 12 month period April 10 - March 11, the A303 route has been shown to be more reliable, with 82-83% of journeys 'on time', compared with 77-79% of journeys via the A31/A35. The alternative route could be approximately £20 cheaper for a freight vehicle on a return trip. Although the M3/A34/A303 is longer, the differences in the nature of the two routes mean that the M3/A34/A303 may have lower fuel consumption, which impacts upon the costs.</p> | 2013 completed | |

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|-------------|--|---------------------------------|--|----------------|----------------|----------------------|---------------------------|--|---|---------------------------|----------|
| 22 | Road Traffic Management Publicity campaign to encourage HGVs from using the A35 | Freight and Delivery Management | Route Management Plans/ Strategic routing strategy for HGV's | HA | | Ongoing | | N/A | The review in Action 17 has been provided to the Road Hauliers Association (RHA) and reported in their Journal. | Ongoing | |
| 23 | Road Traffic Management Voluntary HGV Survey to be undertaken in Chideock | Freight and Delivery Management | Route Management Plans/ Strategic routing strategy for HGV's | HA | | | | N/A | Undertaken by WDDC. Identified the majority of HGV's driving through the village were local, however 27% were trans-regional. | Completed 2011 | |

Dorchester

Chideock

Local Transport Plans and Strategies

Local Transport Plan 3 2011 – 2026

The Local Transport Plan 3 (LTP3) is a statutory document, which sets out a strategy for the management, maintenance and development of the County's transport system. It sets out a way forward to deliver transport needs through short, medium and long term transport solutions and how transport can improve safety and health, support the local economy, protect the environment and reduce carbon emissions and pollution. The LTP3 came into effect in April 2011 and has been produced for the whole of Bournemouth, Poole and Dorset. It covers the period from 2011 to 2026 and is based on a longer term strategy (2011 – 2026) and shorter term implementation plan(s) (3 years).

Travel Choice

This is a County wide initiative to raise awareness about the impacts of travel behaviour and to encourage people to make an informed decision about journeys they make. For example Cycle West, a project to promote our area as a destination for cross channel cycle tourism, promoting cycling events and cycle routes and providing training for adults wanting to get back on their bikes. This initiative also promotes Car Share Dorset, an online tool to encourage and facilitate car sharing by matching journeys, run jointly by Dorset County Council and Bournemouth and Poole Borough Councils. More information can be found

<https://www.dorsetforyou.com/409048>

Local Sustainable Transport Fund

Dorset County Council received £2.409m in 2012 from the Department for Transport through its Local Sustainable Transport Fund to provide sustainable alternatives for people to travel in Weymouth and Dorchester for the period 2012 – 2015.

<https://www.dorsetforyou.com/402591>

Climate change strategies

WDDC launched their Climate Change Strategy in 2009. This strategy aims to help residents, businesses and other organisation to reduce their carbon emissions by

30% by 2020 from 2005 levels. This strategy can be found at

<https://www.dorsetforyou.com/climatechange/west>

West Dorset District Council Carbon Management Plan (CMP)

West Dorset District Council's CMP was approved in March 2010. This plan sets targets for the reduction of carbon dioxide emissions from WDDC activities and outlines the project structure enabling those targets to be achieved.

Nottingham Declaration

In 2007 West Dorset District Council signed up to the Nottingham Declaration. The Nottingham Declaration is a voluntary pledge for local authorities to address the issues of climate change. It represents a high-level, broad statement of commitment for a council to make to its community. It now has over 300 councils as signatories. Under the Nottingham Declaration the council is committed to producing a strategy to reduce carbon emissions and the impact of climate change.

Planning Applications

The Public Health Team review all validated planning applications for their air quality impact. Relevant guidance is followed when reviewing these applications, i.e. Land-Use Planning and Development Control: Planning for Air Quality, May 2015 (EPUK and IAQM). Where there is a potential adverse impact, or the development introduces new sensitive receptors within the AQMA, an air quality impact assessment is required. Where this identifies a significant adverse impact on air quality or human health then mitigation measures are required.

Air Quality Planning Policies

West Dorset District Council and Weymouth & Portland Borough Council have prepared a joint Local Plan. The adopted Local Plan forms the main basis for making decisions on planning applications. It was adopted by Weymouth & Portland Borough Council on 15 October 2015 and by West Dorset District Council on 22 October 2015.

The Local Plan sets out a long term planning strategy for the area from 2011 - 2031 and includes detailed policies and site proposals for housing, employment, leisure and infrastructure.

The Councils Policies that relate to air quality in the 2015 Local Plan are:

Strategic Objective

Provide greater opportunities to reduce car use; improve safety; ensure convenient and appropriate public transport services; and seek greater network efficiency for pedestrians, cyclists and equestrians.

ENV11. THE PATTERN OF STREETS AND SPACES

i) Within and adjoining existing settlements, development should ensure that:

- In residential areas, or where pedestrian activity is high, the design of new vehicular routes should aim to keep traffic speed below 20mph;
- Places are designed to be clear and simple for people to find their way around, and not dominated by the road layout and parking, places are well connected throughout the site and with the surrounding area and do not unduly limit opportunities for future growth. Bus routes and bus stops, and strategic cycle and pedestrian routes, should be planned for;

ENV16. AMENITY

i) Proposals for development should be designed to minimize their impact on the amenity and quiet enjoyment of both existing residents and future residents within the development and close to it. As such, development proposals will only be permitted provided:

- They do not generate unacceptable pollution, vibration or detrimental emissions unless it can be demonstrated that the effects on amenity and living conditions, health and the natural environment can be mitigated to the appropriate standard.

COM4. NEW OR IMPROVED LOCAL RECREATIONAL FACILITIES

i) Proposals for new or improved open space or recreation facilities will be permitted provided that:

- The proposal would be well-located to be accessible to its main catchment population and would not generate significant single purpose trips by private car;

COM7. CREATING A SAFE AND EFFICIENT TRANSPORT NETWORK

- i) Development that generates significant movement should be located where the need to travel will be minimised and the use of sustainable transport modes including public transport, walking and cycling can be maximised.
- ii) Development should be located where the volume of traffic likely to be generated can be accommodated on the local highway network without exacerbating community severance.
- iii) Development will not be permitted where the residual cumulative impacts on the efficiency of the transport network are likely to be severe.
- v) The delivery of a strategic cycle network and improvements to the public rights of way network will be supported.

COM8. TRANSPORT INTERCHANGES AND COMMUNITY TRAVEL EXCHANGES

- i) Proposals which involve the improvement of the public realm around public transport interchanges will be encouraged and supported as long as there is no detriment to the function of the interchange.
- ii) Proposals for community travel exchanges in urban and rural areas will be supported, provided that:
 - it can provide safe access to the public right of way network, cycle network and highway network and can accommodate and provide safe access and egress for large vehicles;
 - it has space to accommodate sufficient car and cycle parking;

Consideration has been given to air quality: Where there is reason to believe that the development would give rise to a significant change in air quality (either individually or cumulatively with other planned development) the councils may ask for an air quality assessment. Particular caution will be exercised in or close to designated Air Quality Management Areas, and due regard had to any air quality action plan.

2.3 PM_{2.5} – Local Authority Approach to Reducing Emissions and or Concentrations

As detailed in Policy Guidance LAQM.PG16 (Chapter 7), local authorities are expected to work towards reducing emissions and/or concentrations of PM_{2.5} (particulate matter with an aerodynamic diameter of 2.5µm or less). There is clear evidence that PM_{2.5} has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

West Dorset District Council do not currently monitor for PM_{2.5}. The closest AURN Monitoring Stations are located within Bournemouth Borough Council, approximately 48 km and, Christchurch Borough Council 54km.

Defra's national background maps have been used to identify the modelled PM_{2.5} concentrations for the calendar year 2015.

The average of Total PM_{2.5} of all 1116 locations (centre point of 1 km x 1 km grids) was 9.04µg/m³ (Min 7.70 µg/m³ and Max 11.25µg/m³)

PM_{2.5} concentrations are considered to be well below the EU Limit Value of 25 µg/m³. However, all Dorset Local Authorities and Dorset Public Health are looking at the possibility of a joint project to establish the actual levels of PM_{2.5}. Work will continue with this possible pan-Dorset air quality project, and the outcome / progress will be reported in the next ASR.

In addition, the Council is taking the following measures to address PM_{2.5}:

- Inspection of processes under the LAPPC Regime
- The AQAP in place looks at measures to reduce the exposure of residents within the AQMAs to NO₂, however, these initiatives will have a positive effect on PM_{2.5} levels.
- Liaise with Dorset County Council (the Highway Authority) with regards to improvements schemes on the road infrastructure as and when necessary
- Travel choices as detailed above.

3 Air Quality Monitoring Data and Comparison with Air Quality Objectives and National Compliance

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

This section sets out what monitoring has taken place and how it compares with objectives.

West Dorset District Council has a continuous air quality monitoring station located in Main Street, Chideock, next to the A35 trunk road, details of which are shown in Table A.1. This station contains an oxide of nitrogen monitor. Monitoring commenced in January 2010.

The monitor is situated approximately 2m from the A35. Due to location restrictions in Chideock the monitor it is not situated in the worst case location, along the steep incline, westwards towards Lyme Regis. This is due to a lack of space and limited access to utilities. The monitor is still located at a representative location regarding the distance of the monitor to the road and the distance from the road and receptors. However as this site is in an open location; the readings here represent background levels of nitrogen dioxide and are way below the annual mean objective.

West Dorset District Council undertook automatic (continuous) monitoring at one site during 2015. Table A.1 in Appendix A shows the details of the site.

A map showing the location of the automatic monitoring site is provided in Appendix E. Further details on how the monitors are calibrated and how the data has been adjusted are included in Appendix D.

3.1.2 Non-Automatic Monitoring Sites

Continuous monitoring is a very expensive way of assessing air quality. The main pollutant of concern in the district is nitrogen dioxide and there is a way of monitoring this at a low cost. Passive diffusion tubes are relatively inexpensive and provide a monthly average of NO₂ concentrations. Because of the low cost, they allow West Dorset to monitor NO₂ widely across the district.

Diffusion tubes are exposed for 4/5 week periods throughout the year at each monitoring site and are deployed using a holder and rubber collar method. They are located at a variety of sites, including kerbside sites, roadside sites or background sites and placed approximately 2m above ground level and positioned at locations representative of public exposure.

The tubes are supplied and analysed by Gradko International Ltd, and the preparation method used is 50% TEA in acetone.

Monitoring is currently undertaken in three areas of West Dorset where elevated levels of nitrogen dioxide had been identified. Monitoring was discontinued in Sherborne, Lyme Regis and Abbotsbury in 2010 as there had been no exceedences of the annual objective for the past 8 years.

Chideock - A small village in West Dorset, dwellings are situated either side of the A35 (trunk road) going through the village with dwellings immediately adjacent to a steep incline leaving the village going west. An air quality management area for NO₂ has been declared along the A35 as annual average NO₂ concentrations here exceed the annual objective concentration; Tubes have been relocated along both sides of the trunk road in Chideock to assess the extent of the elevated levels within Chideock with a view to amending the size of the AQMA boundary to reflect previously monitored results.

Dorchester –The County Town of Dorset, with a population of approximately 19,000. WDDC have been monitoring nitrogen dioxide within the town centre, predominantly along the B3150 High East and High West Street where some exceedences of the AQO have been observed. Due to these exceedences an AQMA was declared on the 5th May 2009 along High East Street. It was decided to undertake further monitoring in High East Street in 2010 to assess the extent of the NO₂ levels, to extend the monitoring along High East and High West Street and to relocate monitoring sites to the routes predicted to be effected by the proposed Dorchester Transport & Environment Plan (DTEP) transport improvements.

Bridport - A market town located approximately 1km from the coast and 20km west of Dorchester. Annual average NO₂ concentrations adjacent to the A35 (trunk road) along East Road are monitored by WDDC and have been found to exceed the annual objective concentration at one dwelling located very close to the kerbside.

The study area in Bridport consists of the A35 along East Road on the eastern side of Bridport.

West Dorset District Council undertook non- automatic (passive) monitoring of NO₂ at 24 sites during 2015. Table A.2 in Appendix A shows the details of the sites.

Maps showing the location of the monitoring sites are provided in Appendix E.

Further details on Quality Assurance/Quality Control (QA/QC) and bias adjustment for the diffusion tubes are included in Appendix D.

3.2 Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for “annualisation” and bias. Further details on adjustments are provided in Appendix D.

3.2.1 Nitrogen Dioxide (NO₂)

The two air quality objectives that ambient concentrations of NO₂ need to be assessed against are as follows:

- An annual mean of 40µg/m³; and
- The number of exceedences of the 1 hour mean of 200µg/m³ (18 allowable exceedences in total).

It should be noted that it is only possible to directly assess against the 1 hour objective if hourly monitoring data is available. With regards to the hourly objective regarding diffusion tubes the approach suggested in LAQM. TG(16) has been adopted. The approach, based on empirical studies suggests that where the annual mean is less than 60µg/m³, exceedences of the short term objective are unlikely.

Table A.3 in Appendix A compares the ratified and adjusted monitored NO₂ annual mean concentrations for the past 5 years with the air quality objective of 40µg/m³.

For diffusion tubes, the full monthly results for 2015 are provided in Appendix B.

Table A.4 in Appendix A compares the ratified continuous monitored NO₂ hourly mean concentrations for the past 5 years with the air quality objective of 200µg/m³, not to be exceeded more than 18 times per year. There were no exceedences of this objective in 2015.

The 2015 diffusion tube monitoring results show 3 sites exceeding the NO₂ annual mean objective. One was within a designated AQMA and two are outside and located on East Road, Bridport. The monitoring results at all diffusion tube monitoring locations in 2015 were below 60ug/m³ which suggests that exceedences of the hourly objective are unlikely.

Chideock

In 2010, further monitoring was undertaken in Chideock to further define the levels of NO₂ as previous monitoring was only undertaken on the South side of the village, sites 724, 725 and 726. Historical results have shown that exceedences were only found on the steep incline, South of the A35 going out of the village, West towards Lyme Regis (724 and 726). New sites are situated on the North side of the road, with the traffic here going downhill towards the centre of the village. Monitoring in 2015 did not show any exceedences in areas in Chideock other than those on the steep incline, this sites are located within the AQMA boundary.

Site 725 is located on the façade of a property that is directly on the main road with no footpath. This area is in the middle of the village with flat topography. There have been no exceedences of the objective here for over 10 years. The continuous monitor and the co-located tubes (735, 736 and 737), that are in a similar position to 725, in the middle of the village at the bottom of the hill, were below the objective in 2015.

Site 727 (Figure E.2) is located on the steep incline going out of the village. The site has exceeded the objective for 2015 but is in the AQMA boundary and further confirms the localised exceedance caused by the traffic climbing uphill within the 30mph zone.

Site 726 is located within the AQMA boundary. This site has previously exceeded the objective, however the result for 2015 show the objective was met at this site.

Figure 3.1 shows an overall reduction in NO₂ levels at monitoring sites in Chideock for 2015.

Dorchester

Table A3 shows that the annual mean objective for NO₂ was met at all monitoring locations in Dorchester in 2015, including monitoring sites within the AQMA.

Figure 3.2 shows an overall reduction in NO₂ levels at monitoring sites in Dorchester.

Bridport

Sites 717 and 730 are located either side of a property that is situated approximately 2m from the A35 trunk road. Monitoring from 2015 shows that these sites exceed the objective for NO₂. This location is again on a steep incline going Eastbound out of Bridport towards Dorchester. Apart from this property, all other properties that front the road within this vicinity are approximately 10m back from the roadside. Tube 733 was located on the façade of one of these properties in 2010 and results showed that this was within the objective and this tube has since been relocated to Dorchester.

Sites 734, 732 and 731 are located at the bottom of the hill, adjacent to relevant receptors. These sites have not shown exceedences in 2015. Therefore, evidence shows that the objective is only likely to exceed at one property. Site 730 shows the annual mean for 2015 to be below 60ug/m³, which suggests that exceedences of the hourly objective are unlikely.

A Detailed Assessment was undertaken in 2011 and concluded that an AQMA was not to be declared here. This outcome was not accepted by DEFRA but the Council resolved to continue to monitor NO₂ to check levels here in the future.

Long term diffusion tube monitoring in West Dorset is provided in Appendix C.

Trends in Annual Mean Nitrogen Dioxide Concentrations measured at Diffusion Tube Monitoring Sites

Figure 3.1 Chideock

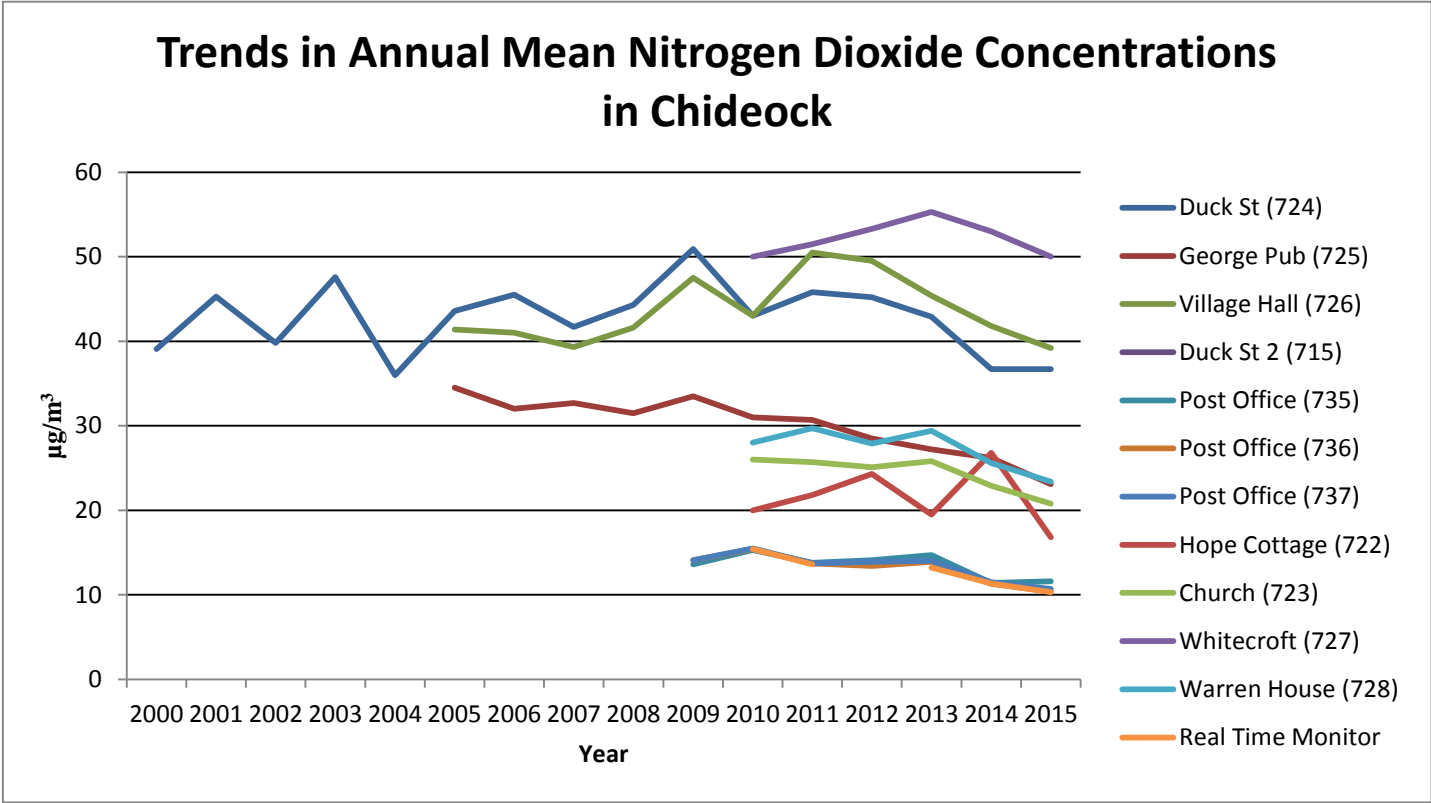


Figure 3.2 Dorchester

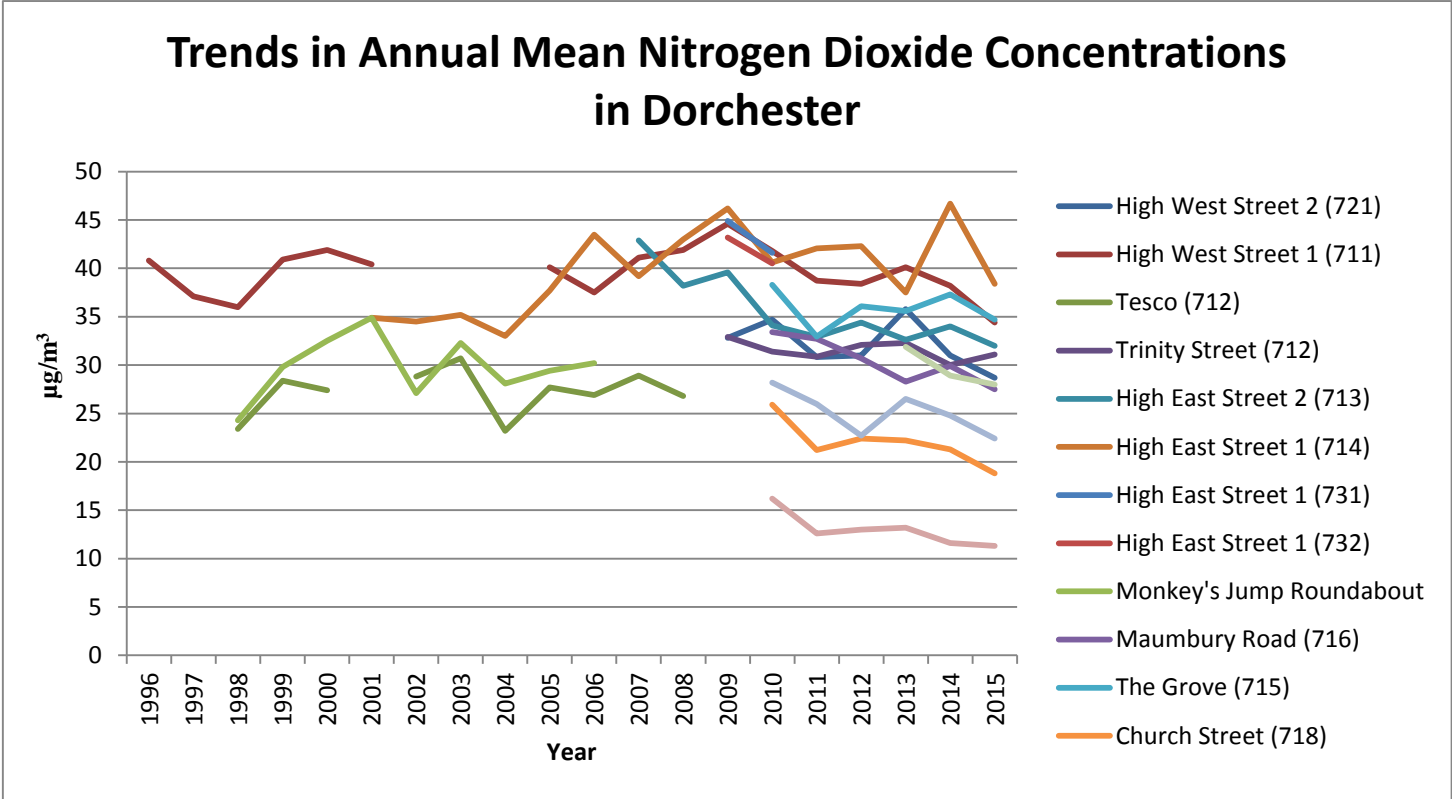
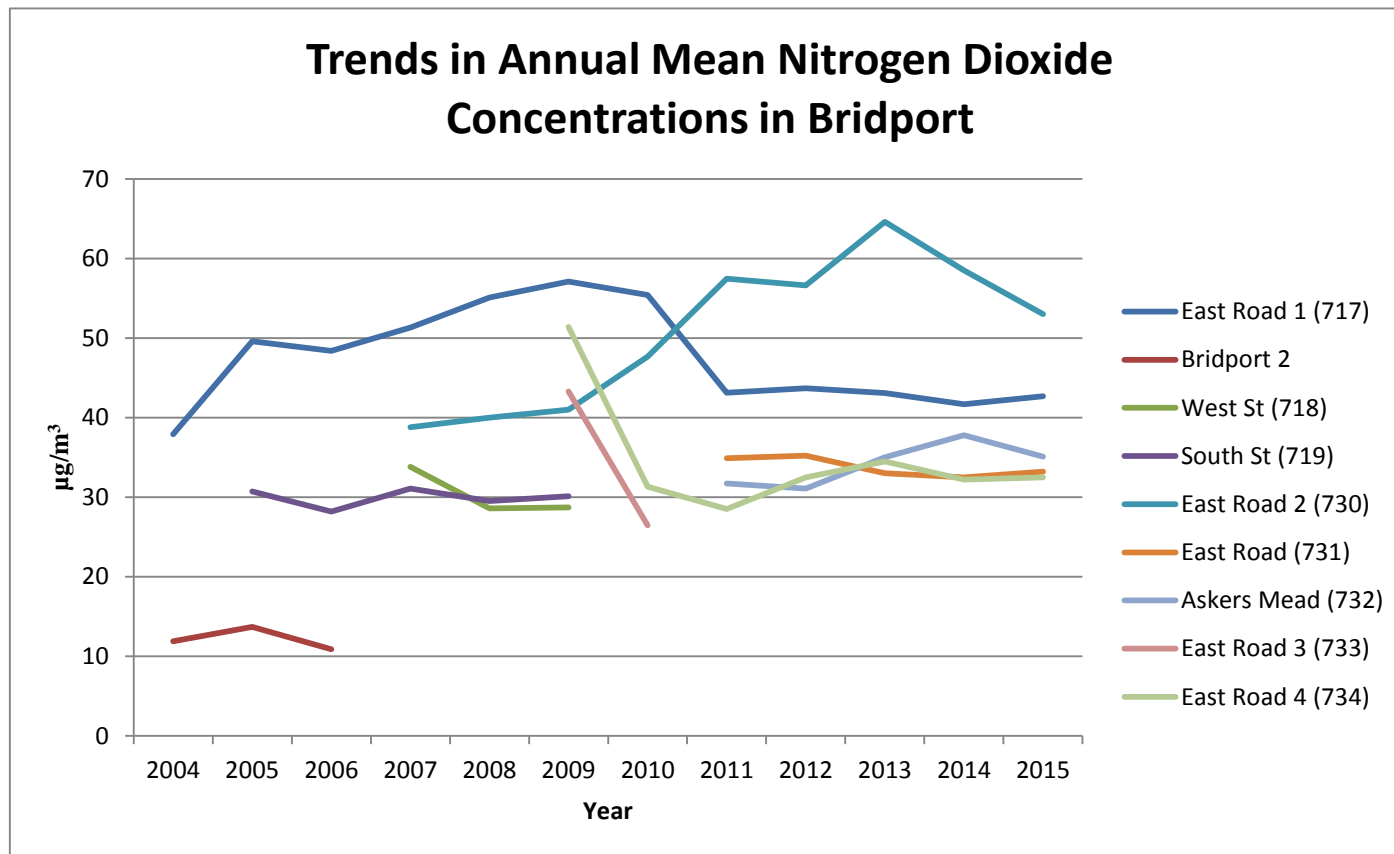


Figure 3.3 Bridport



Appendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites

| Site ID | Site Name | Site Type | X OS Grid Ref | Y OS Grid Ref | Pollutants Monitored | In AQMA? | Monitoring Technique | Distance to Relevant Exposure (m) ⁽¹⁾ | Distance to kerb of nearest road (m) ⁽²⁾ | Inlet Height (m) |
|----------|------------------------------------|-----------|---------------|---------------|----------------------|----------|----------------------|--|---|------------------|
| Chideock | Post Office, Main Street, Chideock | Roadside | 342301 | 92817 | NO ₂ | N | Chemiluminescent | N/A | 2m | 2m |

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

(2) N/A if not applicable.

The location of the automatic analyser is representative of relevant exposure i.e. the distance of the inlet from the source is the same distance as the façade of residential dwellings.

Table A.2 – Details of Non-Automatic Monitoring Sites

| Site ID | Site Name | Site Type | X OS Grid Ref | Y OS Grid Ref | Pollutants Monitored | In AQMA ? | Distance to Relevant Exposure (m) ⁽¹⁾ | Distance to kerb of nearest road (m) ⁽²⁾ | Tube collocated with a Continuous Analyser? | Height (m) |
|---------|-------------------------------|-----------|---------------|---------------|----------------------|-----------|--|---|---|------------|
| 711 | Dorchester High West Street | Roadside | 369121 | 90739 | NO ₂ | N | N | 2m | N | 2.5 |
| 712 | Dorchester Trinity Street | Roadside | 369171 | 90711 | NO ₂ | N | Y - on Façade | 2m | N | 2.5 |
| 713 | Dorchester High East Street 2 | Roadside | 369484 | 90759 | NO ₂ | Y | Y – on façade | 2m | N | 2.5 |
| 714 | Dorchester High East Street 1 | Roadside | 369387 | 90742 | NO ₂ | Y | Y – on façade | 2m | N | 2.5 |
| 715 | Dorchester | Roadside | 368907 | 90739 | NO ₂ | N | Y (1m) | 2m | N | 2.5 |

| Site ID | Site Name | Site Type | X OS Grid Ref | Y OS Grid Ref | Pollutants Monitored | In AQMA ? | Distance to Relevant Exposure (m) ⁽¹⁾ | Distance to kerb of nearest road (m) ⁽²⁾ | Tube collocated with a Continuous Analyser? | Height (m) |
|---------|----------------------------|------------|---------------|---------------|----------------------|-----------|--|---|---|------------|
| | The Grove | | | | | | | | | |
| 716 | Dorchester Maumbury Road | Roadside | 368948 | 90089 | NO ₂ | N | Y – on façade | 2m | N | 2.5 |
| 718 | Dorchester Church Street | Roadside | 369381 | 90698 | NO ₂ | N | Y – on façade | 2m | N | 2.5 |
| 719 | Dorchester Bridport Road | Roadside | 368815 | 90636 | NO ₂ | N | Y (2m) | 2m | N | 2.5 |
| 720 | Dorchester Borough Gardens | Background | 368982 | 90453 | NO ₂ | N | 5m | N/A | N | 2.5 |
| 721 | Dorchester | Roadside | 368982 | 90706 | NO ₂ | N | Y – on | 3m | N | 2.5 |

| Site ID | Site Name | Site Type | X OS Grid Ref | Y OS Grid Ref | Pollutants Monitored | In AQMA ? | Distance to Relevant Exposure (m) ⁽¹⁾ | Distance to kerb of nearest road (m) ⁽²⁾ | Tube collocated with a Continuous Analyser? | Height (m) |
|---------|----------------------|-----------|---------------|---------------|----------------------|-----------|--|---|---|------------|
| | High West Street 2 | | | | | | façade | | | |
| 717 | Bridport East Road 1 | Roadside | 347557 | 93023 | NO ₂ | N | N | 2m | N | 2.5 |
| 730 | Bridport East Road 2 | Roadside | 347612 | 93050 | NO ₂ | N | N | 2m | N | 2.5 |
| 731 | Bridport East Road | Roadside | 347277 | 92867 | NO ₂ | N | N | 2m | N | 2 |
| 732 | Bridport Askers Mead | Roadside | 347262 | 92873 | NO ₂ | N | Y | 2m | N | 2.5 |
| 733 | Dorchester | Roadside | 369002 | 90275 | NO ₂ | N | Y – on | 2m | N | 2.5 |

| Site ID | Site Name | Site Type | X OS Grid Ref | Y OS Grid Ref | Pollutants Monitored | In AQMA ? | Distance to Relevant Exposure (m) ⁽¹⁾ | Distance to kerb of nearest road (m) ⁽²⁾ | Tube collocated with a Continuous Analyser? | Height (m) |
|---------|--------------------------|-----------|---------------|---------------|----------------------|-----------|--|---|---|------------|
| | Great Western Road | | | | | | façade | | | |
| 734 | Bridport East Road 4 | Roadside | 347489 | 92989 | NO ₂ | N | Y (1m) | 2m | N | 2.5 |
| 722 | Chideock Main Street | Roadside | 342364 | 92814 | NO ₂ | N | Y (2m) | 2m | N | 2 |
| 723 | Chideock St Giles Church | Roadside | 342151 | 92869 | NO ₂ | N | N | 2m | N | 2 |
| 724 | Chideock Duck Street | Roadside | 342190 | 92840 | NO ₂ | Y | Y – on façade | 1m | N | 2.5 |

| Site ID | Site Name | Site Type | X OS Grid Ref | Y OS Grid Ref | Pollutants Monitored | In AQMA ? | Distance to Relevant Exposure (m) ⁽¹⁾ | Distance to kerb of nearest road (m) ⁽²⁾ | Tube collocated with a Continuous Analyser? | Height (m) |
|---------|-----------------------|-----------|---------------|---------------|----------------------|-----------|--|---|---|------------|
| 725 | Chideock George Inn | Roadside | 342486 | 92791 | NO ₂ | N | Y (1m) | 1m | N | 2 |
| 726 | Chideock Village Hall | Roadside | 342015 | 92887 | NO ₂ | Y | N | 1m | N | 2.5 |
| 727 | Chideock Main Street | Roadside | 341946 | 92908 | NO ₂ | Y | Y (1m) | 1m | N | 2 |
| 728 | Chideock Main Street | Roadside | 342025 | 92894 | NO ₂ | N | Y (1m) | 1m | N | 2 |
| 735 | Chideock Triplicate | Roadside | 342301 | 92817 | NO ₂ | N | N | 2m | Y | 2 |
| 736 | Chideock Triplicate | Roadside | 342301 | 92817 | NO ₂ | N | N | 2m | Y | 2 |

| Site ID | Site Name | Site Type | X OS Grid Ref | Y OS Grid Ref | Pollutants Monitored | In AQMA ? | Distance to Relevant Exposure (m) ⁽¹⁾ | Distance to kerb of nearest road (m) ⁽²⁾ | Tube collocated with a Continuous Analyser? | Height (m) |
|---------|---------------------|-----------|---------------|---------------|----------------------|-----------|--|---|---|------------|
| 737 | Chideock Triplicate | Roadside | 342301 | 92817 | NO ₂ | N | N | 2m | Y | 2 |

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on/adjacent to the façade of a residential property).

(2) N/A if not applicable.

Table A.3 – Annual Mean NO₂ Monitoring Results

| Site ID | Site Type | Monitoring Type | Valid Data Capture 2015 (%) ⁽²⁾ | NO ₂ Annual Mean Concentration (µg/m ³) ⁽³⁾ | | | | |
|----------|------------|-----------------|--|---|-------------|-------------|-------------|-------------|
| | | | | 2011 | 2012 | 2013 | 2014 | 2015 |
| Chideock | Roadside | Automatic | 99.86 | 13.6 | N/A | 13.21 | 11.32 | 10.31 |
| 711 | Roadside | Diffusion Tube | 91.67 | 38.73 | 38.4 | 40.1 | 38.2 | 34.4 |
| 712 | Roadside | Diffusion Tube | 100 | 30.85 | 32.1 | 32.3 | 30.0 | 31.1 |
| 713 | Roadside | Diffusion Tube | 100 | 32.91 | 34.4 | 32.6 | 34.0 | 32.0 |
| 714 | Roadside | Diffusion Tube | 100 | 42.06 | 42.3 | 37.5 | 46.7 | 38.4 |
| 715 | Roadside | Diffusion Tube | 100 | 32.93 | 36.1 | 35.6 | 37.3 | 34.7 |
| 716 | Roadside | Diffusion Tube | 66.67 | 32.7 | 30.7 | 28.3 | 29.9 | 27.5 |
| 718 | Roadside | Diffusion Tube | 100 | 21.23 | 22.4 | 22.2 | 21.3 | 18.8 |
| 719 | Roadside | Diffusion Tube | 100 | 25.99 | 22.7 | 26.5 | 24.8 | 22.4 |
| 720 | Background | Diffusion Tube | 100 | 12.58 | 13.0 | 13.2 | 11.6 | 11.3 |
| 721 | Roadside | Diffusion Tube | 100 | 30.84 | 31.0 | 35.8 | 31.0 | 28.7 |
| 717 | Roadside | Diffusion Tube | 91.67 | 43.11 | 43.7 | 43.1 | 41.7 | 42.7 |
| 730 | Roadside | Diffusion Tube | 100 | 57.45 | 56.6 | 64.6 | 58.5 | 53.0 |
| 731 | Roadside | Diffusion Tube | 100 | | 35.2 | 33.0 | 32.5 | 33.2 |
| 732 | Roadside | Diffusion Tube | 100 | | 31.1 | 35.0 | 37.8 | 35.1 |
| 733 | Roadside | Diffusion Tube | 100 | | | 31.9 | 28.9 | 28.0 |
| 734 | Roadside | Diffusion Tube | 100 | 28.58 | 32.5 | 34.5 | 32.2 | 32.5 |
| 722 | Roadside | Diffusion Tube | 91.67 | 21.8 | 24.3 | 19.5 | 26.8 | 16.8 |
| 723 | Roadside | Diffusion Tube | 83.33 | 25.7 | 25.1 | 25.8 | 22.9 | 20.8 |
| 724 | Roadside | Diffusion Tube | 91.67 | 45.8 | 45.2 | 42.9 | 36.7 | 36.7 |
| 725 | Roadside | Diffusion Tube | 100 | 30.7 | 28.5 | 27.2 | 26.2 | 23.1 |
| 726 | Roadside | Diffusion Tube | 100 | 50.5 | 49.5 | 45.4 | 41.8 | 39.2 |
| 727 | Roadside | Diffusion Tube | 91.67 | 51.5 | 53.3 | 55.3 | 53.0 | 50.0 |
| 728 | Roadside | Diffusion Tube | 75 | 29.7 | 27.9 | 29.4 | 25.6 | 23.4 |
| 735 | Roadside | Diffusion Tube | 100 | 13.8 | 14.1 | 14.7 | 11.4 | 11.6 |

| Site ID | Site Type | Monitoring Type | Valid Data Capture 2015 (%) ⁽²⁾ | NO ₂ Annual Mean Concentration (µg/m ³) ⁽³⁾ | | | | |
|---------|-----------|-----------------|--|---|------|------|------|------|
| | | | | 2011 | 2012 | 2013 | 2014 | 2015 |
| 736 | Roadside | Diffusion Tube | 100 | 13.7 | 13.4 | 13.9 | 11.3 | 10.4 |
| 737 | Roadside | Diffusion Tube | 100 | 13.7 | 13.9 | 14.0 | 11.5 | 10.7 |

Notes: Exceedances of the NO₂ annual mean objective of 40µg/m³ are shown in **bold**.

NO₂ annual means exceeding 60µg/m³, indicating a potential exceedance of the NO₂ 1-hour mean objective are shown in **bold and underlined**.

(1) data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

(3) Means for diffusion tubes have been corrected for bias. All means have been “annualised” as per Technical Guidance LAQM.TG16 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Valid data capture for tube 716 was less than 75% and has therefore been annualised (Appendix D, Table D.2).

Table A.4 – 1-Hour Mean NO₂ Monitoring Results

| Site ID | Site Type | Monitoring Type | Valid Data Capture 2015 (%) ⁽²⁾ | NO ₂ 1-Hour Means > 200µg/m ³ ⁽³⁾ | | | | |
|----------|-----------|-----------------|--|--|------|------|------|------|
| | | | | 2011 | 2012 | 2013 | 2014 | 2015 |
| Chideock | Roadside | Automatic | 99.86 | 0 | N/A | 0 | 0 | 0 |

Notes: Exceedances of the NO₂ 1-hour mean objective (200µg/m³ not to be exceeded more than 18 times/year) are shown in **bold**.

(1) data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

(3) If the period of valid data is less than 90%, the 99.8th percentile of 1-hour means is provided in brackets.

Appendix B: Full Monthly Diffusion Tube Results for 2015

Table B.1 – NO₂ Monthly Diffusion Tube Results - 2015

| Site ID | NO ₂ Mean Concentrations (µg/m ³) | | | | | | | | | | | | | Annual Mean | |
|------------------------------|--|------|------|------|------|------|------|------|------|------|------|------|----------|------------------------------|--|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Raw Data | Bias Adjusted ⁽¹⁾ | |
| | | | | | | | | | | | | | | | |
| 711 Dorch High West Street | 43.4 | 39.7 | 40.6 | 38.5 | 36.4 | 36.4 | 36.9 | 28.8 | 27.5 | 33.6 | 31.9 | | 35.8 | 34.4 | |
| 712 Dorch Trinity Street | 35.5 | 31.2 | 33.2 | 28.8 | 24.4 | 25.3 | 26.8 | 33.0 | 45.6 | 46.4 | 33.2 | 25.9 | 32.4 | 31.1 | |
| 713 Dorch High East Street 2 | 36.7 | 30.7 | 35.1 | 30.7 | 31.8 | 28.3 | 31.3 | 45.9 | 32.4 | 32.0 | 34.3 | 31.0 | 33.3 | 32.0 | |
| 714 Dorch High East Street 1 | 36.0 | 35.7 | 37.6 | 40.5 | 42.0 | 37.4 | 49.2 | 38.5 | 36.8 | 36.0 | 46.1 | 44.6 | 40.0 | 38.4 | |
| 715 Dorch The Grove | 40.0 | 35.0 | 33.6 | 31.0 | 37.8 | 39.1 | 42.8 | 32.2 | 43.8 | 39.0 | 34.5 | 25.4 | 36.2 | 34.7 | |
| 716 Dorch Maumbury Road | 34.9 | 31.1 | 29.2 | 29.2 | | | 27.3 | | 25.2 | 33.7 | | 22.6 | 29.1 | 27.5 | |
| 733 Dorch Great Western Road | 36.9 | 30.2 | 27.3 | 22.8 | 22.9 | 24.0 | 23.0 | 33.4 | 36.2 | 45.9 | 24.5 | 22.9 | 29.2 | 28.0 | |
| 718 Dorch Church Street | 23.5 | 24.8 | 18.3 | 21.2 | 15.1 | 16.3 | 15.2 | 21.3 | 22.3 | 26.9 | 16.8 | 13.1 | 19.6 | 18.8 | |

| Site ID | NO ₂ Mean Concentrations (µg/m ³) | | | | | | | | | | | | | |
|------------------------------|--|------|------|------|------|------|------|------|------|------|------|------|-------------|------------------------------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual Mean | |
| | | | | | | | | | | | | | Raw Data | Bias Adjusted ⁽¹⁾ |
| 719 Dorch Bridport Road | 29.7 | 25.7 | 24.6 | 24.2 | 19.5 | 18.4 | 16.8 | 24.8 | 28.1 | 31.1 | 22.3 | 15.3 | 23.4 | 22.4 |
| 720 Dorch Borough Gardens | 16.1 | 13.1 | 11.4 | 10.1 | 8.2 | 7.4 | 7.9 | 9.9 | 10.6 | 14.0 | 23.1 | 9.9 | 11.8 | 11.3 |
| 721 Dorch High West Street 2 | 39.5 | 31.6 | 32.9 | 34.6 | 26.7 | 27.7 | 28.2 | 22.0 | 34.7 | 38.3 | 24.2 | 18.2 | 29.9 | 28.7 |
| 717 Bridport East Road | 42.4 | 39.0 | 35.6 | 41.7 | 49.1 | 45.8 | 48.3 | 56.7 | 53.5 | 46.0 | | 31.4 | 44.5 | 42.7 |
| 730 Bridport East Road 2 | 47.9 | 47.5 | 45.7 | 54.3 | 56.6 | 52.5 | 61.3 | 72.4 | 75.1 | 65.1 | 44.7 | 40.0 | 55.2 | 53.0 |
| 731 Bridport East Road | 34.9 | 36.4 | 33.7 | 32.7 | 31.1 | 34.0 | 38.8 | 38.0 | 38.2 | 34.5 | 34.1 | 28.5 | 34.6 | 33.2 |
| 732 Bridport Askers Mead | 36.0 | 36.8 | 34.2 | 39.8 | 37.2 | 39.2 | 38.4 | 40.3 | 40.5 | 39.8 | 31.1 | 25.4 | 36.6 | 35.1 |
| 734 Bridport East Road 4 | 37.7 | 34.4 | 36.0 | 37.9 | 30.3 | 30.7 | 32.0 | 36.7 | 38.8 | 34.1 | 32.0 | 25.7 | 33.9 | 32.5 |
| 722 Chideock Hope Cottage | | 19.4 | 20.3 | 23.7 | 17.1 | 19.6 | 16.1 | 21.0 | 24.2 | 25.8 | 14.5 | 8.9 | 19.1 | 16.8 |
| 723 Chideock Church | 24.0 | 22.6 | 20.9 | 28.3 | 27.1 | 25.8 | | | 31.4 | 26.6 | 17.3 | 12.0 | 23.6 | 20.8 |

| Site ID | NO ₂ Mean Concentrations (µg/m ³) | | | | | | | | | | | | | |
|---------------------------|--|------|------|------|------|------|------|-------|------|------|------|------|-------------|------------------------------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual Mean | |
| | | | | | | | | | | | | | Raw Data | Bias Adjusted ⁽¹⁾ |
| 724 Chideock Duck Street | 18.3 | 38.5 | 37.2 | 47.6 | 48.8 | 45.5 | 51.9 | 54.0 | 45.2 | 44.1 | | 27.5 | 41.7 | 36.7 |
| 725 Chideock George Pub | 26.7 | 25.2 | 24.0 | 30.5 | 26.9 | 24.9 | 25.2 | 33.0 | 28.4 | 30.2 | 22.8 | 17.7 | 26.3 | 23.1 |
| 726 Chideock Village Hall | 37.5 | 38.3 | 38.9 | 46.1 | 48.3 | 46.2 | 54.4 | 54.3 | 54.3 | 47.0 | 38.8 | 30.2 | 44.5 | 39.2 |
| 727 Chideock Whitecroft | | 47.6 | 44.7 | 57.3 | 55.3 | 55.0 | 55.7 | 101.1 | 72.5 | 61.0 | 44.3 | 30.1 | 56.8 | 50.0 |
| 728 Chideock Warren House | 23.4 | 26.3 | 24.2 | 30.8 | 26.3 | | | 41.5 | | 29.1 | 23.1 | 15.0 | 26.6 | 23.4 |
| 735 Chideock Post Office | 14.9 | 12.5 | 14.8 | 12.0 | 10.8 | 10.4 | 11.1 | 27.2 | 12.8 | 14.5 | 10.3 | 7.5 | 13.2 | 11.6 |
| 736 Chideock Post Office | 15.3 | 13.5 | 15.9 | 13.1 | 11.1 | 10.6 | 10.0 | 10.4 | 11.5 | 14.9 | 7.9 | 7.3 | 11.8 | 10.4 |
| 737 Chideock Post Office | 15.4 | 13.6 | 16.0 | 12.5 | 11.2 | 10.3 | 10.1 | 12.4 | 12.1 | 14.6 | 9.7 | 7.4 | 12.1 | 10.7 |

(1) See Appendix C for details on bias adjustment

Appendix C: Long Term Diffusion Tube Monitoring in West Dorset

| Site | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|--------------------------|-------------|------|------|-------------|-------------|-------------|------|-------------|------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|
| DORCHESTER | | | | | | | | | | | | | | | | | |
| High West Street 2 (721) | | | | | | | | | | | | | | 32.8 | 34.7 | 30.84 | 31.0 |
| High West Street 1 (711) | 40.8 | 37.1 | 36.0 | 40.9 | 41.9 | 40.4 | | 42.0 | | 40.1 | 37.5 | 41.1 | 41.9 | 44.6 | 41.8 | 38.73 | 38.4 |
| Tesco (712) | | | 23.4 | 28.4 | 27.4 | | 28.8 | 30.7 | 23.2 | 27.7 | 26.9 | 28.9 | 26.8 | | | | |
| Trinity Street (712) | | | | | | | | | | | | | | 32.9 | 31.4 | 30.85 | 32.1 |
| High East Street 2 (713) | | | | | | | | | | | | 42.9 | 38.2 | 39.6 | 34.1 | 32.91 | 34.4 |
| High East Street 1 (714) | | | | | | 34.9 | 34.5 | 35.2 | 33.0 | 37.7 | 43.5 | 39.2 | 43.0 | 46.2 | 40.6 | 42.06 | 42.3 |
| High East Street 1 (731) | | | | | | | | | | | | | | 44.9 | 41.6 | | |
| High East Street 1 (732) | | | | | | | | | | | | | | 43.2 | 40.5 | | |
| Monkey's Jump Roundabout | | | 24.3 | 29.8 | 32.5 | 34.9 | 27.1 | 32.3 | 28.1 | 29.4 | 30.2 | | | | | | |
| Maumbury Road (716) | | | | | | | | | | | | | | | 33.4 | 32.7 | 30.7 |
| The Grove (715) | | | | | | | | | | | | | | | 38.3 | 32.93 | 36.1 |
| Church Street (718) | | | | | | | | | | | | | | | 25.9 | 21.23 | 22.4 |
| Bridport Road (719) | | | | | | | | | | | | | | | 28.2 | 25.99 | 22.7 |
| Borough Gardens (720) | | | | | | | | | | | | | | | 16.2 | 12.58 | 13.0 |
| CHIDEOCK | | | | | | | | | | | | | | | | | |
| Duck St (724) | | | | | 39.1 | 45.3 | 39.8 | 47.6 | 36.0 | 43.6 | 45.5 | 41.7 | 44.3 | 50.9 | 43.0 | 45.8 | 45.2 |
| George Pub (725) | | | | | | | | | | 34.5 | 32.0 | 32.7 | 31.5 | 33.5 | 31.0 | 30.7 | 28.5 |
| Village Hall (726) | | | | | | | | | | 41.4 | 41.0 | 39.3 | 41.6 | 47.5 | 43.0 | 50.5 | 49.5 |
| Duck St 2 (715) | | | | | | | | | | | | | | 13.9 | | | |
| Post Office (735) | | | | | | | | | | | | | | 13.6 | 15.3 | 13.8 | 14.1 |
| Post Office (736) | | | | | | | | | | | | | | 14.1 | 15.4 | 13.7 | 13.4 |
| Post Office (737) | | | | | | | | | | | | | | 14.1 | 15.5 | 13.7 | 13.9 |
| Hope Cottage (722) | | | | | | | | | | | | | | | 20.0 | 21.8 | 24.3 |
| Church (723) | | | | | | | | | | | | | | | 26.0 | 25.7 | 25.1 |

West Dorset District Council

| Site | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|------|
| Whitecroft (727) | | | | | | | | | | | | | | | 50.0 | 51.5 | 53.3 |
| Warren House (728) | | | | | | | | | | | | | | | 28.0 | 29.7 | 27.9 |
| Real Time Monitor | | | | | | | | | | | | | | | 15.4 | 13.6 | |
| BRIDPORT | | | | | | | | | | | | | | | | | |
| East Road 1 (717) | 34.2 | 35.8 | 28.5 | 37.4 | 34.5 | 37.9 | 34.1 | 47.4 | 37.9 | 49.6 | 48.4 | 51.3 | 55.1 | 57.1 | 55.4 | 43.11 | 43.7 |
| Bridport 2 | | 12.9 | 11.8 | 12.4 | 11.8 | 18.1 | 12.3 | 12.5 | 11.9 | 13.7 | 10.9 | | | | | | |
| West St (718) | | | | | | | | | | | | 33.8 | 28.6 | 28.7 | | | |
| South St (719) | | | | | | | | | | 30.7 | 28.2 | 31.1 | 29.5 | 30.1 | | | |
| East Road 2 (730) | | | | | | | | | | | | 38.8 | 40.0 | 41.0 | 47.65 | 57.45 | 56.6 |
| East Road (731) | | | | | | | | | | | | | | | | 34.91 | 35.2 |
| Askers Mead (732) | | | | | | | | | | | | | | | | 31.74 | 31.1 |
| East Road 3 (733) | | | | | | | | | | | | | | 43.3 | 26.45 | | |
| East Road 4 (734) | | | | | | | | | | | | | | 51.4 | 31.33 | 28.52 | 32.5 |
| LYME REGIS | | | | | | | | | | | | | | | | | |
| Lyme Regis 1 | 19.4 | 20.5 | 12.9 | 14.6 | 14.4 | 18.1 | 12.6 | 14.7 | 10.8 | | | | | | | | |
| Church St (722) | | | | | | | | | | | | 27.7 | 25.9 | 27.2 | | | |
| Broad St (723) | | | | | | | | | | 28.0 | 31.6 | 36.1 | 27.6 | 29.8 | | | |
| Lyme 2 | | | 8.3 | 14.5 | 11.3 | 16.3 | 10.3 | 12.4 | 8.7 | | | | | | | | |
| BEAMINSTER | | | | | | | | | | | | | | | | | |
| Beaminster/Beam 1 | 24.3 | 22.7 | 19.7 | 18.7 | 18.5 | 28.4 | 22.5 | 28.3 | 19.3 | 26.7 | 24.1 | 24.1 | 24.5 | 24.9 | | | |
| Beaminster 2 | | | 10.6 | 10.7 | 11.3 | 14.5 | 9.9 | 10.7 | 8.3 | | | | | | | | |
| SHERBOURNE | | | | | | | | | | | | | | | | | |
| Green Hill (727) | 43.5 | 45.7 | 36.0 | 36.5 | 37.1 | 38.3 | 30.5 | 35.2 | 26.6 | 31.6 | 31.8 | 31.2 | 30.0 | 33.0 | | | |
| Westbury (728) | | | 19.3 | 19.6 | 19.7 | 23.0 | 18.0 | 19.4 | 15.4 | 19.5 | 16.6 | 22.4 | 17.1 | 21.4 | | | |
| OTHER | | | | | | | | | | | | | | | | | |
| Chickerell | | | | 19.2 | 21.1 | 25.2 | 18.5 | 21.0 | 14.8 | 17.4 | 13.8 | 14.0 | | | | | |
| Abbotsbury | | | 8.9 | 10.9 | 10.4 | 13.5 | 9.4 | 16.1 | 12.3 | 20.2 | 21.1 | 21.6 | 18.9 | 19.6 | | | |

West Dorset District Council

| Site | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Cerne Abbas | | | 8.8 | 12.8 | 11.2 | 15.3 | 12.3 | 11.7 | 9.1 | | | | | | | | |
| Maiden Newton | | | 12.6 | 17.9 | 15.2 | 19.1 | 16.2 | 22.0 | 15.4 | 19.6 | 19.0 | 16.4 | 17.0 | | | | |
| Puddletown | 37.1 | 34.5 | 30.8 | 14.2 | 18.7 | | | | | | | | | | | | |
| Broadmayne | | | 12.7 | 15.6 | 15.8 | 18.4 | 17.1 | 16.6 | 11.8 | | | | | | | | |

Appendix D: Supporting Technical Information / Air Quality Monitoring Data QA/QC

Factor from Local Co-Location Studies

The AEA Energy and Environment Prevision and Accuracy Spreadsheet were used to ascertain a locally derived bias adjustment factor and considered if this was suitable for use on the results. The spreadsheet for 2015 is supplied in Table D.1 and shows a factor of 0.88. As the overall survey was deemed to be of good data capture, this local bias adjustment factor was chosen to be applied to the diffusion tube results for Chideock.

The default national bias adjustment factor (version September 2016) taken from the LAQM Helpdesk website was 0.96.

Table D.1 – Summary of Bias Adjustment – Roadside

| Checking Precision and Accuracy of Triplicate Tubes | | | | | | | | | | | AEA Energy & Environment From the AEA group | | | |
|---|--------------------------|------------------------|-------------------------------|-------------------------------|-------------------------------|--------------------|-----------------------|-------------------------------------|-------------------|--|--|---------------------------|-----------------------------|------------------------------|
| Diffusion Tubes Measurements | | | | | | | | | | | Automatic Method | | Data Quality Check | |
| Period | Start Date dd/mm/yyyy | End Date dd/mm/yyyy | Tube 1 μgm^{-3} | Tube 2 μgm^{-3} | Tube 3 μgm^{-3} | Triplicate Mean | Standard Deviation | Coefficient of Variation (CV) | 95% CI of mean | | Period Mean | Data Capture (% DC) | Tubes Precision Check | Automatic Monitor Data |
| 1 | 12/01/2015 | 04/02/2015 | 14.9 | 15.3 | 15.4 | 15 | 0.2 | 2 | 0.6 | | 16 | 98.1 | Good | Good |
| 2 | 04/02/2015 | 04/03/2015 | 12.5 | 13.5 | 13.6 | 13 | 0.6 | 5 | 1.5 | | 14.9 | 99.72 | Good | Good |
| 3 | 04/03/2015 | 02/04/2015 | 14.8 | 15.9 | 16.0 | 16 | 0.7 | 4 | 1.7 | | 15.09 | 100 | Good | Good |
| 4 | 02/04/2015 | 29/04/2015 | 12.0 | 13.1 | 12.5 | 13 | 0.5 | 4 | 1.4 | | 12.42 | 100 | Good | Good |
| 5 | 29/04/2015 | 28/05/2015 | 10.8 | 11.1 | 11.2 | 11 | 0.2 | 2 | 0.5 | | 10 | 100 | Good | Good |
| 6 | 28/05/2015 | 01/07/2015 | 10.4 | 10.6 | 10.3 | 10 | 0.2 | 2 | 0.4 | | 9 | 100 | Good | Good |
| 7 | 01/07/2015 | 29/07/2015 | 11.1 | 10.0 | 10.1 | 10 | 0.6 | 6 | 1.5 | | 8 | 100 | Good | Good |
| 8 | 29/07/2015 | 26/08/2015 | 27.2 | 10.4 | 12.4 | 17 | 9.2 | 55 | 22.8 | | 8 | 99.96 | Poor Precision | Good |
| 9 | 26/08/2015 | 30/09/2015 | 12.8 | 11.5 | 12.1 | 12 | 0.6 | 5 | 1.6 | | 10 | 100 | Good | Good |
| 10 | 30/09/2015 | 28/10/2015 | 14.5 | 14.9 | 14.6 | 15 | 0.2 | 2 | 0.6 | | 10 | 100 | Good | Good |
| 11 | 28/10/2015 | 02/12/2015 | 10.3 | 7.9 | 9.7 | 9 | 1.2 | 13 | 3.1 | | 9 | 100 | Good | Good |
| 12 | 02/12/2015 | 06/01/2016 | 7.5 | 7.3 | 7.4 | 7 | 0.1 | 1 | 0.2 | | 8.977 | 100 | Good | Good |
| 13 | | | | | | | | | | | | | | |

It is necessary to have results for at least two tubes in order to calculate the precision of the measurements

| | | |
|--------------------|----------------|-----------------|
| Overall survey --> | Good precision | Good Overall DC |
|--------------------|----------------|-----------------|

(Check average CV & DC from Accuracy calculations)

| | |
|---------------|----------------|
| Site Name/ID: | Boot Hill 2013 |
|---------------|----------------|

| | |
|-----------|---|
| Precision | 11 out of 12 periods have a CV smaller than 20% |
|-----------|---|

| | |
|--|----------------------------------|
| Accuracy (with 95% confidence interval) | |
| without periods with CV larger than 20% | |
| Bias calculated using 11 periods of data | |
| Bias factor A | 0.93 (0.83 - 1.06) |
| Bias B | 8% (-5% - 21%) |
| Diffusion Tubes Mean: | 12 μgm^{-3} |
| Mean CV (Precision): | 4 |
| Automatic Mean: | 11 μgm^{-3} |
| Data Capture for periods used: | 100% |
| Adjusted Tubes Mean: | 11 (10 - 13) μgm^{-3} |

| | |
|--|---------------------------------|
| Accuracy (with 95% confidence interval) | |
| WITH ALL DATA | |
| Bias calculated using 12 periods of data | |
| Bias factor A | 0.88 (0.74 - 1.08) |
| Bias B | 14% (-8% - 35%) |
| Diffusion Tubes Mean: | 12 μgm^{-3} |
| Mean CV (Precision): | 8 |
| Automatic Mean: | 11 μgm^{-3} |
| Data Capture for periods used: | 100% |
| Adjusted Tubes Mean: | 11 (9 - 13) μgm^{-3} |

Jaume Targa, for AEA
Version 04 - February 2011

QA/QC of Automatic Monitoring

The automatic analyser is serviced and maintained by Air Monitors Ltd. The Local Authority undertake regular checks of the analyser by accessing the software 2-3 times per week to review if any error messages are showing. Physical visits to the analyser are undertaken each month for filter changes etc.

Air Monitors also monitor the analyser remotely and contact the Local Authority if there are any unusual readings.

The analyser undergoes automatic calibration. Data are screened regularly for spurious results, which are then removed and the data ratified. Any possible drift in the analyser's daily calibration can be identified and adjusted and correction factors applied if they are needed.

Discussion of Choice of Factor to Use

The national correction factor of 0.96 was used for 2015 data for all areas other than Chideock, where a local co-location study gave a correction factor of 0.88. Although this is slightly more conservative than the national adjustment factor it was considered to be more representative due to the unique location and topography of Chideock.

QA/QC of Diffusion Tube Monitoring

The UKAS accredited laboratory, Gradko International Limited supply and analyse the diffusion tubes, which are a preparation of 50% TEA (triethanolamin) / Acetone. Tubes are handled in accordance with the instruction within LAQM.TG(16), 7.185.

Gradko International participate in the AIR/WASP NO₂ Proficiency Testing Scheme. In the four periods assessed in 2015 the laboratory received a score of 100%.

<http://laqm.defra.gov.uk/diffusion-tubes/qa-qc-framework.html>

For the purposes of Local Air Quality Management, tube precision is separated into two categories, “Good” or “Poor”, tubes are considered to have good precision where the coefficient of variation of duplicate or triplicate diffusion tubes for eight or more periods during the year is less than 20% and the average CV of all monitoring periods is less than 10%.

The results of precision testing show that Gradko International had “Good” precision for 2015. <http://laqm.defra.gov.uk/diffusion-tubes/precision.html>

Appendix E: Map(s) of Monitoring Locations

Figure E.1 Maps of Automatic Monitoring Site

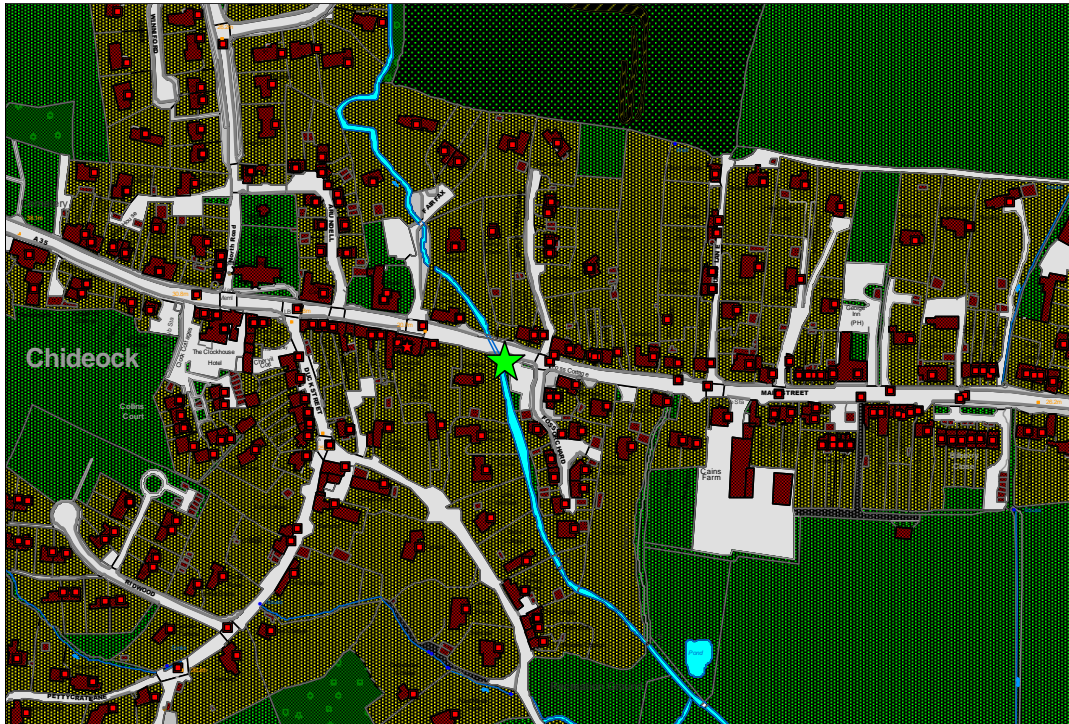
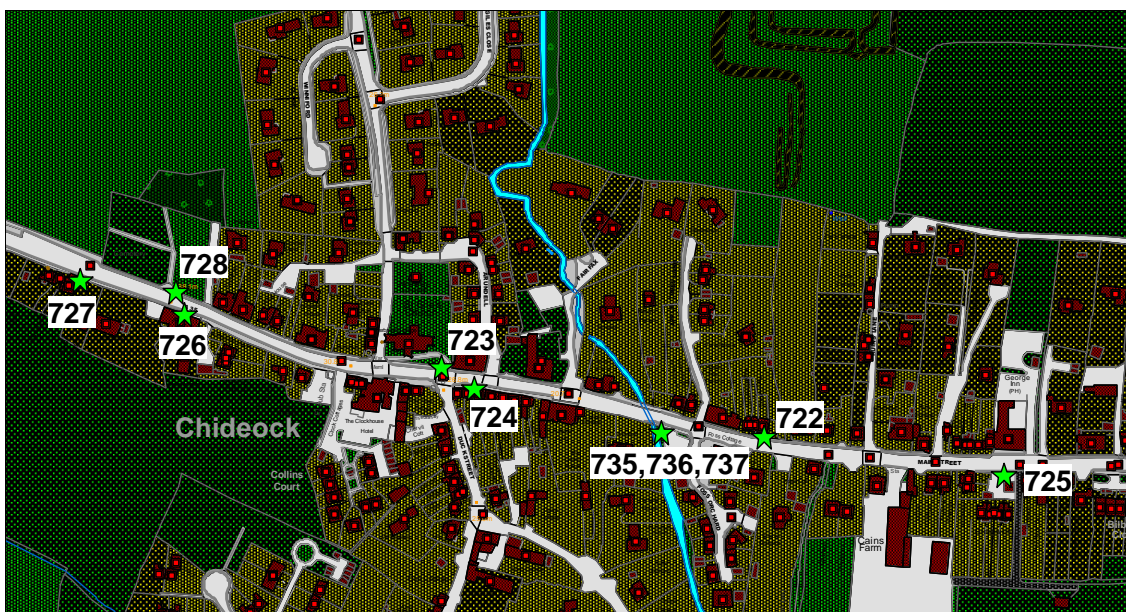


Figure E.2 Maps of Non-Automatic Monitoring Sites

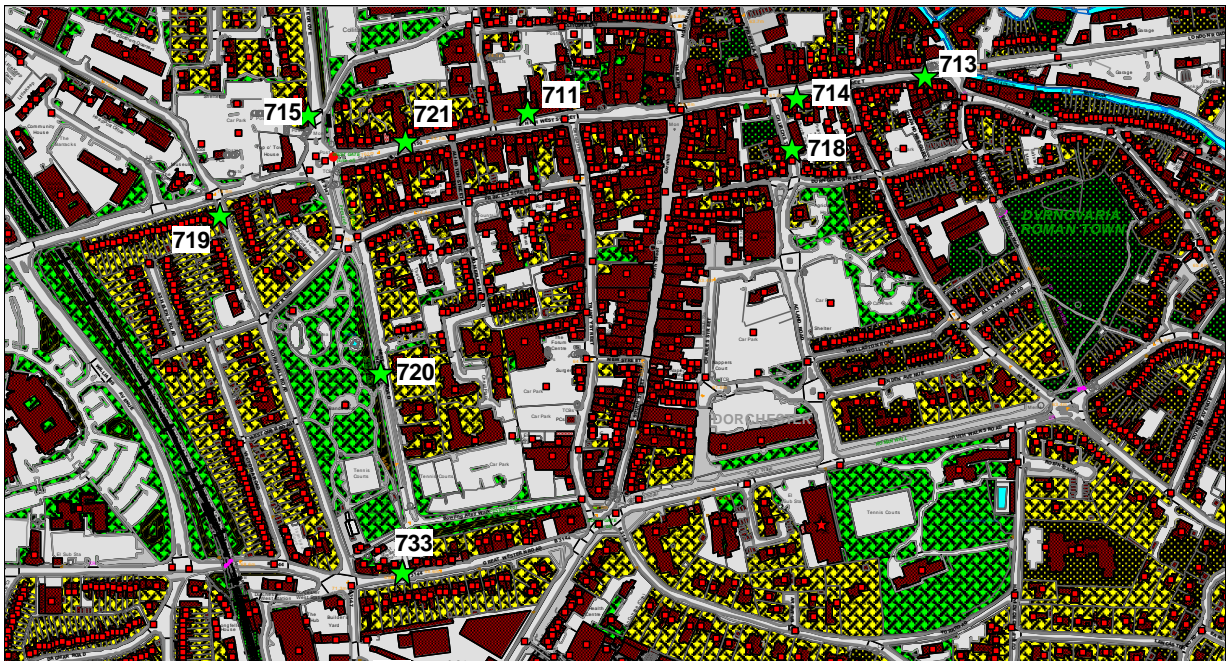
Chideock



Bridport

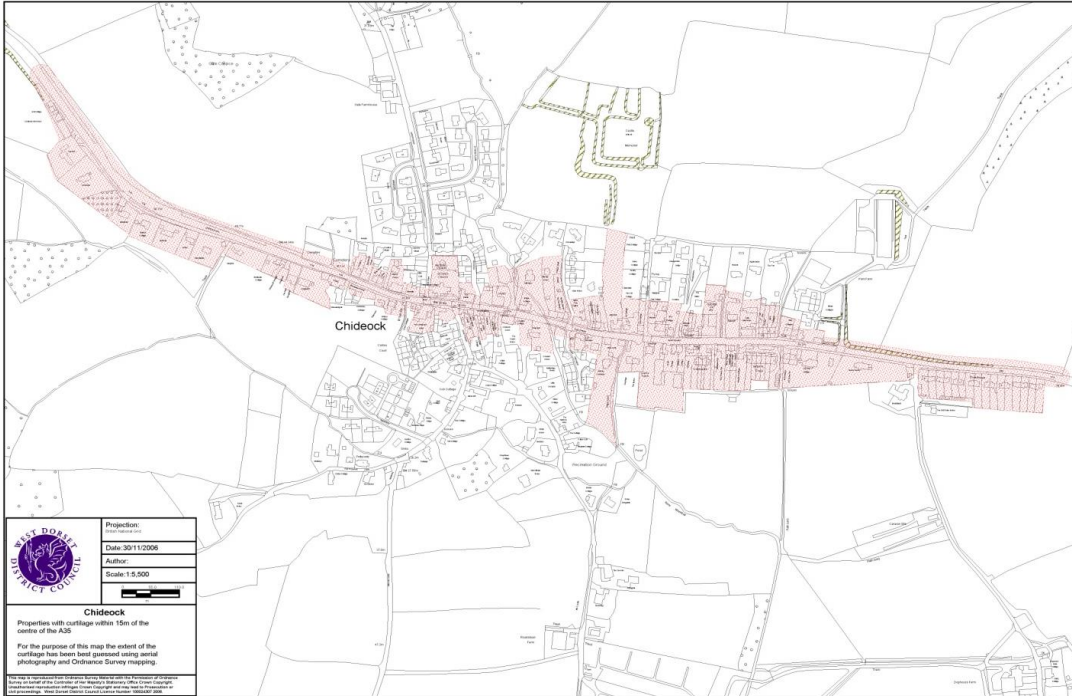


Dorchester

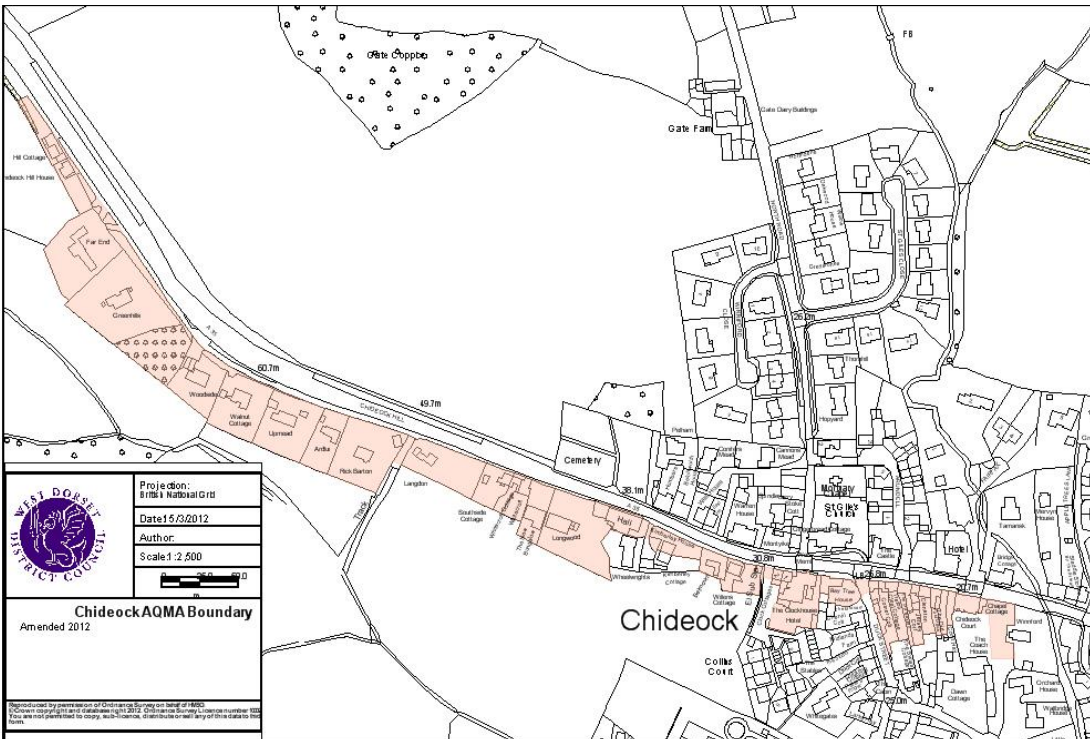


Appendix F: Maps of AQMA Boundaries

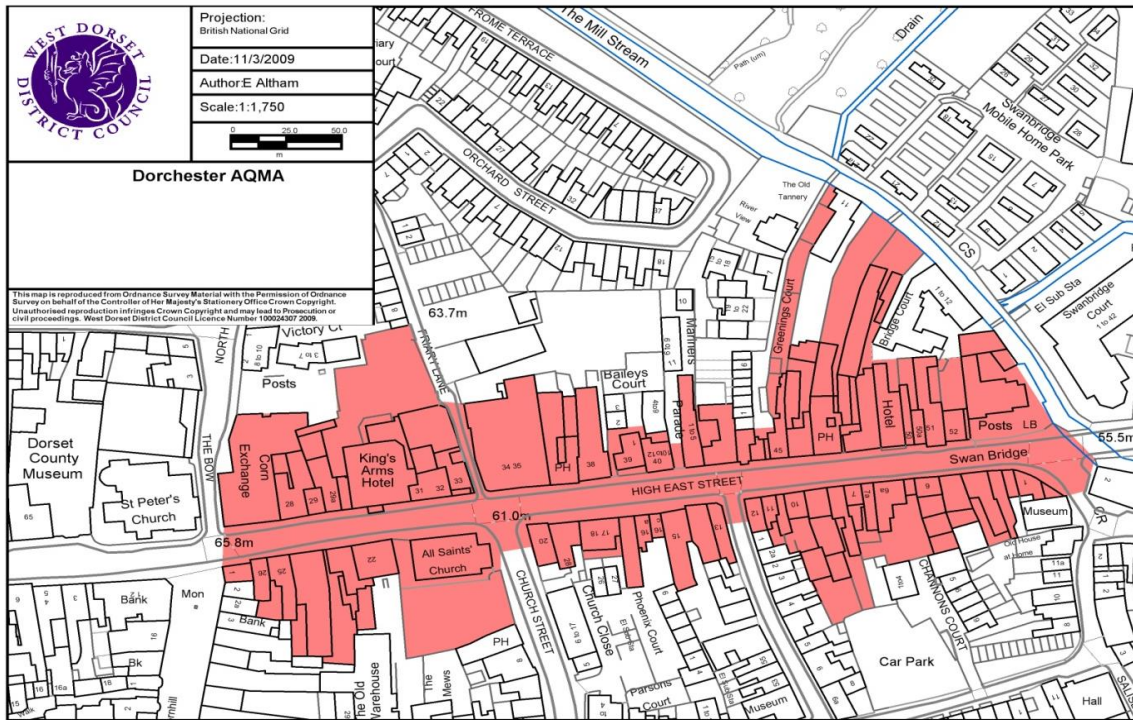
2007 AQMA Chideock Boundary



2011 Amended Chideock Boundary



2009 Dorchester AQMA Boundary



Appendix G: Summary of Air Quality Objectives in England

Table G.1 – Air Quality Objectives in England

| Pollutant | Air Quality Objective ⁴ | |
|--|--|----------------|
| | Concentration | Measured as |
| Nitrogen Dioxide (NO ₂) | 200 µg/m ³ not to be exceeded more than 18 times a year | 1-hour mean |
| | 40 µg/m ³ | Annual mean |
| Particulate Matter (PM ₁₀) | 50 µg/m ³ , not to be exceeded more than 35 times a year | 24-hour mean |
| | 40 µg/m ³ | Annual mean |
| Sulphur Dioxide (SO ₂) | 350 µg/m ³ , not to be exceeded more than 24 times a year | 1-hour mean |
| | 125 µg/m ³ , not to be exceeded more than 3 times a year | 24-hour mean |
| | 266 µg/m ³ , not to be exceeded more than 35 times a year | 15-minute mean |

⁴ The units are in microgrammes of pollutant per cubic metre of air (µg/m³).

Appendix H: Summary of Previous Review and Assessment

West Dorset District Council completed its first round of Review and Assessment in 2001. The review of the local air quality concluded that the objectives for all the seven regulatory pollutants were met and a further assessment was not required.

The second round of Review and Assessment began with an Updating and Screening Assessment (USA) in 2003. The USA, completed in 2004, concluded that a Detailed Assessment (DA) was required for some areas in Chideock, Bridport and Dorchester having the potential to exceed the AQO for NO₂. This was completed in 2006. Based on the findings of the assessment and comments by DEFRA, it was concluded to declare an AQMA in Chideock and increase monitoring in Bridport and Dorchester to confirm if an AQMA was required in these areas.

In the third round of Review and Assessment the Council submitted a Progress Report in May 2007. Based on new monitoring data for NO₂, the report concluded that a Detailed Assessment was required for NO₂ due to road traffic emissions in Bridport and Dorchester.

A Detailed Assessment was produced in 2008 based on new monitoring data collected during 2007. From the conclusion of the Detailed Assessment and comments by Defra, it was concluded to declare an AQMA in High East Street, Dorchester and undertake modelling and further monitoring of NO₂ in East Road, Bridport.

In 2008 a Further Assessment was completed for Chideock. This concluded that based on future year projections the annual average AQO for NO₂ would be achieved in 2010 but that an Action Plan would be drafted and implemented should the projected future year annual predictions not be met. The predictions were not met and WDDC have produced and implemented an Action Plan. Progress on the actions taken is regularly reviewed at stakeholder meetings.

A fourth round of review and assessment commenced with an Updating & Screening Assessment in 2009. The USA concluded that two areas, High East Street in Dorchester and along the A35 in Chideock, exceeded the national objective for nitrogen dioxide and both are already designated Air Quality Management Areas. The report also concluded that new monitoring data showed that nitrogen dioxide targets had been exceeded in East Road, Bridport, but that as the sites were not representative of relevant exposure, it

was recommended additional diffusion tubes to be placed in more representative locations.

A Progress report was submitted in 2010. This report concluded that three areas, High East Street Dorchester (designated an AQMA in 2009), Main Street, Chideock (designated AQMA in 2007) and East Road Bridport, exceeded the national objective for nitrogen dioxide; A Detailed Assessment for nitrogen dioxide was recommended for East Road, Bridport as a result of Defras' recommendations to WDDC's Updating & Screening Assessment 2009.

A Further Assessment was undertaken in 2010 for High East Street, Dorchester that confirmed the existing AQMA boundary.

A Progress Report, Detailed Assessment for Chideock and Bridport, and the Dorchester Air Quality action Plan were completed in 2011. The Progress report did not identify any other areas, other than those already identified as AQMA's and East Road Bridport, where there was a likely that the AQ Objectives would be met. A detailed assessment was undertaken for Chideock that recommended a reduction of the AQMA Boundary to the area where exceedences were recorded. The report also concluded that East Road, Bridport would not be declared as an AQMA as only one property is affected, limited staff resources, and that there is limited action that the council can take to resolve the problem as the Highways Agency is responsible for the A35 Trunk Road. The reduction of the AQMA boundary in Chideock was approved by Defra, however conclusions were not accepted for Bridport. Whilst Defra advised the Council to declare an AQMA at this location, the Council resolved to continue monitoring NO₂ to check levels here in the future.

An Updating and Screening Assessment (2012) and Progress Report (2013) were completed in 2013. Monitoring data for 2011 and 2012 continued to show exceedences of the nitrogen dioxide annual mean in areas of Dorchester, Chideock and Bridport. The areas in Dorchester and Chideock have been declared AQMA's and have ongoing action plans in place to reduce the nitrogen dioxide levels here. The area of East Road, Bridport also exceeds this objective and there is only one residential property within the exceedance area. However, the Council resolved in 2011 not to declare here but to continue monitoring to check future levels of NO₂ here.

The 2014 Progress Report was completed in November 2015. Monitoring data for 2013 continued to show exceedences of the nitrogen dioxide annual mean in areas of Dorchester, Chideock and Bridport. The areas in Chideock and Dorchester have been

declared AQMA's and have ongoing action plans in place to reduce the nitrogen dioxide levels here. The area of East Road, Bridport, also exceeds this objective and there is one residential property within the exceedance area. In 2011, the Council resolved not to declare here but to continue monitoring to check future levels of NO₂ here.

The 2015 Updating and Screening Assessment was completed in December 2015. Monitoring data for 2014 continues to show exceedances of the nitrogen dioxide annual mean in areas of Dorchester, Chideock and Bridport. The areas in Dorchester and Chideock have been declared AQMA's and have ongoing action plans in place to reduce the nitrogen dioxide levels here. There are no plans to alter these AQMA's. The area of East Road, Bridport also exceeds this objective and there is one residential property within the exceedance area. However, the Council resolved in 2011 not to declare here but to continue monitoring to check future levels of NO₂ here. There are no plans to review this decision at present.

Glossary of Terms

| Abbreviation | Description |
|-------------------|---|
| AQAP | Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values' |
| AQMA | Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives |
| ASR | Air quality Annual Status Report |
| Defra | Department for Environment, Food and Rural Affairs |
| DMRB | Design Manual for Roads and Bridges – Air quality screening tool produced by Highways England |
| EU | European Union |
| FDMS | Filter Dynamics Measurement System |
| LAQM | Local Air Quality Management |
| NO ₂ | Nitrogen Dioxide |
| NO _x | Nitrogen Oxides |
| PM ₁₀ | Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less |
| PM _{2.5} | Airborne particulate matter with an aerodynamic diameter of 2.5µm or less |
| QA/QC | Quality Assurance and Quality Control |
| SO ₂ | Sulphur Dioxide |

References

- Local Air Quality Management Policy Guidance LAQM.PG (16). April 2016. Published by Defra.
- Local Air Quality Management Technical Guidance LAQM.TG (16). April 2016. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
- The Local Transport Plan 3 2011- 2026, Dorset County Council
- Travel Choice – www.dorsetforyou.com/travelchoice
- West Dorset Climate Change Strategy
- West Dorset District Council Carbon Management Plan (CMP)
- West Dorset District Council Updating and Screening Assessment 2015.
- West Dorset District Council Chideock Air Quality Action Plan 2009
- West Dorset District Council Dorchester Air Quality Action Plan 2011
- West Dorset District Council and Weymouth & Portland Borough Council joint Local Plan 2015