

***TEST VALLEY***  
B O R O U G H C O U N C I L

## 2013 Air Quality Progress Report for Test Valley Borough Council

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

Date: April 2013

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03 July 2013

Dear Mr Slaughter

**LOCAL AIR QUALITY MANAGEMENT: 2013 AIR QUALITY PROGRESS REPORT**

Thank you for consulting the Secretary of State for Environment, Food and Rural Affairs on Test Valley BC's Air Quality Progress Report. Please find comments on the report attached.

The report provides update with respect to air quality management in the Borough. The Council has examined the results from monitoring. Concentrations are all below the objectives so there is no need to proceed to a Detailed Assessment. The report did not identify any new developments that may have an impact on air quality.

On the basis of the information provided the conclusions of the Progress Report are accepted. The Council should take note of the comments in the appraisal report in future reports. We look forward to receiving the Council's 2014 Progress Report.

Yours sincerely

Tutu Aluko  
**ATMOSPHERE AND LOCAL ENVIRONMENT PROGRAMME**



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## Executive Summary

Local Authorities in the UK have the statutory duty to review and assess air quality on a regular basis which involves the production of reports on a three year cycle. The 2013 report is the second part of Round 5 of the Review and Assessment process requiring the submission of a Progress Report by 30<sup>th</sup> April 2013. The Progress Report is intended to maintain continuity in the Local Air Quality Management process and present the results of on-going monitoring of air quality pollutants within the Borough where emissions from a range of sources could adversely impact sensitive receptors.

The Progress Report details the nitrogen dioxide monitoring carried out in 2012 at 17 sites and considers whether new or proposed developments have the potential to impact local air quality which may lead to an exceedence of Air Quality Objectives.

Road transport is one of the main sources of local air pollution in Test Valley and UK trends in NO<sub>2</sub> (2004 – 2009) have been weakly downward in the range 0.5 – 1.0% per year with rural sites showing a greater decrease  $\approx$  1.4% per year. This trend is also reflected in the Council's own monitoring (2008 – 2012) which has indicated a small downward trend at 13 of the 17 sites.

Based on the findings of this Progress Report, Test Valley Borough Council has found no evidence that the levels of nitrogen dioxide may exceed the specific Air Quality Objectives and therefore has not identified the need to proceed to a Detailed Assessment.

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# 1 Introduction

## 1.1 Description of Local Authority Area

Test Valley lies on the western side of Hampshire and to the north of the Southampton conurbation. The borough covers 628 square kilometres (243 square miles) and includes the two historic market towns of Andover and Romsey. The population of the borough in 2012 was estimated at approximately 114,651.

One of the major sources of air pollution within the borough is road traffic using the two primary east-west routes through the Test Valley. To the south of Romsey there is approximately 8.5km of the M27 and to the south of Andover is the A303, of which around 26km passes through Test Valley. In addition to these main traffic routes, a short section of the A34 (approximately 1.3km) runs north-south through the eastern side of the borough at Bullington.

Although there are no other 'major' sources of air pollution within the borough, there are currently 46 Part B installations permitted by Test Valley under the Environmental Permitting (England and Wales) Regulations 2010 and one Part A2 installation. In addition, there are currently 10 sites which have IPPC permits issued by the Environment Agency.

## 1.2 Purpose of Progress Report

This report fulfils the requirements of the Local Air Quality Management 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 exceedances 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 Local Air Quality Management 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 exceedance 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 ( $\mu\text{g}/\text{m}^3$ ) and milligrammes per cubic metre ( $\text{mg}/\text{m}^3$ ) for carbon monoxide, with the number of exceedences in each year that are permitted (where applicable).

**Table 1.1 Air Quality Objectives included in Regulations for the purpose of LAQM in England**

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

## 1.4 Summary of Previous Review and Assessments

### Review and Assessment - Round 5

#### **Part 1 - April 2012 Updating & Screening Assessment**

The 2012 Updating & Screening Assessment Report was carried out by staff of the Housing and Environmental Health Service in March/April 2012 and considered the results of nitrogen dioxide monitoring carried out in 2011 at 17 sites. In addition, the assessment consisted of applying various screening criteria for the purpose of considering whether new or significantly changed sources of air pollutants may lead to an exceedance of an Air Quality Objective for any of the seven key pollutants.

Road transport is one of the major sources of local air pollution in Test Valley and although national air quality data has shown a decrease in air pollution levels in recent years, the Council's own monitoring (2007–2011) indicated a slight upward trend at approximately half of the NO<sub>2</sub> tube locations. Population exposure to traffic-related pollutants is expected to be relatively higher near major roads with a high percentage of HGV's, at busy road junctions, and in narrow and congested town centre streets.

Based on the findings of this *USA* report, Test Valley Borough Council found no evidence that the levels of any of these seven pollutants may exceed the specific Air Quality Objectives and therefore did not identify the need to proceed to a Detailed Assessment.

The April 2012 *USA* Report is published on the Council's website at:  
<http://www.testvalley.gov.uk/assets/files/2380/TVBC-USA-Report-April-2012-.pdf>

### Review and Assessment - Round 4

#### **Part 3 - April 2011 Progress Report**

The 2011 Progress Report was carried out by staff of the Housing, Health & Communities Service in March/April 2010 and considered the results of nitrogen dioxide monitoring carried out in 2010 at 17 sites. In addition, the assessment consisted of applying various screening criteria for the purpose of considering whether new or significantly changed sources of air pollutants may lead to an exceedance of an Air Quality Objective for any of the seven key pollutants.

Road transport is one of the main sources of local air pollution in Test Valley and although UK trends in NO<sub>2</sub> (2004–2009) have been decreasing in the range of 0.5 – 1.0% per year, the Council's own monitoring (2005–2010) has indicated a slight upward trend at all 17 sites. Population exposure to traffic-related pollutants is expected to be relatively higher near major roads with a high percentage of HGV's, at busy road junctions, and in narrow and congested town centre streets.

Based on the findings of this report, Test Valley Borough Council found no evidence that the levels of any of these seven pollutants may exceed the specific Air Quality Objectives and therefore did not identify the need to proceed to a Detailed Assessment.

The April 2011 Progress Report is published on the Council's website at:

<http://www.testvalley.gov.uk/assets/files/217/Air-Quality-Progress-Report-2011.pdf>

### **Part 2 - April 2010 Progress Report**

The 2010 Progress Report was carried out by staff of the Housing, Health & Communities Service in March/April 2010 and considered the results of nitrogen dioxide monitoring carried out in 2009 at 21 sites. In addition, the assessment consisted of applying various screening criteria for the purpose of considering whether new or significantly changed sources of air pollutants may lead to an exceedence of an Air Quality Objective for any of the seven key pollutants.

Road transport is one of the major sources of local air pollution in Test Valley and although national air quality data has shown a decrease in air pollution levels in recent years, the Council's own monitoring (2005–2009) indicated a gradual upward trend. Population exposure to traffic-related pollutants is expected to be relatively higher near major roads with a high percentage of HGVs, at busy road junctions, and in narrow and congested town centre streets.

Based on the findings of this report, Test Valley Borough Council found no evidence that the levels of any of these seven pollutants may exceed the specific Air Quality Objectives and therefore did not identify the need to proceed to a Detailed Assessment.

The April 2010 Progress Report is published on the Council's website at:

<http://www.testvalley.gov.uk/assets/files/218/Air-Quality-Progress-Report-2010.pdf>

### **Part 1 - April 2009 Updating & Screening Assessment**

The 2009 Updating & Screening Assessment (*USA*), carried out by staff of the Housing, Health & Communities Service in March/April 2009, considered the results of nitrogen dioxide monitoring carried out in 2008 at 21 sites. In addition, the assessment consisted of applying various screening criteria for the purpose of considering whether new or significantly changed sources of air pollutants may lead to an exceedence of an Air Quality Objective for any of the seven key pollutants.

Road transport is one of the major sources of local air pollution in Test Valley and although national air quality data has shown a decrease in air pollution levels in recent years, the Council's own monitoring (2004–2008) indicated a gradual upward trend in some areas. Population exposure to traffic-related pollutants is expected to

## **Test Valley Borough Council**

be relatively higher near major roads with a high percentage of HGV's, at busy road junctions, and in narrow and congested town centre streets.

Based on the findings of this *USA* report, Test Valley Borough Council found no evidence that the levels of any of these seven pollutants may exceed the specific Air Quality Objectives and therefore did not identify the need to proceed to a Detailed Assessment.

The April 2009 *USA* Report is published on the Council's website at: <http://www.testvalley.gov.uk/assets/files/219/Air-Quality-Progress-Report-2009.pdf>

## 2 New Monitoring Data

### 2.1 Summary of Monitoring Undertaken

#### 2.1.1 Automatic Monitoring Sites

Test Valley Borough Council currently operates no automatic monitoring sites.

#### 2.1.2 Non-Automatic Monitoring Sites

The nitrogen dioxide diffusion tubes used by Test Valley Borough Council in 2012 were supplied and analysed by Environmental Scientifics Group (ESG) based in Didcot, Oxfordshire. The method of analysis is 50% TEA in Acetone and the ESG laboratory is UKAS accredited. ESG confirm that their laboratory follows the procedures set out in the Practical Guidance document.

Test Valley Borough Council does not have a co-location study included with their current diffusion tube monitoring program. A bias adjustment factor of **0.79** has been used for the 2012 data which was obtained from the Defra website at:

[http://laqm.defra.gov.uk/documents/Database\\_Diffusion\\_Tube\\_Bias\\_Factors-v03\\_13-Final.xls](http://laqm.defra.gov.uk/documents/Database_Diffusion_Tube_Bias_Factors-v03_13-Final.xls).

The non-automatic monitoring carried out by Test Valley Borough Council during 2012 comprised of 17 nitrogen dioxide diffusion tubes positioned at selected kerbside, roadside, intermediate and urban background locations. Details of these sites are set out in Table 2.2 and location plans can be found in Appendix B.

In order for the results from the use of diffusion tubes to be of an adequate quality, the diffusion tubes used by Test Valley Borough Council are located in accordance with the guidance set out in the AEA Energy & Environment report entitled 'Diffusion Tubes for Ambient NO<sub>2</sub> Monitoring: Practical guidance for Laboratories and Users'.

Table 2.2 Details of Non- Automatic Monitoring Sites

Site ID	Site Type	OS Grid Ref	Pollutant Monitored	In AQMA?	Relevant Exposure? Yes / No (distance to relevant exposure)	Distance to kerb of nearest road (n/a if not applicable)	Worst-case location ?
ROM1	Urban background	X 435382 Y 121377	NO <sub>2</sub>	N	Yes (Property façade)	n/a	N
ROM2	Roadside	X 435135 Y 121461	NO <sub>2</sub>	N	Yes (Property façade)	1m	Y
ROM3	Roadside	X 435205 Y 121147	NO <sub>2</sub>	N	Yes (Property façade)	1.3m	Y
ROM5A	Roadside	X 435474 Y 121089	NO <sub>2</sub>	N	No (3 metres)	1.1m	Y
ROM7	Roadside	X 435480 Y 121103	NO <sub>2</sub>	N	Yes (Property façade)	2.3m	Y
ROM8	Roadside	X 435867 Y 121277	NO <sub>2</sub>	N	No (-3 metres)	4.8m	Y
ROM9	Roadside	X 435697 Y 121244	NO <sub>2</sub>	N	Yes (Property façade equivalent)	2m	Y
ROM10	Roadside	X 435630 Y 121403	NO <sub>2</sub>	N	No (6 metres)	2.6m	Y
CHIL12	Roadside	X 441763 Y 118089	NO <sub>2</sub>	N	No (18 metres)	2m	Y
CHIL11B	Intermediate	X 442137 Y 117672	NO <sub>2</sub>	N	Yes (Property façade equivalent)	24m	N
CHIL14	Roadside	X 442266 Y 117627	NO <sub>2</sub>	N	Yes (Property façade equivalent)	3m	Y
AND15	Intermediate	X 435864 Y 145381	NO <sub>2</sub>	N	Yes (Property façade)	9m	N
AND19	Urban background	X 435848 Y 145599	NO <sub>2</sub>	N	No (12 metres)	n/a	N
AND20	Kerbside	X 436500 Y 144938	NO <sub>2</sub>	N	No (6 metres)	<1m	Y
AND22	Urban background	X 436362 Y 144855	NO <sub>2</sub>	N	Yes (Property façade equivalent)	n/a	N
AND23	Urban background	X 435864 Y 144430	NO <sub>2</sub>	N	Yes (Property façade)	n/a	N
AND25	Roadside	X 435740 Y 144235	NO <sub>2</sub>	N	No (4 metres)	<1m	Y

## 2.2 Comparison of Monitoring Results with Air Quality Objectives

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

Based on the January 2012 – December 2012 diffusion tube results, the annual mean concentration for nitrogen dioxide was not exceeded at any of the 17 monitoring locations within the borough.

#### Automatic Monitoring Data

Test Valley Borough Council does not currently carry out automatic monitoring of any pollutants.

**Table 2.3a Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with Annual Mean Objective**

Site ID	Location	Within AQMA?	Relevant public exposure? Y/N	Data Capture for monitoring period <sup>a</sup> %	Data Capture for full calendar year 2010 <sup>b</sup> %	Annual mean concentrations (µg/m <sup>3</sup> )		
						2010 <sup>c,d</sup>	2011 <sup>c,d</sup>	2012 <sup>c</sup>
Test Valley Borough Council does not carry out automatic monitoring of nitrogen dioxide								

**Table 2.3b Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with 1-hour Mean Objective**

Site ID	Location	Within AQMA?	Relevant public exposure? Y/N	Data Capture for monitoring period <sup>a</sup> %	Data Capture for full calendar year 2010 <sup>b</sup> %	Number of Exceedences of hourly mean (200 µg/m <sup>3</sup> ) <small>If the period of valid data is less than 90% of a full year, include the 99.8<sup>th</sup> percentile of hourly means in brackets.</small>		
						2010 <sup>c</sup>	2011 <sup>c</sup>	2012
Test Valley Borough Council does not carry out automatic monitoring of nitrogen dioxide								

## Diffusion Tube Monitoring Data

The survey methodology and diffusion tube locations remain unchanged from those reported in the April 2012 Updating & Screening Assessment Report. The location plans for the 17 nitrogen dioxide diffusion tubes can be found in Appendix B and a corresponding set of 5 year trend charts can be found in Appendix C.

**Table 2.5 Results of NO<sub>2</sub> Diffusion Tubes 2012**

Site ID	Location	Site Type	Within AQMA?	Triplicate or Co-located Tube	Full Calendar Year Data Capture 2012 (Number of Months) <sup>a</sup>	2012 Annual Mean Concentration (µg/m <sup>3</sup> ) - Bias Adjustment factor = 0.79 <sup>b</sup>
ROM1	Station Road, Romsey	Urban background	N	N	12	15.5
ROM2	Cherville Street, Romsey	Roadside	N	N	12	17.1
ROM3	Bell Street, Romsey	Roadside	N	N	12	20.3
ROM5A	Palmerston Street, Romsey (west)	Roadside	N	N	12	33.6
ROM7	Palmerston Street, Romsey (east)	Roadside	N	N	12	29.5
ROM8	Plaza Roundabout, Romsey	Roadside	N	N	12	28.4
ROM9	Alma Road, Romsey (south)	Roadside	N	N	12	27.8
ROM10	Alma Road, Romsey (middle)	Roadside	N	N	12	29.6
CHIL12	Chilworth Road, Chilworth	Roadside	N	N	12	36.9
CHIL11B	Winchester Road, Chilworth	Intermediate	N	N	11 (91.6%)	25.2
CHIL14	Bracken Place, Chilworth	Roadside	N	N	12	26.9
AND15	Weyhill Road, Andover	Intermediate	N	N	11 (91.6%)	20.2
AND19	St. John the Baptist Church, Alexandra Road, Andover	Urban background	N	N	12	14.9
AND20	Humberstone Road, Andover (east)	Kerbside	N	N	11 (91.6%)	18.8
AND22	Humberstone Road, Andover (west)	Urban background	N	N	12	14.7
AND23	Barlows Lane, Andover (north)	Urban background	N	N	12	14.6
AND25	Barlows Lane, Andover (south)	Roadside	N	N	12	19.8

In bold, exceedence of the NO<sub>2</sub> annual mean AQS objective of 40µg/m<sup>3</sup>

Underlined, annual mean > 60µg/m<sup>3</sup>, indicating a potential exceedence of the NO<sub>2</sub> hourly mean AQS objective

<sup>a</sup> Means should be "annualised" as in Box 3.2 of TG(09)( <http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38>), if full calendar year data capture is less than 75%

<sup>b</sup> If an exceedence is measured at a monitoring site not representative of public exposure, NO<sub>2</sub> concentration at the nearest relevant exposure should be estimated based on the "[NO<sub>2</sub> fall-off with distance](http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html)" calculator (<http://laqm.defra.gov.uk/tools-monitoring-data/no2-falloff.html>), and results should be discussed in a specific section. The procedure is also explained in [Box 2.3 of Technical Guidance LAQM.TG\(09\)](http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=30) (<http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=30>).

**Table 2.6 Results of NO<sub>2</sub> Diffusion Tubes (2008 to 2012)**

Site ID	Site Type	Within AQMA?	Annual Mean Concentration (µg/m <sup>3</sup> ) - Adjusted for Bias <sup>a</sup>				
			2008 (Bias Adjustment Factor = 0.83)	2009 (Bias Adjustment Factor = 0.82)	2010 (Bias Adjustment Factor = 0.84)	2011 (Bias Adjustment Factor = 0.84)	2012 (Bias Adjustment Factor = 0.79)
ROM1	Urban background	N	17.5	18.0	18.1	17.5	15.5
ROM2	Roadside	N	20.2	18.9	19.8	18.8	17.1
ROM3	Roadside	N	22.9	23.3	27.9	23.2	20.3
ROM5A	Roadside	N	32.2	38.5	34.7	37.9	33.6
ROM7	Roadside	N	33.1	35.2	34.0	33.0	29.5
ROM8	Roadside	N	31.1	31.9	29.7	30.3	28.4
ROM9	Roadside	N	28.9	32.6	27.5	30.2	27.8
ROM10	Roadside	N	32.9	32.9	30.9	30.1	29.6
CHIL12	Roadside	N	36.2	37.4	35.6	38.8	36.9
CHIL11B	Intermediate	N	26.1	26.7	25.7	27.8	25.2
CHIL14	Roadside	N	29.2	31.7	29.7	29.0	26.9
AND15	Intermediate	N	24.5	23.7	22.5	21.8	20.2
AND19	Urban background	N	15.9	15.8	15.8	15.0	14.9
AND20	Kerbside	N	15.3	20.8	21.1	18.9	18.8
AND22	Urban background	N	21.3	14.8	16.2	14.7	14.7
AND23	Urban background	N	16.5	16.1	16.7	15.5	14.6
AND25	Roadside	N	21.6	20.2	20.3	20.5	19.8

In bold, exceedence of the NO<sub>2</sub> annual mean AQS objective of 40µg/m<sup>3</sup>

Underlined, annual mean > 60µg/m<sup>3</sup>, indicating a potential exceedence of the NO<sub>2</sub> hourly mean AQS objective

<sup>a</sup> Means should be “annualised” as in Box 3.2 of TG(09) (<http://laqm.defra.gov.uk/technical-guidance/index.html?d=page=38>), if full calendar year data capture is less than 75%

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

Test Valley Borough Council does not carry out monitoring of Particulate Matter.

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

Test Valley Borough Council does not carry out monitoring of Sulphur Dioxide.

**2.2.4 Benzene**

Test Valley borough Council does not carry out monitoring of Benzene.

**2.2.5 Other Pollutants Monitored**

Test Valley Borough Council does not carry out monitoring of any other pollutants.

**2.2.6 Summary of Compliance with AQS Objectives**

Test Valley Borough Council has examined the results from monitoring in the borough. Concentrations are all below the objectives, therefore there is no need to proceed to a Detailed Assessment.

## **3 New Local Developments**

### **3.1 Road Traffic Sources**

Test Valley Borough Council has not identified any new road traffic sources since the last Updating and Screening Assessment report was produced in April 2012.

### **3.2 Other Transport Sources**

Test Valley Borough Council has not identified any new transport sources since the last Updating and Screening Assessment report was produced in April 2012.

### **3.3 Industrial Sources**

Test Valley Borough Council has not identified any new industrial sources since the last Updating and Screening Assessment report was produced in April 2012.

### **3.4 Commercial and Domestic Sources**

Test Valley Borough Council has not identified any new commercial or domestic sources since the last Updating and Screening Assessment report was produced in April 2012.

### **3.5 New Developments with Fugitive or Uncontrolled Sources**

Test Valley Borough Council has not identified any new developments with fugitive or uncontrolled sources since the last Updating and Screening Assessment report was produced in April 2012.

Test Valley Borough 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.

Test Valley Borough 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**

Test Valley Borough Council does not currently have an Air Quality Strategy, though the need for one will continue to be kept under review.

## 5 Planning Applications

Test Valley Borough Council has a number of approved planning applications for new large-scale developments which have possible implications for local air quality. The air quality assessments carried out for these applications indicate that there is no likelihood of a breach of any current air quality objectives. A brief summary of these applications is set out below:

### **Abbotswood, Romsey** (Application Number – 08/00475/OUTS)

- Outline application for the erection of 800 dwellings with associated Local Centre.
- An air quality assessment was been carried out and formed part of the Environmental Statement submitted with the outline application.
- Construction work on this development started in 2011 and there are currently around 160 dwellings now occupied.

### **Andover Business Park** (Application Number – 13/00034/FULLN)

- Erection of Business Park development on Plot 5 comprising storage and distribution (Class B8), ancillary office accommodation, Vehicle Maintenance Unit, security gatehouse, access, parking and servicing areas, landscaping, acoustic fencing and associated works.
- An updated air quality assessment was carried out and formed part of the Environmental Statement submitted with this application.
- A decision on this planning application is still pending.

### **Land at East Anton, Andover** (Application Number – TVN.09258)

- Erection of 2500 dwellings, schools, local centres, playing fields, parkland, public open space, landscaping and associated works.
- An air quality assessment was included in the Environmental Statement which was submitted with the outline application.
- Construction works continuing and approximately 800 dwellings are now occupied.

### **Land at Picket Piece, Andover** (Application Number – 10/00242/OUTN)

- Outline application for a mixed use development comprising up to 530 dwellings, local centre offering community facilities and retail units, public open space, vehicular, pedestrian and cycle access and landscaping.
- An air quality assessment was included with the Environmental Statement which was submitted with the outline application.
- Construction work has not yet started.

**Land at Picket Twenty, Andover** (Application Number – TVN.09275)

- Erection of 1200 residential units, community facility, school, retail units, offices, recreational areas and associated highway works.
- An air quality assessment was included in the Environmental Statement which was submitted with the outline application.
- Associated highway works are nearly complete and approximately 600 dwellings have been completed.

**Land at Redbridge Land, Nursling** (Application Number – 09/01706/OUTS)

- Outline application for residential development of up to 350 dwellings with open space, landscaping, vehicular and pedestrian access.
- An air quality assessment was carried out and submitted with the outline application.
- Construction work has not yet started.

**Land South of Brownhill Way, Nursling** (Application Number – 11/02859/FULLS)

- Demolition of 6 residential properties and erection of a *Lidl* regional distribution centre (42,820 m<sup>2</sup> gross area), 186 associated car parking spaces, HGV hard-standing, two sprinkler tanks and pump room and new peripheral landscaping.
- An air quality assessment was carried out and submitted with this planning application.
- A decision on this planning application is still pending.

**The Fairground Site, Romsey** (Application Number – 12/01934/FULLS)

- Demolition of six Class C3 dwellings and the erection a Class A1 retail food store (TESCO), with associated access, parking and landscaping arrangements.
- An air quality assessment was carried out and submitted with this planning application.
- A decision on this planning application is still pending.

Note: Full details of these planning applications can be viewed on-line via the Test Valley website at: <http://www.testvalley.gov.uk/Default.aspx?page=9883>

## 6 Air Quality Planning Policies

Test Valley Borough Council's Planning Policy HAZ 03 and AME 05 are policies which consider development for approval if the proposal will not have an adverse impact on the environment, including discharges or emissions to air.

### **HAZ 03:**

#### **POLLUTION**

**Development which would, or could potentially give rise to pollution, will only be permitted if it will not have an adverse impact on adjoining uses or the natural environment, or pose a risk to health as a result of any discharges or emissions to water, land or air.**

5.4.1 Pollution is the release of substances into the environment, which can cause harm to human health, property or the wider environment. Pollution can be released into the air or water or can contaminate land. Some developments or activities have the potential to pollute more than one environmental medium. Emissions or discharges that are a nuisance but are not likely to prove harmful to health (such as dust, noise or harmless odours) are dealt with in Policy AME 05.

5.4.2 The control of pollution is a complex process involving both local planning authorities and other statutory bodies. Government advice is that "the planning system should not be operated so as to duplicate controls which are the statutory responsibility of other bodies." The legal position, however, is that pollution impacts are material planning considerations which should not be ignored in the making of planning decisions. Therefore the Local Planning Authority will control the location of development which may give rise to pollution or is in close proximity to pollution sources.

5.4.3 The Council will take account of any material considerations concerning potential releases of pollution and when making planning decisions will have regard to the advice of the pollution control agencies. In cases where land use mitigation measures are required to prevent pollution, or to enable releases, or potential releases, to meet pollution control standards the Council will need to be convinced that the proposed measures will be effective. In appropriate circumstances the Council will use planning conditions or agreements to ensure that a development does not give rise to pollution.

**AME 05:**

**UNPLEASANT EMISSIONS**

**Development likely to generate unpleasant emissions will be permitted provided that the amenity of people in the locality is not adversely affected.**

**Residential development or other uses resulting in regular human occupation will only be permitted close to sources of unpleasant emissions if the impact of the emissions on the intended users of the development would be reduced to an acceptable degree through appropriate mitigation measures.**

9.1.15 Certain developments such as sewage treatment works, biodegradable waste sites and some industrial uses give rise to unpleasant emissions. Even some food and drink establishments can cause potential environmental nuisances such as smells. Whilst such emissions are not usually harmful to health, they can adversely affect the amenity of people in the immediate vicinity. Emissions or discharges that could prove harmful to health are dealt with by Policy HAZ 03 in Chapter 5: Avoiding Hazards.

9.1.16 Where development is proposed that would give rise to unpleasant emissions (such as odour, fumes, smoke, soot, ash, dust or grit), the Council will ensure that the amenity of neighboring uses is not adversely effected. This will not preclude development provided that measures (for example: dust extractors) are incorporated into its design to reduce the impact of any unpleasant emissions to acceptable levels. The Council will also seek to limit development in close proximity to known sources of unpleasant emissions, (such as Sewage Treatment Works and Waste Treatment Plants).

## 7 Local Transport Plans and Strategies

### Hampshire Local Transport Plan 2011 - 2031

Hampshire County Council's new Local Transport Plan (LTP) was formally approved at a full meeting of the County Council on 24 February 2011.

The new LTP is written in two parts:

- Part A is a 20-year Strategy, which sets out a long-term vision for how the transport network of Hampshire will be developed over the next 20 years, and includes a policy (Policy E) to specifically deliver improvements in air quality.
- Part B is a three-year Implementation Plan setting out planned expenditure on transport over the period April 2011 to March 2014.

The new LTP builds on the successes of previous local transport plans and looks to make improvements to the transport system which will benefit people living and working in Hampshire. It has been produced following extensive consultation with the public and the County Council's strategic partners.

### Policy E: To deliver improvements in air quality

<b>Why?</b>	Congestion creates higher levels of air pollution as queuing traffic, especially in more restricted or confined spaces, generates higher concentrations of vehicle emissions. Poor air quality can create or exacerbate health and respiratory problems, for example asthma. Air Quality Management Areas (AQMAs) are places where pollutant levels exceed government thresholds. Twenty AQMAs have been identified within urban areas across the sub-region. The recent White Paper on Public Health indicates that by April 2013, Unitary Authorities and County Councils will be given funding and responsibility for improving public health.
<b>How?</b>	The Transport for South Hampshire authorities will work with key partners, environmental health professionals and transport operators to mitigate the impacts of traffic on air quality. The principal causes of poor air quality will be addressed by implementing a strategic area-wide approach within each urban centre to minimise the cumulative effect of road transport emissions. This can be achieved through measures promoting modal shift towards public transport modes, walking and cycling, reducing single occupancy car journeys. Tackling congestion at hotspots can also improve air quality.
<b>Delivery Options</b>	<ul style="list-style-type: none"> <li>• Air Quality Management Areas and Air Quality Action Plans;</li> <li>• Promotion of cleaner, greener vehicle technologies e.g. alternative fuels;</li> <li>• Car Share Schemes;</li> <li>• Support for and similar schemes;</li> </ul>
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>• Improved air quality &amp; environment, and reduced greenhouse gas emissions; and</li> <li>• Promoting a higher quality of life.</li> </ul>

### **Test Valley Access Plan**

The Test Valley Access Plan was jointly prepared by the Borough Council and Hampshire County Council and was reviewed in July 2012.

The Test Valley Access Plan objectives are to:

- identify an agreed list of future transport schemes, for which funding can be sought from a variety of sources,
- improve personal safety, for all road users,
- improve access and reduce severance,
- developing and encouraging greater use of more sustainable means of transport;
- encourage the development of routes for cyclists and pedestrians; and
- encourage healthier and more active lifestyles, and
- ensure that improved access routes do not compromise the natural or historic environment.

### **Andover Town Access Plan**

The Andover Town Access Plan was jointly prepared by Test Valley Borough Council and Hampshire County Council and was published in July 2012.

The Town Access plan seeks to:

- set out a range of measures which the contributions collected under the TCP and the emerging Community Infrastructure (CiL) can help to deliver, either in part or wholly.
- develop appropriate measures to accommodate the planned development associated with the Major Development Areas at East Anton and Picket Twenty, and the former Andover Airfield site.
- encourage greater use of more sustainable means of transport,
- improve personal safety, especially for pedestrians and cyclists,
- encourage healthier and more active lifestyles,
- reduce the severance caused by the inner ring road,
- encourage the development of a town wide network of cycle facilities,
- recognise and respond to the needs of
- those with limited or impaired mobility.

### **Romsey Town Access Plan**

The Andover Town Access Plan was jointly prepared by Test Valley Borough Council and Hampshire County Council and was published in April 2011.

The Town Access Plan seeks to:

- Inform an agreed priority list of future transport schemes for which funding can be sought and for which contributions can be collected under the TCP
- Encourage greater use of more sustainable modes of transport,
- Improve access to public transport
- Improve personal safety for all highway users and especially pedestrians and cyclists.
- Reduce severance caused by main roads and railway lines
- Encourage the development of a town wide network of cycle and pedestrian facilities
- Encourage healthier and more active lifestyles, and
- Enhance and protect the character and setting of Romsey.
- Support enhancements to Romsey urban public realm underpinning the future economic strength of the town

## 8 Climate Change Strategies

### Summary of 'BUILDING A SUSTAINABLE TEST VALLEY, Sustainability Strategy 2012 – 2017' (Approved March 2012)

(<http://www.testvalley.gov.uk/aboutyourcouncil/corporatedirection/environmentandsustainability/environmental-strategies>)

#### **Introduction**

The Council has a range of responsibilities in the way it delivers its services, including seeking to promote sustainable practices. This incorporates a range of issues and areas of focus, such as reducing demand on resources and using them more wisely (including energy and materials), adapting to a changing climate and reducing expenditure on energy and fuel.

#### **Background**

The environmental aspects of the Government's vision covers a range of issues, in particular tackling a changing climate (mitigation and adaptation) and protecting and enhancing the natural environment. Both of these issues are important in Test Valley and the links between the two are recognised.

#### **Achievements to date**

In 2008 the Council signed the Nottingham Declaration and embarked upon a number of initiatives including adoption of a Carbon Management Plan and Sustainability Strategy, undertaking a Green Fleet Review and preparing a Climate Change Adaptation Plan. Through implementing the actions set out in these documents we have reduced our carbon dioxide emissions and promoted the theme of sustainability in the running of the Council. By the end of the financial year 2010/11, the Council's carbon dioxide emissions had reduced by approximately 13.4% in comparison to the Carbon Management Plan baseline position.

#### **Vision and Objectives**

The Council's vision is:

"To be an organisation of excellence committed to improving the quality of life of all the people of Test Valley".

This Strategy will help to deliver the Council's Vision and focuses on a number of objectives which are set out below:

- Ensure sustainability is incorporated into our procedures and policies
- Procure materials and resources from more sustainable sources
- Reduce our emissions of carbon dioxide and other greenhouse gases
- Through working with the residents of the Borough, reduce the amount of household waste collected, whilst increasing the proportion which is re-used, recycled or composted
- Reduce our water consumption

- Adapt to a changing climate to deliver a more robust estate and working practices
- Promote biodiversity and the positive management of Sites of Importance for Nature Conservation (SINCs) for which the Council is responsible
- Work with partner organisations and the community to preserve and enhance the local environment and quality of life of those living and working in the Borough
- Progress schemes which have an environmental benefit where there is a sound business case.

### **Key Themes and Areas for Action**

A number of themes have been identified as a focus for action within Test Valley. They have been grouped by area of work rather than environmental / sustainability issue. It will be important to ensure that local and national policies and objectives for each of these themes are integrated into our work and operations.

The Council's key themes are:

- Policy development and implementation
- Internal practices and procedures
- Transport and travel
- Managing the Council's estate
- Managing green open spaces and biodiversity
- Partnership working
- Community involvement

### **Implementation and Monitoring**

The actions associated with the key themes will provide the focus for project delivery within the Borough, in some cases these can be implemented by the Council alone, with others needing the support of partners. Monitoring of progress in delivering the actions will be undertaken on an annual basis through the production of a monitoring report and additional actions may be identified which would provide further opportunities for partnership working.

### **Conclusion**

The implementation of this strategy is intended to support the delivery of the Council's objectives, incorporating sustainability into our procedures and policies and ensuring the sustainable use of resources. There should also be a 10% reduction of carbon dioxide emissions through the proposed actions.

## **9 Implementation of Action Plans**

Since the start of the Local Air Quality Management Review and Assessment process in 2000, Test Valley Borough Council has not identified any areas within the borough where Air Quality Objectives have been breached. Accordingly, the Council has not been required to produce an Action Plan.

## **10 Conclusions and Proposed Actions**

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

Based on nitrogen dioxide diffusion tube results for 2012, no exceedences of the current Air Quality Objectives have been identified. Nitrogen dioxide trend charts for the 17 diffusion tube locations utilising data from 2008 to 2012 are included in Appendix C. 13 of the 17 trend charts show modest decreases in the concentrations of nitrogen dioxide with 3 charts showing a small increase in concentrations. The results of monitoring showed that the highest concentration of nitrogen dioxide in 2012 was found on Chilworth Road, Chilworth (CHIL12).

### **10.2 Conclusions relating to New Local Developments**

There are currently seven major residential/commercial developments referred to in Section 5 of this report which have the potential to have an impact on local air quality. As part of the planning process, each of these applications included an air quality assessment as part of their respective Environmental Impact Assessments. In each case, the assessment indicated no likelihood of a breach of any Air Quality Objectives due to these developments.

Monitoring of nitrogen dioxide in the borough during 2012 has not identified any breaches of Air Quality Objectives; therefore it has not been necessary to proceed to a Detailed Assessment during this current round of the Review and Assessment process.

### **10.3 Proposed Actions**

The Council intends to continue with its nitrogen dioxide diffusion tube survey and then prepare and submit a Progress Report in April 2014.

## 11 References

1. Defra (February 2009), Part IV of the Environment Act 1995 Local Air Quality Management – Policy Guidance (PG09)
2. Defra (February 2009), Part IV of the Environment Act 1995 Local Air Quality Management - Technical Guidance LAQM.TG(09)
3. AEA Energy & Environment (Feb 2008), Diffusion Tubes for Ambient NO<sub>2</sub> Monitoring: Practical Guidance for Laboratories and Users – AEAT/ENV/R/2504 – Issue 1a
4. Prepared for Defra, Trends in NO<sub>x</sub> and NO<sub>2</sub> emissions and ambient measurements in the UK, 18<sup>th</sup> July 2011

# Appendices

## Appendix A: QA:QC Data

### Diffusion Tube Bias Adjustment Factor

The nitrogen dioxide diffusion tubes used by Test Valley Borough Council are supplied by Environmental Scientifics Group, Didcot in Oxfordshire. The bias adjustment factor (**0.79**) for our 2012 diffusion tube data was obtained from the Defra website at:

[http://laqm.defra.gov.uk/documents/Database\\_Diffusion\\_Tube\\_Bias\\_Factors-v03\\_13-Final.xls](http://laqm.defra.gov.uk/documents/Database_Diffusion_Tube_Bias_Factors-v03_13-Final.xls).

### Factor from Local Co-location Studies (if available)

Test Valley Borough Council does not currently have a local co-location study.

### Discussion of Choice of Factor to Use

Test Valley Borough Council utilise the National Bias Adjustment Factor as it does not currently have the facility to calculate its own local factor.

### PM Monitoring Adjustment

Test Valley Borough Council currently has no Particulate Monitoring sites.

### Short-term to Long-term Data adjustment

All nitrogen dioxide diffusion tube monitoring carried out by Test Valley Borough Council exceeded the 90% capture rate.

### QA/QC of automatic monitoring

Test Valley Borough Council currently has no automatic monitoring sites.

### QA/QC of diffusion tube monitoring

In order for the results from the use of diffusion tubes to be of an adequate quality, the tubes used by Test Valley Borough Council are located in accordance with the guidance set out in the AEA Energy & Environment report entitled 'Diffusion Tubes for Ambient NO<sub>2</sub> Monitoring: Practical guidance for laboratories and Users'.

A copy of the Summary of Precision Results for Nitrogen Dioxide Diffusion Tube Co-location Study was downloaded from:

[http://laqm.defra.gov.uk/documents/Tube\\_Precision\\_2013\\_version\\_03\\_13-Final.pdf](http://laqm.defra.gov.uk/documents/Tube_Precision_2013_version_03_13-Final.pdf)

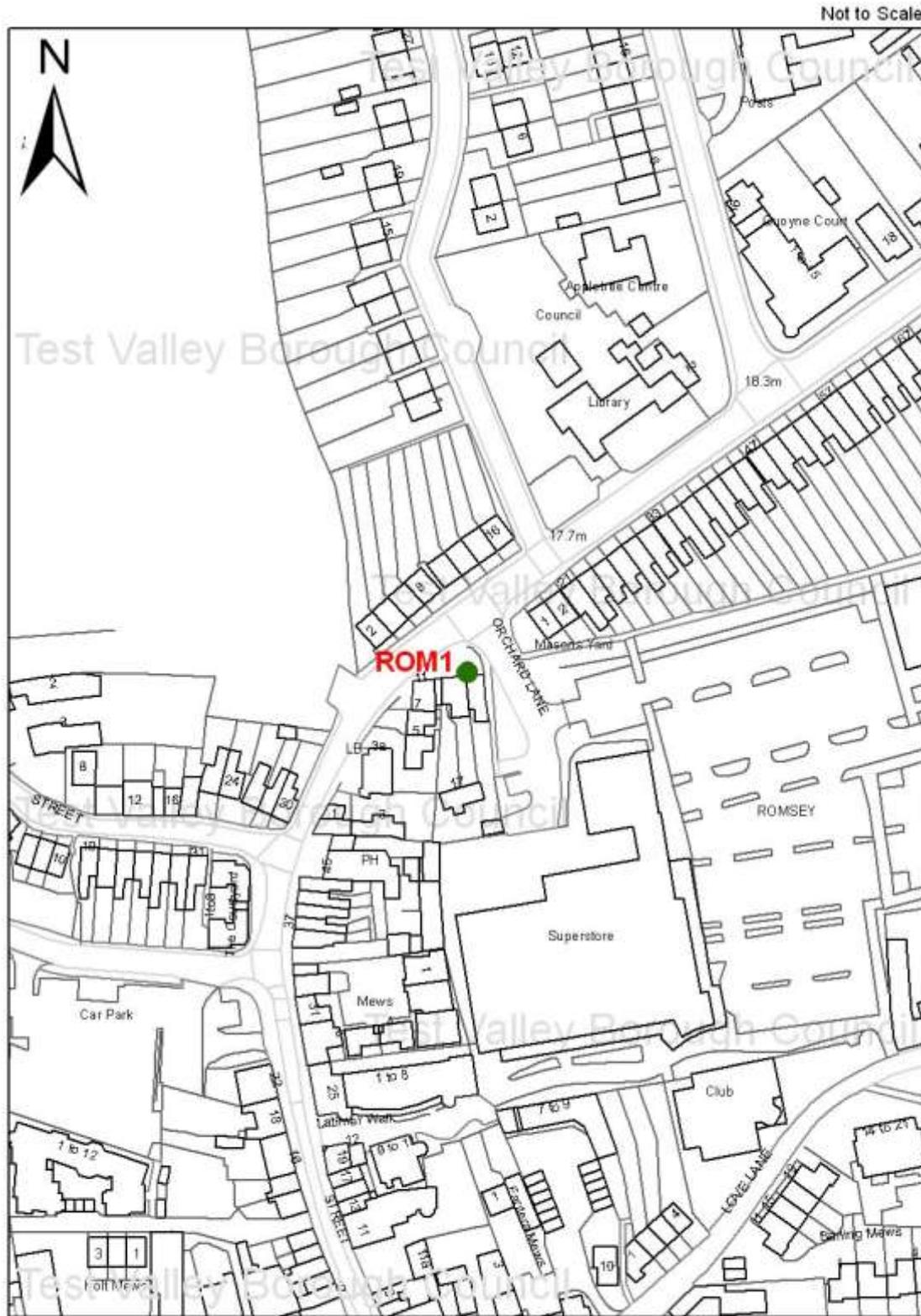
From the co-location Studies utilising Environmental Scientifics Group (ESG) diffusion tubes over the past 3 years have indicated the following:

- 2012 - 23 studies with 'Good' precision and 3 studies with 'Poor' precision
- 2011 - 39 studies with 'Good' precision and 4 studies with 'Poor' precision
- 2010 - 5 studies with 'Good' precision and 4 studies with 'Poor' precision

#### Notes:

1. Tubes spiked with 50% TEA in Acetone
2. Tubes spiked with 20% TEA in Water

Appendix B: Nitrogen Dioxide monitoring location plans

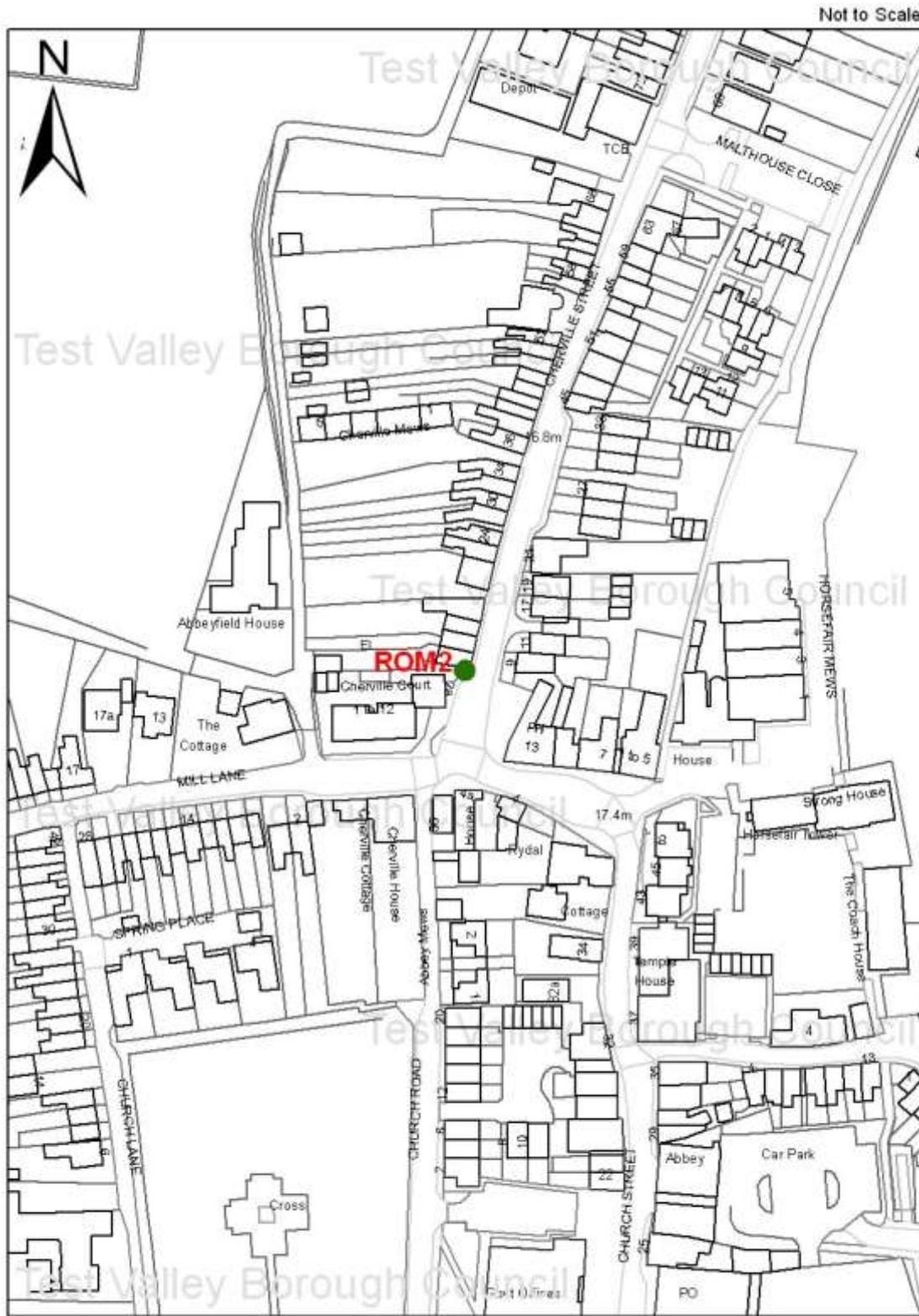


Plan 1  
Approximate location of the ROM1  
Nitrogen Dioxide diffusion tube in Romsey

Housing and Environmental Health Service,  
Beech Hurst, Weyhill Road,  
Andover, Hampshire SP10 3AJ



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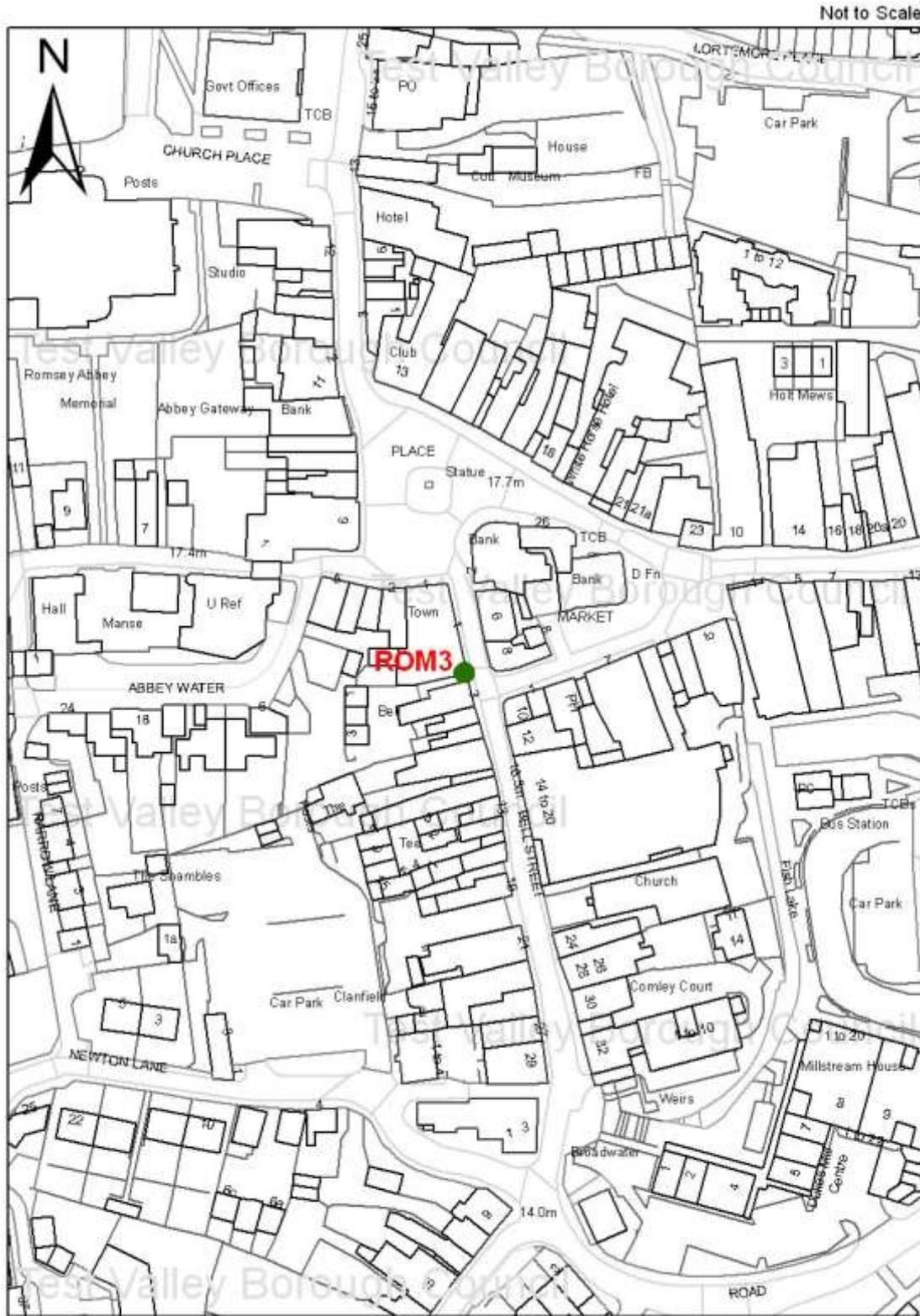


Plan 2  
Approximate location of the ROM2  
Nitrogen Dioxide diffusion tube in Romsey

Housing and Environmental Health Service,  
Bech Hurst, Weyhill Road,  
Andover, Hampshire SP10 3AJ



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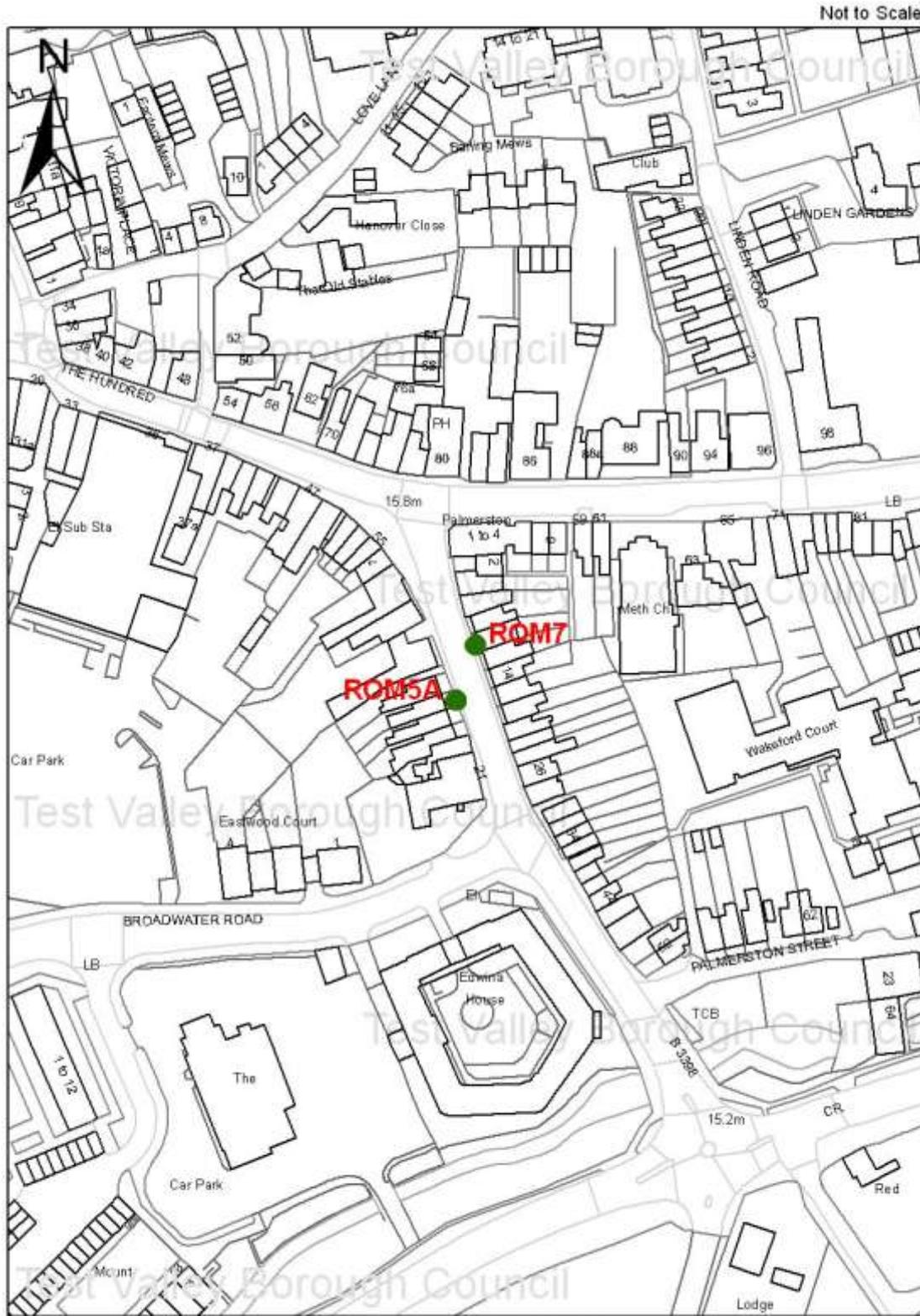


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Plan 3  
Approximate location of the ROM3  
Nitrogen Dioxide diffusion tube in Romsey

Housing and Environmental Health Service,  
Bech Hurst, Weyhill Road,  
Andover, Hampshire SP10 3AJ





Plan 4  
Approximate location of the ROM5A and ROM7  
Nitrogen Dioxide diffusion tubes in Romsey

Housing and Environmental Health Service,  
Beach Hurst, Weyhill Road,  
Andover, Hampshire SP10 3AJ



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Not to Scale



Plan 5  
Approximate location of the ROM8  
Nitrogen Dioxide diffusion tube in Romsey

Housing and Environmental Health Service,  
Beech Hurst, Weyhill Road,  
Andover, Hampshire SP10 3AJ



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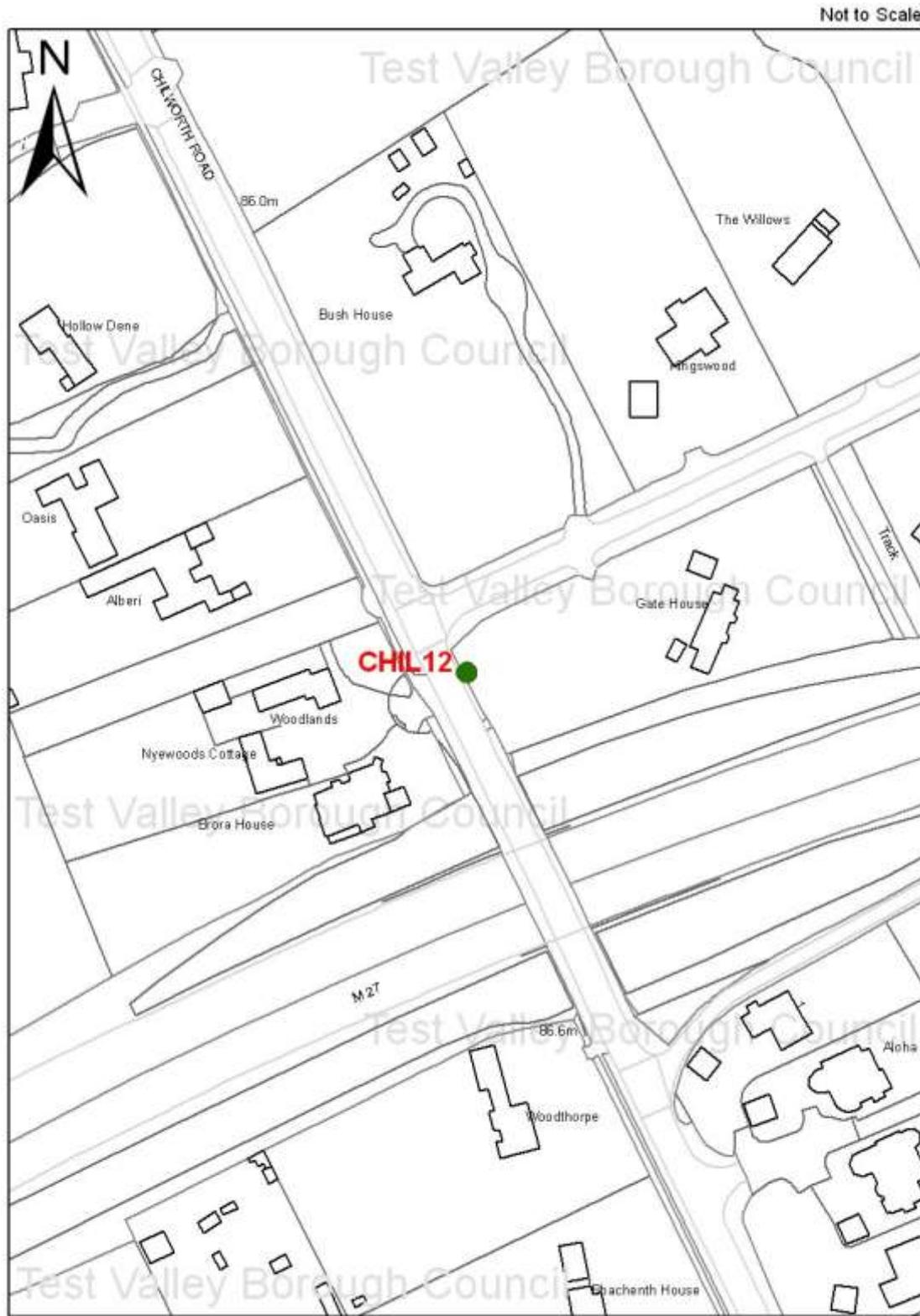


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Plan 6  
Approximate location of the ROM9 and ROM10  
Nitrogen Dioxide diffusion tubes in Romsey

Housing and Environmental Health Service,  
Beach Hurst, Weyhill Road,  
Andover, Hampshire SP10 3AJ



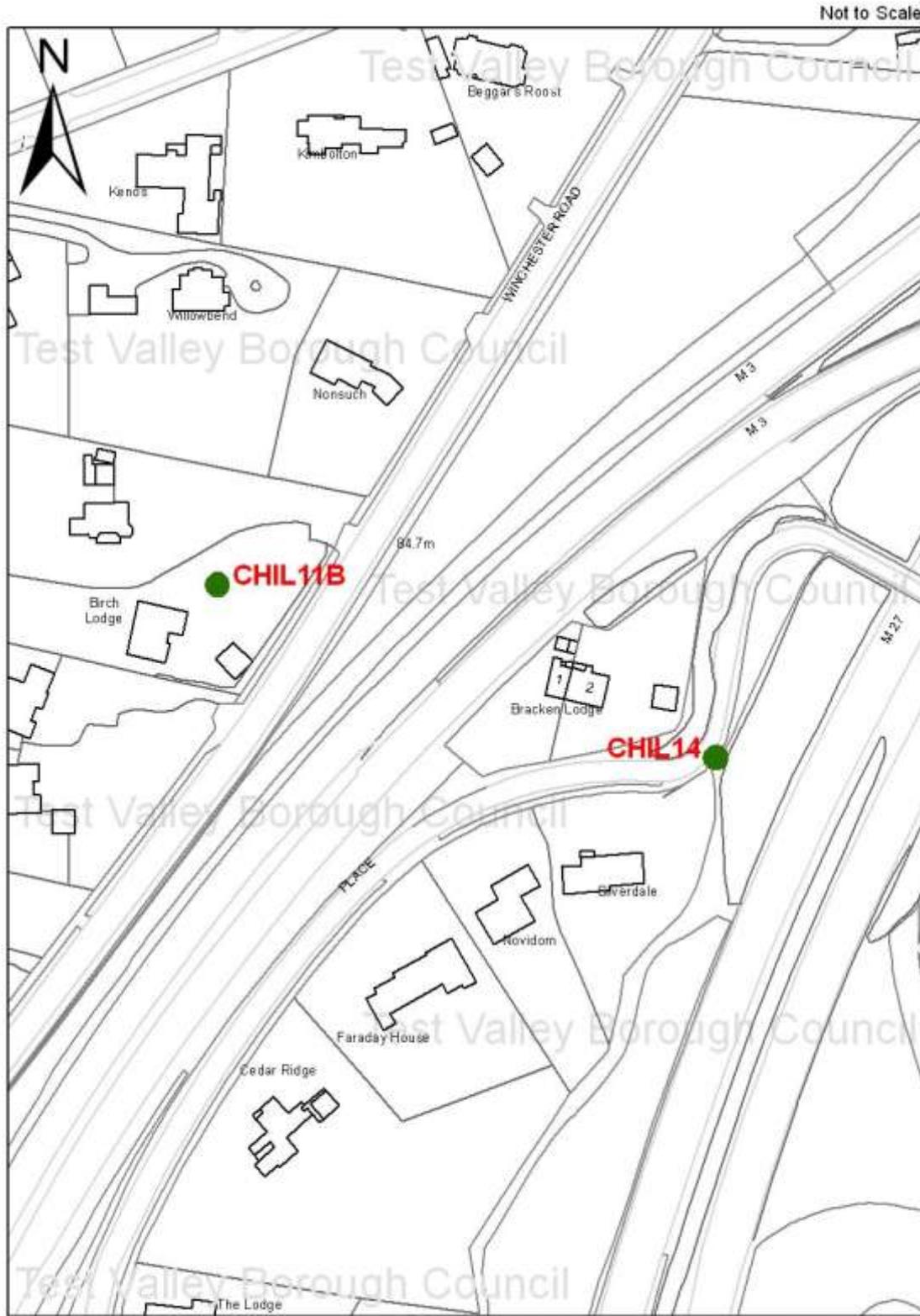


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Plan 7  
Approximate location of the CHIL12  
Nitrogen Dioxide diffusion tube in Chilworth

Housing and Environmental Health Service,  
Beach Hurst, Weyhill Road,  
Andover, Hampshire SP10 3AJ





Plan 8  
Approximate location of the CHIL11B and CHIL14  
Nitrogen Dioxide diffusion tubes in Chilworth

Housing and Environmental Health Service,  
Beach Hurst, Weyhill Road,  
Andover, Hampshire SP10 3AJ



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Plan 9  
Approximate location of the AND15 and AND19  
Nitrogen Dioxide diffusion tubes in Andover

Housing and Environmental Health Service,  
Beach Hurst, Weyhill Road,  
Andover, Hampshire SP10 3AJ





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Plan 11  
Approximate location of the AND23 and AND25  
Nitrogen Dioxide diffusion tubes in Andover

Housing and Environmental Health Service,  
Bech Hurst, Weyhill Road,  
Andover, Hampshire SP10 3AJ



Appendix C: Nitrogen Dioxide trend charts (2008 - 2012)

