

# 2014 Air Quality Progress Report West Dorset District Council

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

November 2015

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# **Executive Summary**

This Progress Report has been produced by West Dorset District Council (WDDC) to satisfy the requirements of Part IV of the Environment Act 1995. The Act requires local authorities to review and assess the air quality within their area and to take account of Government guidance when undertaking such work.

The Progress Report shows that monitoring results for 2013 continue to exceed the annual objective for nitrogen dioxide in High East Street, Dorchester, Main Street, Chideock and East Road, Bridport. 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 (NO<sub>2</sub>) in Dorchester and Chideock are already within Air Quality Management Areas (AQMA's) and action plans are in place to improve air quality to comply with the objective. However, there is no AQMA currently declared 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 NO<sub>2</sub> here. There are no plans to review this decision at present.

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# 1 Introduction

# 1.1 Description of Local Authority Area

West Dorset is the largest district within the county of Dorset, covering 42% of the county area at 418 square miles. The District is predominantly rural in character with small market towns, and as a relatively low population density, with a total population of just over 96,000. Almost half of the population live in village/rural areas.

71% of the District is designated as an area of outstanding natural beauty and the majority of the coast in West Dorset is within the Jurassic Coast World Heritage Site. The major role of tourism in the area results in significant peak seasonal increases in traffic and congestion, particularly on coastal routes.

The major roads in the District consist of the A35 and the A37. The A35 is a trunk road that runs east to west through the District and cuts through Bridport and Chideock. The A37 is also a major road that runs through West Dorset from Dorchester through to Yeovil.

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, the main source of pollution being from road traffic. This is due to vehicle emission 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.

# 1.2 Purpose of Progress Report

This report fulfils the requirements of the Local Air Quality Management (LAQM) process as set out in Part IV of the Environment Act (1995), the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 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 exceedences are considered likely, the local authority must then 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.

Progress Reports are required in the intervening years between the three-yearly Updating and Screening Assessment reports. Their purpose is to maintain continuity in the LAQM process.

They are not intended to be as detailed as Updating and Screening Assessment Reports, or to require as much effort. However, if the Progress Report identifies the risk of exceedence of an Air Quality Objective, the Local Authority (LA) should undertake a Detailed Assessment immediately, and not wait until the next round of Review and Assessment.

# 1.3 Air Quality Objectives

The air quality objectives applicable to LAQM **in England** are set out in the Air Quality (England) Regulations 2000 (SI 928), The Air Quality (England) (Amendment) Regulations 2002 (SI 3043), and are shown in Table 1.1. This table shows the objectives in units of microgrammes per cubic metre  $\mu$ g/m<sup>3</sup> (milligrammes per cubic metre, mg/m<sup>3</sup> for carbon monoxide) with the number of exceedences in each year that are permitted (where applicable).

Pollutant	Air Quality	Date to be	
Fonutant	Concentration	Measured as	achieved by
Benzene	16.25 μg/m <sup>3</sup>	Running annual mean	31.12.2003
	5.00 µg/m <sup>3</sup>	Annual mean	31.12.2010
1,3-Butadiene	2.25 µg/m <sup>3</sup>	Running annual mean	31.12.2003
Carbon monoxide	10 mg/m <sup>3</sup>	Running 8-hour mean	31.12.2003
	0.50 µg/m³	Annual mean	31.12.2004
Lead	0.25 µg/m³	Annual mean	31.12.2008
Nitrogen dioxide	200 µg/m <sup>3</sup> not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m <sup>3</sup>	Annual mean	31.12.2005
Particulate Matter (PM <sub>10</sub> ) (gravimetric)	50 μg/m <sup>3</sup> , not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 µg/m <sup>3</sup>	Annual mean	31.12.2004
	350 μg/m <sup>3</sup> , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
Sulphur dioxide	125 μg/m <sup>3</sup> , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m <sup>3</sup> , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

Table 1.1	Air Quality Objectives included in Regulations for the purpose of
LAQM in En	gland

# **1.4 Summary of Previous Review and Assessments**

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 NO<sub>2</sub>. 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 NO<sub>2</sub>, the report concluded that a Detailed Assessment was required for NO<sub>2</sub>, 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 NO<sub>2</sub> 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 NO<sub>2</sub> would be achieved in 2010 but that an Action Plan would be drafted and implemented should the projected future year annual projections 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 and 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 are 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 and 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 and Screening Assessment 2009.

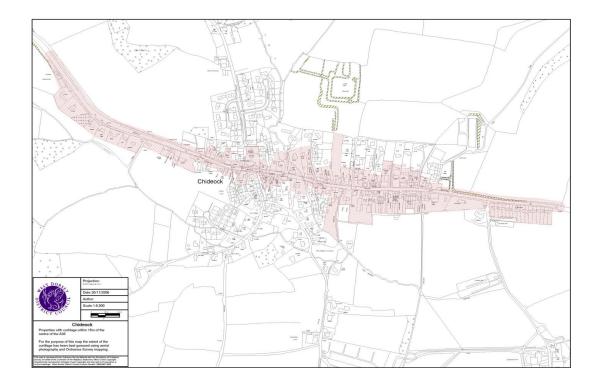
A Further Assessment was undertaken in 2010 for High East Street, Dorchester that confirmed the existing AQMA boundary.

A Progress Report, Detailed Assessment for Chideock and Bridport and the Dorchester Air Quality Action Plan was 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 it was likely that the AQ objectives would not be met. A Detailed Assessment was undertaken for Chideock that recommended a reduction of the AQMA boundary to the area where the 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 NO<sub>2</sub> to check levels here in 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

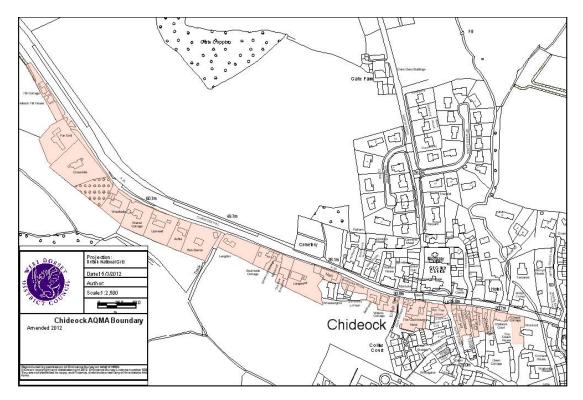
and Bridport. The areas in Dorchester and Chideock have been declared AQMA's and have ongoing action plans in place to reduce the nitrogen dioxide levels here. The area of East Road, Bridport also exceeds this objective and there is only one residential property within the exceedance area. However, the Council resolved in 2011 not to declare here but to continue monitoring to check future levels of  $NO_2$  here.

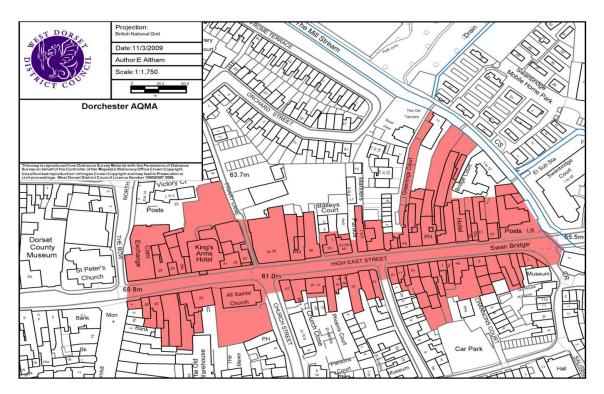
### Figure 1.1 Maps of AQMA Boundaries



### 2007 AQMA Chideock Boundary

# 2011 Amended Chideock Boundary





### 2009 Dorchester AQMA Boundary

# 2 New Monitoring Data

# 2.1 Summary of Monitoring Undertaken

### 2.1.1 Automatic Monitoring Sites

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 2.1. This station contains an oxide of nitrogen monitor. A map showing the location of this monitoring station is shown in figure 2.1. Monitoring commenced in January 2010.

The monitor is situated approximately 2m from the A35. Due to location restrictions in Chideock the monitor is not situated in the worst case location, along the steep incline, westwards towards Lyme Regis. This is due to 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 an open location, the readings here represent background levels of nitrogen dioxide and are way below the annual mean objective.



Figure 2.1 Map of Automatic Monitoring Sites

Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Pollutants Monitored	In AQMA?	Monitoring Technique	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Does this Location Represent Worst- Case Exposure?
Post Office, Main Street, Chideock	Roadside	342301	92817	NO <sub>2</sub>	Ν	Chemiluminescent analyser	Y (1m)	2m	Ν

# Table 2.1Details of Automatic Monitoring Sites

#### 2.1.2 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  $NO_2$  concentrations. Because of the low cost, they allow West Dorset to monitor  $NO_2$  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 between 1.5m and 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 water.

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. The tubes were relocated to sites in the three areas with known exceedences:

**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 NO<sub>2</sub> has been declared along the A35 as annual average NO<sub>2</sub> 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.

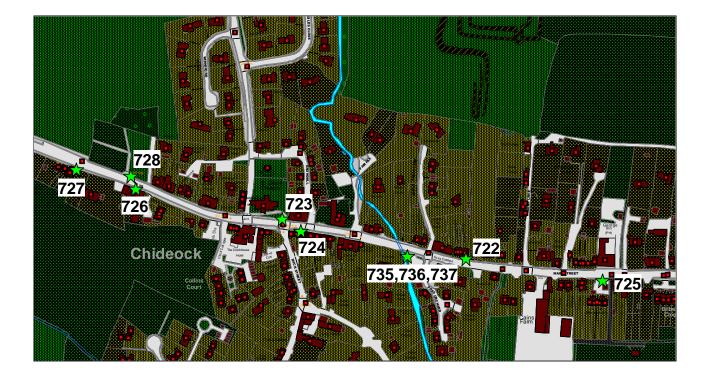
**Dorchester** –The County Town of Dorset, with a population of approximately 18,000. WDDC have been monitoring nitrogen dioxide within the town centre, predominantly along the B3150 High East and High West Street where some exceedences of the AQO have been observed. Due to these exceedences an AQMA 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 NO<sub>2</sub> 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 NO<sub>2</sub> 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

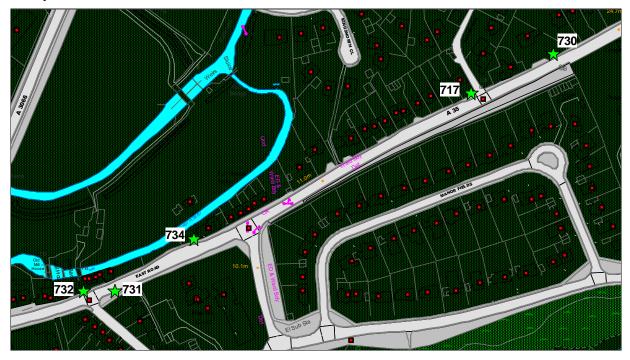
There are 26 diffusion tubes located at 24 sites within these three areas, details of these sites are shown in Table 2.2, and the locations of the monitoring sites are shown on the maps in Figure 2.2 below.

### Figure 2.2 Maps of Non-Automatic Monitoring Sites

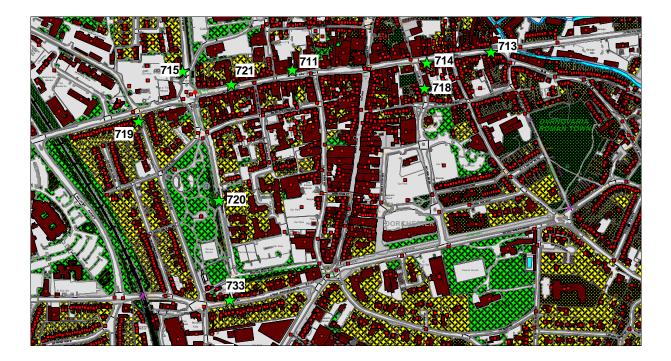
### Chideock



# Bridport



### Dorchester



### Table 2.2 Details of Non- Automatic Monitoring Sites

Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Pollutants Monitored	In AQMA?	Is Monitoring Co-located with a Continuous Analyser (Y/N)	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Does this Location Represent Worst- Case Exposure?
711 Dorchester High West Street 1	Roadside	369121	90739	NO <sub>2</sub>	Ν	Ν	Ν	2m	Y
<b>712</b> <b>Dorchester</b> Trinity Street	Roadside	369171	90711	NO <sub>2</sub>	Ν	Ν	Y – on façade	2m	Y
713 Dorchester High East Street 2	Roadside	369484	90759	NO <sub>2</sub>	Y	Ν	Y – on façade	2m	Y
<b>714</b> <b>Dorchester</b> High East Street 1	Roadside	369387	90742	NO <sub>2</sub>	Y	Ν	Y – on façade	2m	Y
715 Dorchester The Grove	Roadside	368907	90739	NO <sub>2</sub>	Ν	Ν	Y (1m)	2m	Y

	West Dorset District Co								
Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Pollutants Monitored	In AQMA?	Is Monitoring Co-located with a Continuous Analyser (Y/N)	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Does this Location Represent Worst- Case Exposure?
716 Dorchester Maumbury Road	Roadside	368948	90089	NO <sub>2</sub>	N	Ν	Y – on façade	2m	Y
718 Dorchester Church Street	Roadside	369381	90698	NO <sub>2</sub>	N	N	Y – on façade	2m	Y
<b>719</b> <b>Dorchester</b> Bridport Road	Roadside	368815	90636	NO <sub>2</sub>	N	Ν	Y (2m)	2m	Y
720 Dorchester Borough Gardens	Background	368982	90453	NO <sub>2</sub>	Ν	Ν	5m	N/A	Ν
721 Dorchester High West Street 2	Roadside	368982	90706	NO <sub>2</sub>	Ν	Ν	Y – on façade	3m	Y
<b>717</b> <b>Bridport</b> East Road 1	Roadside	347557	93023	NO <sub>2</sub>	Ν	Ν	Ν	2m	Y

	West Dorset District Cour									
Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Pollutants Monitored	In AQMA?	Is Monitoring Co-located with a Continuous Analyser (Y/N)	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Does this Location Represent Worst- Case Exposure?	
<b>730</b> Bridport East Road 2	Roadside	347612	93050	NO <sub>2</sub>	N	Ν	N	2m	Y	
731 Bridport East Road	Roadside	347277	92867	NO <sub>2</sub>	N	N	Ν	2m	Y	
732 Bridport Askers Mead	Roadside	347262	92873	NO <sub>2</sub>	N	N	Y	2m	Y	
733 Dorchester Great Western Road	Roadside	369002	90275	NO <sub>2</sub>	N	Ν	Y – on façade	2m	Y	
<b>734</b> Bridport East Road 4	Roadside	347489	92989	NO <sub>2</sub>	N	N	Y (1m)	2m	Y	
722 Chideock Main Street	Roadside	342364	92814	NO <sub>2</sub>	N	Ν	Y (2m)	2m	Y	

	West Dorset District Council									
Site Name	Site Type	X OS Grid Reference	Y OS Grid Reference	Pollutants Monitored	In AQMA?	Is Monitoring Co-located with a Continuous Analyser (Y/N)	Relevant Exposure? (Y/N with distance (m) from monitoring site to relevant exposure)	Distance to Kerb of Nearest Road (m) (N/A if not applicable)	Does this Location Represent Worst- Case Exposure?	
723 Chideock St Giles Church	Roadside	342151	92869	NO <sub>2</sub>	Ν	Ν	Ν	2m	Y	
724 Chideock Duck Street	Roadside	342190	92840	NO <sub>2</sub>	Y	Ν	Y – on façade	1m	Y	
725 Chideock George Inn	Roadside	342486	92791	NO <sub>2</sub>	N	Ν	Y (1m)	1m	Y	
<b>726</b> <b>Chideock</b> Village Hall	Roadside	342015	92887	NO <sub>2</sub>	Y	N	Ν	1m	Ν	
727 Chideock Main Street	Roadside	341946	92908	NO <sub>2</sub>	Y	Ν	Y (1m)	1m	Y	
728 Chideock Main Street	Roadside	342025	92894	NO <sub>2</sub>	Ν	Ν	Y (1m)	1m	Y	
735 Chideock Triplicate	Roadside	342301	92817	NO <sub>2</sub>	Ν	Y	Ν	2m	Ν	

West Dorset District Council Relevant ls Exposure? Distance Does this Monitoring (Y/N with to Kerb of Location **Co-located** distance X OS Grid Y OS Grid Pollutants In Nearest Represent Site Type Site Name with a (m) from Reference Reference Monitored AQMA? Road (m) Worst-Continuous monitoring (N/A if not Case Analyser site to Exposure? applicable) (Y/N) relevant exposure) 736 Chideock Roadside 342301 92817  $NO_2$ Ν Υ Ν Ν 2m Triplicate 737 Chideock Roadside 342301 92817  $NO_2$ Υ Ν 2m Ν Ν Triplicate

# 2.2 Comparison of Monitoring Results with Air Quality Objectives

### 2.2.1 Nitrogen Dioxide (NO<sub>2</sub>)

The two air quality objectives that ambient concentrations of NO<sub>2</sub> need to be assessed against are as follows:

- An annual mean of  $40\mu g/m^3$ ; and
- The number of exceedences of the 1 hour mean of 200µg/m<sup>3</sup> (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(09) has been adopted. The approach, based on empirical studies suggests that where the annual mean is less than  $60\mu g/m^3$ , exceedences of the short term objective are unlikely.

#### Automatic Monitoring Data

The ratified monitoring results for 2013 are provided below in Table 2.3 and 2.4.

### Table 2.3 Results of Automatic Monitoring for NO2: Comparison with Annual Mean Objective

			Valid Data	Valid Data	Annual Mea	n Concentrati	on (µg/m³)			
Site ID	Site Type	Within AQMA?	Capture for Monitoring Period %	Capture 2013 %	2011	2012	2013			
Chideock	Roadside	Adjacent to AQMA	100	50	13.6	N/A	13.21			

# Table 2.4Results of Automatic Monitoring for NO2: Comparison with 1-hour Mean Objective

			Valid Data	Valid Data	Number of	Hourly Means	s > 200µg/m³		
Site ID	Site Type	Within AQMA?	Capture for Monitoring Period %	Capture 2013 %	2011	2012	2013		
Chideock	Roadside	Ν	100	50	0	N/A	0		

#### **Diffusion Tube Monitoring Data**

The NO<sub>2</sub> diffusion tube monitoring results for 2013 are provided in Table 2.5 along with 2009-2012 data for comparison. A nationally derived bias adjustment factor of 1.01 was used in for all diffusion tubes in 2013 as there was poor data capture from the AQMS due to a fault and the results are not representative of roadside conditions in Chideock. The software used by the Council was also changed during this period to improve confidence with data capture and compliance with Quality Assurance and Quality Control.

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co- located Tube	Full Calendar Year Data Capture 2013 (Number of Months or %)	2013 Annual Mean Concentration (μg/m <sup>3</sup> ) - Bias Adjustment factor = 1.01
711	Dorchester High West Street 1	Roadside	Ν	Ν	12	40.1
712	Dorchester Trinity Street	Roadside	Ν	N	10	32.3
713	Dorchester High East Street 2	Roadside	Y	N	11	32.6
714	Dorchester High East Street 1	Roadside	Y	N	10	37.5
715	Dorchester The Grove	Roadside	Ν	Ν	12	35.6
716	Dorchester Maumbury Road	Roadside	Ν	N	11	28.3
718	Dorchester Church Street	Roadside	Ν	N	12	22.2
719	Dorchester Bridport Road	Roadside	Ν	N	11	26.5

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co- located Tube	Full Calendar Year Data Capture 2013 (Number of Months or %)	2013 Annual Mean Concentration (µg/m <sup>3</sup> ) - Bias Adjustment factor = 1.01
720	Dorchester Borough Gardens	Background	Ν	N	12	13.2
721	Dorchester High West Street 2	Roadside	Ν	N	12	35.8
717	Bridport East Road 1	Roadside	Ν	N	12	43.1
730	Bridport East Road 2	Roadside	N	N	12	<u>64.6</u>
731	Bridport East Road	Roadside	N	N	12	33.0
732	Bridport Askers Mead	Roadside	Ν	N	12	35.0
733	Dorchester Great Western Road	Roadside	Ν	N	12	31.9
734	Bridport East Road 4	Roadside	N	N	11	34.5
722	Chideock Main Street	Roadside	Ν	N	12	19.5
723	Chideock St Giles	Roadside	Ν	N	12	25.8
724	Chideock Duck Street	Roadside	Y	N	11	42.9

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co- located Tube	Full Calendar Year Data Capture 2013 (Number of Months or %)	2013 Annual Mean Concentration (μg/m <sup>3</sup> ) - Bias Adjustment factor = 1.01
725	Chideock George Inn	Roadside	Ν	N	11	27.2
726	Chideock Village Hall	Roadside	Y	N	12	45.4
727	Chideock Main Street	Roadside	Y	N	11	55.3
728	Chideock Main Street	Roadside	N	N	12	29.4
735	Chideock Triplicate	Roadside	N	Y	12	14.7
736	Chideock Triplicate	Roadside	N	Y	12	13.9
737	Chideock Triplicate	Roadside	Ν	Y	12	14.0

			Annual Mean Concentration (μg/m <sup>3</sup> ) - Adjusted for Bias						
Site ID	Site Type	Within AQMA?	2009 (Bias Adjustment Factor = 0.99)	2010 (Bias Adjustment Factor = 0.99 Chideock =	2011 (Bias Adjustment Factor = 0.93 Chideock =	2012 (Bias Adjustment Factor = 1.01)	2013 (Bias Adjustment Factor = 1.01)		
711	Roadside	N	44.6	0.93) 41.8	<b>0.99)</b> 38.73	38.4	40.1		
712	Roadside	N	32.9	31.4	30.85	32.1	32.3		
712	Roadside	Y	39.6	34.1	32.91	34.4	32.6		
713	Roadside	Y	<b>46.2</b>	<b>40.6</b>	42.06	42.3	37.5		
714	Roadside	N N	40.2	38.3	32.93	36.1	35.6		
715	Roadside	N		33.4	32.93	30.7	28.3		
718	Roadside	N		25.9	21.23	22.4	20.3		
710	Roadside	N		28.2	25.99	22.4	26.5		
713	Background	N		16.2	12.58	13.0	13.2		
720	Roadside	N	32.8	34.7	30.84	31.0	35.8		
721	Roadside	N	<b>57.1</b>	<b>55.4</b>	<b>43.11</b>	43.7	<b>43.1</b>		
730	Roadside	N	41	47.7	57.45	56.6	64.6		
731	Roadside	N	41	47.7	57.45	35.2	33.0		
732	Roadside	N				31.1	35.0		
733	Roadside	N		26.5		51.1	31.9		
734	Roadside	N		31.33	28.58	32.5	34.5		
722	Roadside	N		20	20.00	24.3	19.5		
723	Roadside	N		26	25.7	25.1	25.8		
723	Roadside	Ŷ	50.9	43	<b>45.8</b>	45.2	42.9		
724	Roadside	N N	33.5	31	30.7	28.5	27.2		
725	Roadside	Y	47.5	43	<b>50.7</b>	<b>49.5</b>	45.4		
727	Roadside	Y		50	51.5	53.3	55.3		
728	Roadside	N		28	29.7	27.9	29.4		
735	Roadside	N		15.3	13.8	14.1	14.7		

# Table 2.6Results of NO2 Diffusion Tubes (2009 to 2013)

		Within AQMA?	Annual Mean Concentration (µg/m <sup>3</sup> ) - Adjusted for Bias							
Site ID	Site Type		2009 (Bias Adjustment Factor = 0.99)	2010 (Bias Adjustment Factor = 0.99 Chideock = 0.93)	2011 (Bias Adjustment Factor = 0.93 Chideock = 0.99)	2012 (Bias Adjustment Factor = 1.01)	2013 (Bias Adjustment Factor = 1.01)			
736	Roadside	N		15.4	13.7	13.4	13.9			
737	Roadside	N		15.5	13.7	13.9	14.0			

The 2013 diffusion tube monitoring results show 6 sites exceeding the NO<sub>2</sub> annual mean objective. Three are within designated AQMA's, two are outside and located on East Road, Bridport and one is outside located on High West Street, Dorchester. The annual mean for site 730 in Bridport was above 60ug/m3, suggesting that there is the potential that the 1- hour average objective may have exceeded. The results are explained in more detail below.

#### Discussion of results for NO<sub>2</sub>

#### Chideock

In 2010, further monitoring was undertaken in Chideock to further define the levels of NO<sub>2</sub> 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 2013 did not show any exceedences in areas in Chideock other than those on the steep incline, these sites are located within the AQMA boundary.

Site 727 (see Figure 2.2) is located on the steep incline going out of the village. The site has exceeded the objective for 2013 but is in the AQMA boundary and further confirms the localised exceedance caused by the traffic climbing uphill within the 30mph zone.

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 the past 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 2013.

#### Dorchester

Table 2.5 shows that the annual mean objective for  $NO_2$  was exceeded in one location in Dorchester in 2013, site 711. Site 711 is not within the AQMA, however this is not a relevant exposure site. Monitoring results for 2013 show that the annual mean objective for  $NO_2$  was not exceeded at sites 714 and 713, these sites are located within the AQMA boundary.

Monitoring was extended in 2010 and a new site was introduced in 2012 to include locations where traffic was to be diverted when the Dorchester Transport & Environment Plan was to be implemented in 2014. This plan aimed to improve

environmental quality in Dorchester, primarily through a reduction in negative traffic impacts and is included in the Air Quality Action Plan for Dorchester. These sites are not showing exceedences and no other sites are above the annual mean objective for 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 2013 shows that these sites exceed the objective for NO<sub>2</sub>. 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 2013. Therefore, evidence shows that the objective is only likely to exceed at one property. Site 730 shows the annual mean for 2013 to be above 60ug/m<sup>3</sup>, which suggests that there was the potential for exceedences of the hourly objective in 2013. However, data from 2014 shows the annual mean for this site to be below 60ug/m<sup>3</sup>.

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  $NO_2$  to check levels here in the future.

### 2.2.2 Particulate Matter (PM<sub>10</sub>)

There were no areas identified in the last Updating and Screening Assessment within the district where  $PM_{10}$  could be a problem. This has not changed, therefore, no monitoring is currently undertaken for  $PM_{10}$ . However concerns had been raised by residents in Chideock regarding  $PM_{10}$  levels due to the unique topography of the area and the large percentage of HGV's that travel through the village.

Given those concerns, air quality modelling was undertaken for  $PM_{10}$  in Chideock in 2011. The results have shown that the annual average and 24 hour AQO for  $PM_{10}$  would not be exceeded at any locations within Chideock. There have been no further changes in West Dorset.

### 2.2.3 Sulphur Dioxide (SO<sub>2</sub>)

No areas were identified within the district where sulphur dioxide could be a problem during the last Updating and Screening Assessment. This has not changed, therefore no monitoring is currently undertaken for sulphur dioxide.

#### 2.2.4 Benzene

No areas were identified within the district where benzene could be a problem during the last Updating and Screening Assessment. This has not changed, therefore no monitoring is undertaken for benzene.

#### 2.2.5 Other Pollutants Monitored

No other pollutants are monitored in West Dorset.

#### 2.2.6 Summary of Compliance with AQS Objectives

West Dorset District Council has examined the results from monitoring in the district.

2013 data shows concentrations of nitrogen dioxide outside of the AQMA's have exceeded the annual mean  $NO_2$  objective in two locations along East Road, Bridport, sites 717 and 730 (the latter is above 60ug/m3) and one location in Dorchester, site 711 (however this is not a relevant exposure location).

Apart from the above, and the sites already within AQMA's, all other sites in West Dorset are below the objectives.

This 2014 progress report has been completed at the same time as the 2015 USA, therefore results from 2014 are also available. 2014 results show that the annual mean  $NO_2$  objective is exceeded in two locations along East Road, Bridport, sites 717 and 730. The annual mean for each of these locations is lower than 2013 and both are below  $60ug/m^3$ , suggesting that exceedences of the hourly objective for this pollutant are unlikely.

2014 data for Dorchester shows the annual mean for tube 711 is below the objective. Tubes 713 and 714 are located within the AQMA, tube 713 remains below the annual mean objective, tube 714 exceeds the objective.

2014 data for Chideock did not show any exceedences of the annual mean, other than sites within the AQMA.

WDDC will continue to monitor  $NO_2$  levels in these three areas and have no intentions to change any monitoring locations. Please see 2015 USA report for further information.

# 3 New Local Developments

West Dorset District Council confirms that there are no new or newly identified local developments which may have an impact on air quality within the Local Authority area.

West Dorset District Council confirms that all the following have been considered:

- Road traffic sources
- Other transport sources
- Industrial sources
- Commercial and domestic sources
- New developments with fugitive or uncontrolled sources.

# 4 Local / Regional Air Quality Strategy

West Dorset District Council does not have a Local Air Quality Strategy. However, its Air Quality Action Plans in Chideock and Dorchester include wider issues across the district.

# 5 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.

During 2013, no developments were granted planning permission that required mitigation for adverse air quality impacts.

# 6 Air Quality Planning Policies

The current West Dorset District Council Local Plan contains policies covering air quality and was adopted by the Council on 14 July 2006. However, through joint working, West Dorset District Council and Weymouth and Portland Borough Council have produced a draft joint Local Plan. This Local Plan sets out a long term planning strategy for the area up until 2031 and includes detailed policies and site proposals for housing, employment, leisure and infrastructure. The draft version will be considered by both councils in 2015 before it can be adopted.

The Councils policies that relate to air quality in the 2006 Local Plan are:

- AH8a: DEVELOPMENT WITH POTENTIAL TO GENERATE POLLUTION, NOISE, VIBRATION OR UNPLEASANT EMISSIONS
   Planning permission will not be granted for development that has the potential to generate pollution, noise, vibration or unpleasant emissions unless it can be demonstrated that the effects on health, amenity and the natural environment are or can be made acceptable.
- TRAN12 TRAVEL PLANS
   Development likely to have significant transport implications should provide a travel plan demonstrating practical measures for achieving sustainable transport objectives.
- TRAN8 CYCLISTS AND PEDESTRIANS

All new development will be expected to take account of the needs of cyclists and pedestrians by the direct provision or by contribution to new routes of links to existing routes within or adjoining a settlement. Such routes should provide a safe, convenient, direct and attractive environment to the cyclist or pedestrian. Where conditions allow, a choice of routes should be provided to increase the trip potential.

The Local Plan also aims to improve air quality through encouraging the management and planting of hedges (Chapter 11.2) and trees (Chapter 12.8).

Air quality is also a central topic of the Sustainable Construction Chapter (Chapter 12), where the reduction of emissions to air is discussed.

## 7 Local Transport Plans and Strategies

### 7.1 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).

The key actions under the LTP3 that relate to air quality and the environment are:

- Minimise the need to travel by supporting the planning system to build sustainable communities where people live near services, employment, education and leisure opportunities;
- Leading by example in the Public Sector by instigating transport carbon reduction programmes and assisting major public services (Local Authority, schooling and health) to provide their services as close to the client group as possible;
- Strongly encourage people to choose low carbon travel modes by improving urban centres for walking, cycling and public transport complimented by effective demand management measures;
- Help individuals and businesses to consider and assess the carbon impacts of meeting their transport needs and change their travel behaviour accordingly through "Smarter Choices" measures;
- Facilitate walking and cycling especially for children and young people to ensure a significant increase in these modes for short trips;
- Significantly increase the proportion of journeys undertaken by public transport within the major urban centres and the hinterland of market towns;
- Promote the adoption of low carbon fuels and vehicle technologies in the domestic, business and HGV fleet;

- Identify and implement measures to reduce carbon emissions associated with leisure travel and tourism in Dorset;
- Encourage efficient and low carbon use of the car in areas of poor accessibility by walking and cycling & public transport;
- Maximise the efficiency of the existing Highways Network through the deployment of Intelligent Transport Systems (ITS)4;
- Manage and adapt the Highways Network and structures to reduce vulnerability to the direct physical impacts of climate change;
- Monitor and report on carbon emissions from transport.

## 7.2 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 o 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

### 2.3 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

Measures delivered through the package included:

• £1.02m investment in the Weymouth, Portland and Dorchester walking and cycling network

- £335k for Personalised Travel Planning including practical travel information, maps and upgrade of the traveldorset.org web travel information resource including apps
- £280k towards Variable Messaging Signage and Car Parking Guidance in Dorchester
- £147k investment in Dorchester's public transport network including improving interchange at Dorchester South
- £148k for marketing of sustainable transport in the area
- £100k for a Bike It Officer working exclusively in schools within Weymouth, Portland and Dorchester
- £78k towards working with Sustrans to deliver sustainable transport in the area
- £60k for community led sustainable travel initiatives
- £53k for tourist and visitor travel planning to encourage visitors to enjoy our area by public transport, walking and cycling when on holiday
- £51k to provide three electric vehicles in the local authority fleet and install a 32amp electric charging point in Dorchester for LA and public use
- £50k for a business commuter club to support businesses to manage their travel needs including grants for cycle parking and other sustainable modes
- £34k to upgrade Dorset Flexicars Dorchester Car Club and expand into Weymouth
- £30k for the purchase of three car club vehicles
- £25k to work with schools
- £2k for electric vehicle and charge point operational costs

# 8 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 <a href="https://www.dorsetforyou.com/climatechange/west">https://www.dorsetforyou.com/climatechange/west</a>

## 8.1 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.

## 8.2 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.

# 9 Implementation of Action Plans

The Action Plans for Dorchester and Chideock are not provided here as the 2015 Updating and Screening Assessment is currently being written and will be submitted to DEFRA shortly after this 2014 Progress report. Please see the 2015 USA report for further details.

## 10 Conclusions and Proposed Actions

### **10.1** Conclusions from New Monitoring Data

Monitoring data for 2013 continues 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. There are no plans to alter these AQMA's.

The area of East Road, Bridport, also exceeds this objective and here 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 NO<sub>2</sub> here, this decision is still valid.

There were no hourly mean exceedences throughout the district in 2013 apart from tube 730 located in Bridport.

This Progress Report has been written alongside the 2015 Updating and Screening Assessment, please see this report for further details.

### 10.2 Proposed Actions

WDDC will continue to monitor NO<sub>2</sub> levels in Chideock, Bridport and Dorchester. Please see the 2015 Updated and Screening Assessment for further information.

## 11 References

- Local Air Quality Management Policy Guidance LAQM.PG (09). February 2009. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
- Local Air Quality Management Technical Guidance LAQM.TG (09). February 2009. 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 <u>www.dorsetforyou.com/travelchoice</u>
- West Dorset Climate Change Strategy
- West Dorset District Council Carbon Management Plan (CMP)
- West Dorset District Council Updating and Screening Assessment 2009.
- West Dorset District Council Chideock Air Quality Action Plan 2009
- West Dorset District Council Progress Report 2010.
- West Dorset District Council Dorchester Air Quality Action Plan 2011
- West Dorset District Council Progress report and Detailed Assessment 2011
- West Dorset in Profile Key facts & figures about the community Dorset County Council
- West Dorset Local Plan 2006

# Glossary

AQMA	Air Quality Management Area
AQO	Air Quality Objective
AURN	Automatic Urban and Rural Network
CPC	Chideock Parish Council
DCC	Dorset County Council
Defra	Department of environment, food & rural affairs
DfT	Department of Transport
DTEP	Dorchester Transport & Environment Plan
HA	Highways Agency
LA	Local Authority
LAQM	Local Air Quality Management
LPT3	Local Transport Plan 3
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>X</sub>	Nitrogen Oxides
PG(09)	Policy Guidance 2009
PM <sub>10</sub>	Particulate Matter <=10 µm
PM <sub>2.5</sub>	Particulate Matter <=2.5 µm
TG09	Technical Guidance 2009
USA	Updating and Screening Assessment
WDDC	West Dorset District Council
µg/m³	Microgrammes per cubic metre

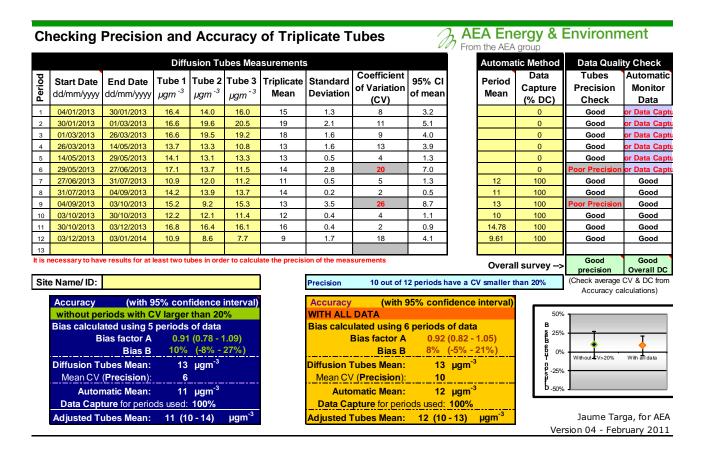
# **Appendices**

### Appendix A: Quality Assurance / Quality Control (QA/QC) Data

#### **Diffusion Tube Bias Adjustment Factors**

Gradko International Limited supply and analyse the diffusion tubes, which are a preparation of 50% TEA (triethanolamine) / Acetone. To improve the accuracy of the diffusion tube results and to minimise any potential errors, West Dorset co-locate three diffusion tubes (coded 735, 736, 737) with the inlet of the continuous monitoring equipment at the A35 Roadside site in Chideock. The results of these tubes can be assessed against the ratified data from the continuous NO<sub>X</sub> analyser and a local bias-adjustment factor calculated. The calculation is summarised in Table A.1.

#### Table A.1 – Summary of Bias Adjustment – Roadside



The default national bias adjustment factor (version September 2014) taken from the LAQM Helpdesk website was 1.01.

#### Discussion of Choice of Factor to Use in 2013

Due to a fault with the analyser, there was limited data available for 2013. From the data available, the local bias adjustment factor calculated was 0.92. However, as the data capture for 2013 was 50%, advice was sought from the LAQM Helpline, who advised that in this case, the local bias adjustment factor should not be used. Therefore the national correction factor of 1.01 was used for the monitoring period for 2013 for all areas.

### QA/QC of automatic monitoring

The Automatic Analyser is serviced and maintained by Air Monitors Ltd. The Local Authority undertake regular checks of the analysers 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 analysers remotely and contact the Local Authority if there are any unusual readings.

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

#### QA/QC of diffusion tube monitoring

The diffusion tube monitoring programme follows the NETCEN methodology. Diffusion Tubes are supplied and analysed by Gradko International Limited, who are UKAS accredited. Gradko International Limited, supply and analyse the diffusion tubes, which are a preparation of 50% TEA (triethanolamine) / Acetone. The tubes are handled in accordance with the instructions within Technical Guidance LAQM.TG (09) Box A1.7.

Gradko International demonstrated a satisfactory performance, rating good, in the Workplace Analysis Scheme for Proficiency (WASP) for analysis of NO<sub>2</sub> diffusion tubes in 2013.

## Appendix B: Long Term 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								

### West Dorset District Council