



2010 Air Quality Progress Report for Test Valley Borough Council

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

Date: April 2010

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04 May 2010

Dear Mr Lee

LOCAL AIR QUALITY MANAGEMENT: 2010 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.

On the basis of the information provided, the report is accepted. We look forward to receiving the council's progress report in 2011.

If you have any specific queries about the comments contained in the appraisal report, we would advise that you initially contact the help desk. Details on how to contact the help desk can be found in the appraisal report.

Yours sincerely

Tutu Aluko
ATMOSPHERE AND LOCAL ENVIRONMENT PROGRAMME



Ref: PR4-007

Progress Report Appraisal

Report Prepared by: **Test Valley Borough Council**Date Progress Report Issued: **13th April 2010**

The Progress Report sets out new information on air quality obtained by Test Valley Borough Council, as part of the Review & Assessment process required under the Environment Act 1995 and subsequent Regulations.

The Report covers the **minimum requirements for reporting on monitoring and new local developments**. It also covers **some of the recommended additional elements including:**

- a log of planning applications for which air quality assessments have been requested
- information on air quality planning policies
- progress with the LTP
- information on the Carbon Management Plan.

The Local Authority does not propose to progress to a Detailed Assessment.

On the basis of the information provided by the local authority, the report is **accepted**.

Following the completion of this report, Test Valley Borough Council should submit a Progress Report by April 2011.

Commentary

The report is well structured and covers all of the minimum requirements and some of the recommended additional items of the information specified in the Guidance.

There are no specific items to draw to the local authority's attention.

This commentary is not designed to deal with every aspect of the report. It highlights a number of issues that should help the local authority either in completing the Progress Report adequately (if required) or in carrying out future Review & Assessment work.

Issues can be followed up through the Review and Assessment helpdesk as follows:

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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 2010 report is the second part of Round 4 of this Review and Assessment process requiring the submission of a Progress Report by the end of April 2010. The Progress Report is intended to maintain continuity in the Local Air Quality Management process and present the results of ongoing 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 2009 at 21 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 source 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) indicates a gradual upward trend.

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 2009 was estimated at approximately 113,000.

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 43 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 11 sites which have permits issued by the Environment Agency.

1.2 Purpose of Progress Report

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. However, if the Progress Report identifies the risk of exceedence of an Air Quality Objective, the Local Authority 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 Local Air Quality Management (LAQM) in England are set out in the Air Quality (England) Regulations 2000 (SI 928), and the Air Quality (England) (Amendment) Regulations 2002 (SI 3043). They are shown in Table 1.1. This table shows the objectives in units of microgrammes per cubic metre $\mu\text{g}/\text{m}^3$ (for carbon monoxide the units used are milligrammes per cubic metre, mg/m^3). Table 1.1. includes the number of permitted exceedences in any given year (where applicable).

Table 1.1 Air Quality Objectives included in Regulations for the purpose of Local Air Quality Management in England.

Pollutant	Concentration	Measured as	Date to be achieved by
Benzene	16.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
	5.00 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2010
1,3-Butadiene	2.25 $\mu\text{g}/\text{m}^3$	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.5 $\mu\text{g}/\text{m}^3$	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
Particles (PM₁₀) (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 4

Part 1 - April 2009 Updating & Screening Assessment

This 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 a major source 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. 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 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 Test Valley Borough Council website at: <http://www.testvalley.gov.uk/pdf/Air%20Quality%20USA%20Report%20-%20April%202009.pdf>

Review and Assessment - Round 3

This round of the review and assessment process was carried out between 2006 and 2008. The assessment did not identify any exceedences of the current Air Quality Objectives. Consequently there was no requirement to proceed to a detailed assessment nor to declare any Air Quality Management Areas within the borough.

Review and Assessment - Round 2

This round of the review and assessment process was carried out between 2003 and 2005. The assessment did not identify any exceedences of the current Air Quality Objectives. Consequently there was no requirement to proceed to a detailed assessment nor to declare any Air Quality Management Areas within the borough.

Review and Assessment - Round 1

This round of the review and assessment process was carried out between 2000 and 2002. The assessment did not identify any exceedences of the current Air Quality Objectives. Consequently there was no requirement to proceed to a detailed assessment nor to declare any Air Quality Management Areas within the borough.

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

The nitrogen dioxide diffusion tubes used by Test Valley Borough Council are supplied and analysed by Environmental Scientifics Group (ESG), Queenslie, Glasgow. The method of analysis is 10% TEA in water 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 **0.81** was used for the 2009 data and was obtained from the University of West of England (UWE) Review and Assessment website at:

<http://www.uwe.ac.uk/aqm/review/R&Asuport/diffusiontube310310.xls>

The non-automatic monitoring carried out by Test Valley Borough Council during 2009 comprised of 21 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 NO₂ Monitoring: Practical guidance for laboratories and Users'.

A review of the nitrogen dioxide diffusion tube locations at the end of 2009 led to the removal of the following tubes: ROM4, AND18, AND21 and AND24. The reason for their removal was because they were not considered to be providing useful additional data due to the close proximity of other tubes that are providing very similar data.

Table 2.2 Details of Non- Automatic Monitoring Sites

Site Name	Site Type	OS Grid Ref	Pollutant Monitored	In AQMA?	Relevant Exposure? (Y/N with distance (m) 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 ₂	N	Yes Property facade	n/a	N
ROM2	Roadside	X 435382 Y 121377	NO ₂	N	Yes Property facade	1m	Y
ROM3	Roadside	X 435382 Y 121377	NO ₂	N	Yes Property facade	1.3m	Y
ROM4	Roadside	X 435382 Y 121377	NO ₂	N	No Property facade	1.8m	Y
ROM5A	Roadside	X 435382 Y 121377	NO ₂	N	No (3 metres)	1m	Y
ROM7	Roadside	X 435382 Y 121377	NO ₂	N	Yes Property facade	2.3m	Y
ROM8	Roadside	X 435382 Y 121377	NO ₂	N	No (-3 metres)	4.8m	Y
ROM9	Roadside	X 435382 Y 121377	NO ₂	N	Yes Property facade equivalent	2m	Y
ROM10	Roadside	X 435382 Y 121377	NO ₂	N	No (6 metres)	2.6m	Y
CHIL12	Roadside	X 435382 Y 121377	NO ₂	N	No (18 metres)	2m	Y
CHIL11B	Intermediate	X 435382 Y 121377	NO ₂	N	Yes Property facade equivalent	24m	N
CHIL14	Roadside	X 435382 Y 121377	NO ₂	N	Yes Property facade equivalent	3m	Y
AND15	Intermediate	X 435382 Y 121377	NO ₂	N	Yes Property facade	9m	N
AND18	Roadside	X 435382 Y 121377	NO ₂	N	No (6 metres)	<1m	Y
AND19	Urban background	X 435382 Y 121377	NO ₂	N	No (12 metres)	n/a	N
AND20	Kerbside	X 435382 Y 121377	NO ₂	N	No (6 metres)	<1m	Y
AND21	Roadside	X 435382 Y 121377	NO ₂	N	No (4 metres)	1.5m	Y
AND22	Urban background	X 435382 Y 121377	NO ₂	N	Yes Property facade equivalent	n/a	N
AND23	Urban background	X 435382 Y 121377	NO ₂	N	Yes Property facade	n/a	N
AND24	Roadside	X 435382 Y 121377	NO ₂	N	No (11 metres)	4m	Y
AND25	Roadside	X 435382 Y 121377	NO ₂	N	No (4 metres)	<1m	Y

2.2 Comparison of Monitoring Results with Air Quality Objectives

2.2.1 Nitrogen Dioxide

Based on the January 2009 – December 2009 diffusion tube results, the annual mean concentration for nitrogen dioxide was not exceeded at any of the 21 monitoring locations.

Automatic Monitoring Data

Test Valley Borough Council does not 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?	Data Capture for monitoring period %	Data Capture for full calendar year 2009 %	Annual mean concentrations ($\mu\text{g}/\text{m}^3$)		
					2007	2008	2009
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?	Data Capture for monitoring period %	Data Capture for full calendar year 2009 %	Number of Exceedences of hourly mean ($200\mu\text{g}/\text{m}^3$)		
					2007	2008	2009
Test Valley Borough Council does not carry out automatic monitoring of nitrogen dioxide							

If the period of valid data is less than 90% of a full year, include the 99.8th percentile of hourly means in brackets.

Diffusion Tube Monitoring Data

The survey methodology and diffusion tube locations contained in this report have not changed from those reported in the April 2009 Updating & Screening Assessment report. Location plans for all 21 nitrogen dioxide diffusion tubes can be found in Appendix B.

Table 2.4 Results of Nitrogen Dioxide Diffusion Tubes

Site ID	Location	Within an AQMA?	Data Capture for full calendar year 2009 ^a %	Annual mean concentrations ($\mu\text{g}/\text{m}^3$)		
				2007 ^{b, c}	2008 ^{b, c}	2009 ^b
ROM1	Station Road, Romsey	No	100	17.3	17.5	17.8
ROM2	Cherville Street	No	83	22.0	20.2	18.8^b
ROM3	Bell Street	No	100	23.7	22.9	23.0
ROM4	Broadwater Road	No	100	32.5	27.0	25.2
ROM5A	Palmerston Street (west)	No	100	31.4	32.2	38.1
ROM7	Palmerston Street (east)	No	100	32.8	33.1	34.8
ROM8	Plaza Roundabout	No	92	31.8	31.1	31.5
ROM9	Alma Road (south)	No	100	31.0	28.9	32.2
ROM10	Alma Road (middle)	No	100	34.8	32.9	32.5
CHIL12	Chilworth Road, Chilworth	No	100	35.3	36.2	36.9
CHIL11B	Winchester Road	No	100	23.7	26.1	26.3
CHIL14	Bracken Place	No	100	30.8	29.2	31.3
AND15	Weyhill Road, Andover	No	100	22.3	24.5	23.4
AND18	Alexandra Road	No	100	23.2	22.9	24.6
AND19	St. John the Baptist Church, Alexandra Road	No	92	16.7	15.9	15.6
AND20	Humberstone Road (east)	No	100	16.2	15.3	20.6
AND21	Humberstone Road (middle)	No	100	17.1	14.6	15.5
AND22	Humberstone Road (west)	No	100	18.6	21.3	14.6
AND23	Barlows Lane (north)	No	100	17.2	16.5	15.9
AND24	Barlows Lane (middle)	No	100	17.7	19.6	19.3
AND25	Barlows Lane (south)	No	100	18.1	21.6	20.0

^a i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%.)

^b Means should be "annualised" as in Box 3.2 of TG(09), if monitoring was not carried out for the full year.

^c Annual mean concentrations for previous years are optional.

2.2.2 PM₁₀

Test Valley Borough Council does not carry out monitoring of PM₁₀.

Table 2.5a Results of PM₁₀ Automatic Monitoring: Comparison with Annual Mean Objective

Site ID	Location	Within AQMA?	Data Capture for monitoring period %	Data Capture for full calendar year 2009 %	Annual mean concentrations (µg/m ³)		
					2007	2008	2009
Test Valley Borough Council does not carry out monitoring of PM ₁₀							

Table 2.5b Results of PM₁₀ Automatic Monitoring: Comparison with 24-hour Mean Objective

Site ID	Location	Within AQMA?	Data Capture for monitoring period %	Data Capture 2009 %	Number of Exceedences of daily mean objective (50 µg/m ³)		
					2007	2008	2009
Test Valley Borough Council does not carry out monitoring of PM ₁₀							

If data capture < 90%, include the 90th percentile of daily means in brackets

2.2.3 Sulphur Dioxide

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 routine 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 identified no new significant 'Road Traffic Sources' since the Updating and Screening Assessment was produced in April 2009.

3.2 Other Transport Sources

Test Valley Borough Council has identified no new significant 'Transport Sources' since the Updating and Screening Assessment was produced in April 2009.

3.3 Industrial Sources

An environmental permit for a new Part B installation was granted in October 2009 to operate a timber process at Patchington Farm, South Harewood, Andover.

3.4 Commercial and Domestic Sources

Test Valley Borough Council has identified no new significant 'Commercial and Domestic Sources' since the Updating and Screening Assessment was produced in April 2009.

3.5 New Developments with Fugitive or Uncontrolled Sources

Test Valley Borough Council has identified no new significant 'Developments with Fugitive or Uncontrolled Sources' since the Updating and Screening Assessment was produced in April 2009.

Test Valley Borough Council confirms that there are no new or newly identified local developments which may have lead to a potential breach of an Air Quality Objective.

4 Local / Regional Air Quality Strategy

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

5 Planning Applications

Test Valley Borough Council has a number of approved planning applications for new developments which have the potential to impact upon local air quality. 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 has been carried out and formed part of the Environmental Statement submitted with the outline application

Adanac Park, Nursling

- Application Number – 07/02872/OUTS
- Outline application for the a new Class B1 Head Office building and other associated buildings for the Ordnance Survey
- An air quality assessment has been carried out and formed part of the Environmental Statement submitted with the outline application

Andover Airfield

- Application Number – 07/01951/OUTN
- Erection of Business Park with both Outline and Full details for the erection of Class B1, storage and distribution, hotel, community building, biomass plant and associated works.
- An air quality assessment has been carried out and formed part of the Environmental Statement submitted with the outline application

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

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

The air quality assessments submitted with the above applications indicated that there is no likelihood of a breach of any air quality objective as a results of these developments.

Note: Full details of all planning application can be viewed on-line via the council website at: http://publicaccess.testvalley.gov.uk/publicaccess/tdc/tdc_home.aspx

6 Air Quality Planning Policies

Test Valley Borough Council's Planning Policy HAZ 03 (see below) is a policy which only considers development for approval if the proposal will not have an adverse impact on the environment, including discharges or emissions to **air**.

5.4 Pollution

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.

7 Local Transport Plans and Strategies

Hampshire County Council (LTP2 2006-2011)

Chapter 5 of the Hampshire County Council five-year strategy, which was published in March 2006, covers the period 2006/07 to 2010/11. It is structured according to the Government's four shared priority areas of accessibility, congestion, safety and air quality. In line with the overall theme of the Local Transport Plan (LTP), the strategy follows the principles of 'reduce', 'manage' and 'invest' which are summarised in the table below.

Air quality strategy

Reduce	<ul style="list-style-type: none"> • Fewer journeys and reduced congestion. • Measures to encourage cleaner fuels and less polluting vehicles (especially heavy goods vehicles in sensitive areas). • Freight Quality Partnerships to rationalise heavy goods vehicle movements.
Manage	<ul style="list-style-type: none"> • Traffic management measures including signing and traffic signals to reduce queuing. • Information and increased awareness of air quality issues.
Invest	<ul style="list-style-type: none"> • Junction improvements. • New infrastructure to reduce vehicle movements in Air Quality Management Areas.

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 October 2008.

The plan seeks to:-

- set out a range of measures which the contributions collected under the Transport Contributions Policy can help to deliver,
- develop appropriate measures to accommodate the planned development associated with the Major Development Areas at East Anton and Picket Twenty,
- 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.

The plan will act as a guide for the way funding is obtained and spent by Test Valley Borough Council and Hampshire County Council. The plan will also act as a connection between higher level strategies and the development of specific local transport schemes with potential benefits to the local environment and air quality.

8 Climate Change Strategies

Extract taken from the Test Valley BC Carbon Management Plan - March 2009

1. This Carbon Management Plan (CMP) is part of the Local Authority Carbon Management Programme, run by the Carbon Trust. The aim of the Local Authority Carbon Management Programme is to reduce the Council's carbon emissions from the **2007 baseline of 6,608 tonnes to 5,284 tonnes by 2012**. This is a reduction of 20%. The Plan will show how the Council can reduce its own carbon emissions and help the Test Valley residents reduce their carbon emissions too.
2. The CMP will fit in with existing Test Valley Borough Council policies. The Council's Corporate Plan 2007-2011 and the Test Valley Community Plan both reflect the themes of sustainability. The Council also has a Sustainability Strategy. In addition to the targets it has set for itself, the Council is also required to report on National Indicators, including NI 185 CO₂ reduction from local authority operations. The Local Authority Carbon Management Programme includes the production of the Council's baseline carbon emissions, which can be used to report on NI 185.
3. The 2007 baseline of CO₂ emissions is compiled from energy used in all Council-owned and Council-managed buildings and fuel used by fleet vehicles, employees commuting and business travel. **The baseline, taken from 2007 levels, is 6,608 tonnes of CO₂ emissions.** Buildings account for the highest proportion of the Council's CO₂ emissions. This baseline can be used to report on National Indicator 185 - CO₂ reduction from Local Authority operations.
4. Based upon the 2007 CO₂ emissions, the costs to the Council if the Business-as-Usual scenario was followed, where the demand on the amount of energy used increased at a rate of 0.7% each year over the next 5 years. This shows a financial increase of £0.61 million if no action was taken. However, if the CO₂ emissions were reduced by 20% from 2007 to 2012 then the costs would increase by £220,000. This shows a financial saving of £390,000 at the end of year five if the CO₂ emissions were reduced by 20%.
5. The projects defined within this Programme will cost approximately £0.3 million to implement, but will reduce the Council's costs by £1.2 million. These projects will aim to have a carbon saving of 15.3% from the current 2007 CO₂ emissions baseline.
6. In April 2008 the Council signed the Nottingham Declaration. Through this Local Authority Carbon Management Programme, the Council is already working on a number of key projects including:
 - Phase 1 of server virtualisation to reduce the numbers of servers
 - IT switch off so computers are turned off overnight
 - Staff awareness campaigns to turn off computers and lights.The Council is also researching further projects, such as:
 - Printer rationalisation to reduce the number of printers used
 - Voltage optimisation to reduce the amount of energy needed to run equipment.

The Council has also carried out a Green Fleet Review, run by the Energy Saving Trust, which has resulted in a number of suggestions on how to reduce miles driven, and in turn, fuel used.

Extract from BUILDING A SUSTAINABLE TEST VALLEY, Sustainability Strategy - Towards 2012 (published June 2009)

Background

In 2007 the Environment Centre was commissioned to undertake a sustainability audit of the Council's main offices and services. The audit confirmed that Test Valley Borough Council was undertaking many positive actions to support the goal of sustainable development, but that these actions were not necessarily being recognised as such. There were also some gaps in approach, particularly in tackling the causes and effects of climate change.

A Member Board and Officer Working Group were set up under the title of "*Building a Sustainable Test Valley*" to steer priorities and to establish a clear direction of travel.

Purpose of the Sustainability Strategy

This strategy has been developed to set out the Council's priority actions and to demonstrate its commitment to continuous improvement in the delivery of its targets and objectives.

It builds upon the work identified in the Community Strategy and Corporate Plan and complements and informs other council strategies. The Member Board and the Officer Working Group will continue to be involved in the development of the strategy and will ensure that appropriate arrangements are in place for monitoring progress. A full review will be undertaken annually in December.

Promoting the Sustainability Strategy

It is important that the aims and objectives of the strategy, together with key achievements and future successes, are promoted both within the Council and the wider community. Every opportunity will be taken to use a range of methods available for this purpose including:

- Information on the intranet and the website
- Test Valley News
- News releases
- Staff and Member Information Bulletins
- Staff newsletter
- Community News and Information Bulletin
- The Local Strategic Partnership website and quarterly newsletter
- LSP Action Group updates
- Information and feedback from the Council's Sustainability Champions.

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 2009, no exceedences of the current Air Quality Objectives have been identified. Nitrogen dioxide trend charts for 19 of the 21 diffusion tube locations utilising data from 2005 to 2009 are included in Appendix C. Of these 19 trend charts, one shows a 5-year trend of reducing levels of nitrogen dioxide while the remaining eighteen charts indicate a trend of very small to small increases.

10.2 Conclusions relating to New Local Developments

There are currently five 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 2009 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 2011.

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 NO₂ Monitoring: Practical Guidance for Laboratories and Users – AEAT/ENV/R/2504 – Issue 1a

Appendices

Appendix A: QA/QC Data

Appendix B: Nitrogen Dioxide monitoring location plans

Appendix C: Nitrogen Dioxide trend charts

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, Queenslie, Glasgow. The bias adjustment factor (**0.81**) for our 2009 diffusion tube data was obtained from the University of West of England (UWE) website at: <http://www.uwe.ac.uk/aqm/review/R&Asupport/diffusiontube310310.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, except for the tube located in Cherville Street, Romsey (ROM2) which only achieved an 83% capture rate. An adjustment to the results of this tube have now been carried out which indicates an 'adjusted annual mean' of $18.8\mu\text{g}/\text{m}^3$ and is included in Table 2.4.

Long term site	Site Type	Annual Mean 2009 (A_M)	Period Mean 2009 (P_M)	Ratio (A_M/P_M)
ROM3 - Bell Street	Roadside	23.0	23.2	0.991
ROM4 - Broadwater Road	Roadside	25.2	24.8	1.016
ROM5A - Palmerston Street (east)	Roadside	38.1	38.4	0.992
ROM7 - Palmerston Street (west)	Roadside	34.8	34.2	1.018
			Average (R_a)	1.004

$$M \times R_a = 18.7 \times 1.004 = 18.8\mu\text{g}/\text{m}^3$$

QA/QC of automatic monitoring

Test Valley Borough Council currently has no automatic monitoring sites.

QA/QC of diffusion tube monitoring

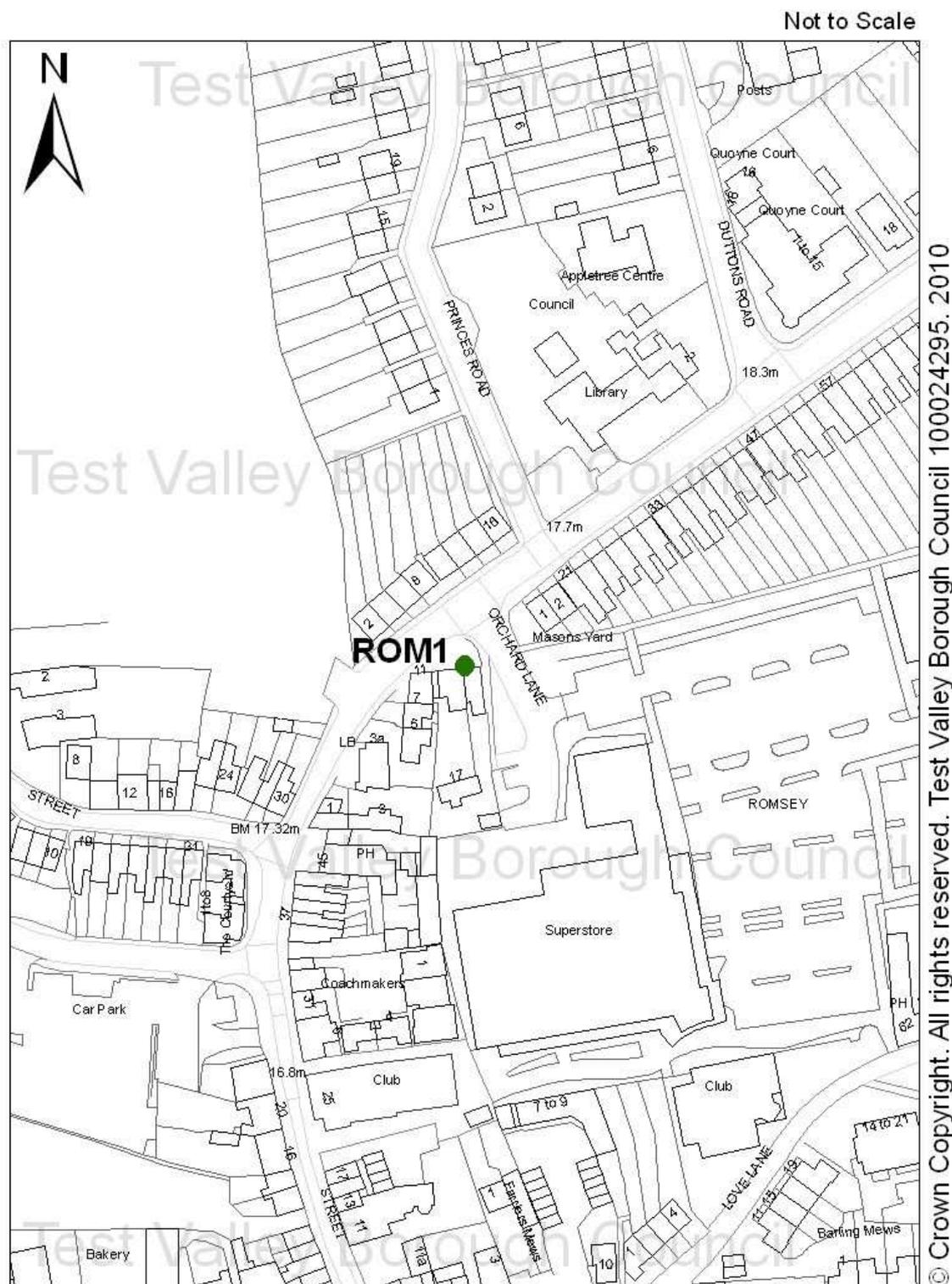
In order for the results from the use of diffusion tubes to be of an adequate quality, the tubes used by Test Valley Borough Council are located in accordance with the guidance set out in the AEA Energy & environment report entitled 'Diffusion Tubes for Ambient NO₂ Monitoring: Practical guidance for laboratories and Users'.

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

[http://www.uwe.ac.uk/aqm/review/R&Asupport/Tube_Precision2009\(Mar2010\).pdf](http://www.uwe.ac.uk/aqm/review/R&Asupport/Tube_Precision2009(Mar2010).pdf)

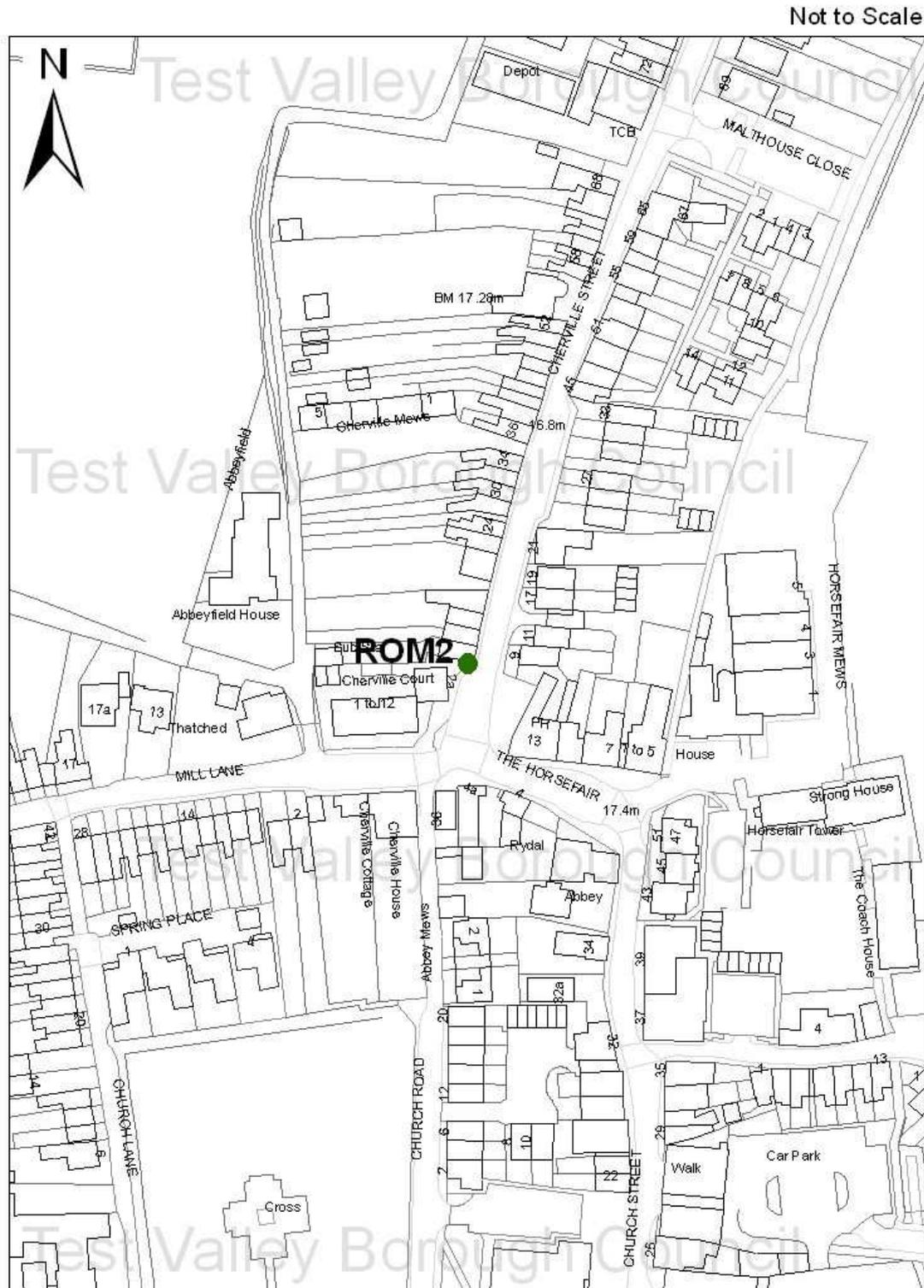
Out of the 8 studies utilising Environmental Scientifics Group (formerly Bureau Veritas) diffusion tubes, 9 studies indicated 'Good' precision and only 1 indicated 'Poor' precision in 2009 compared to 11 'Good' studies and 4 'Poor' studies in 2008.

Appendix B: Nitrogen Dioxide monitoring location plans



Plan 1
Approximate location of the ROM1
nitrogen dioxide diffusion tube in Romsey

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Romsey Hampshire SO51 8XG

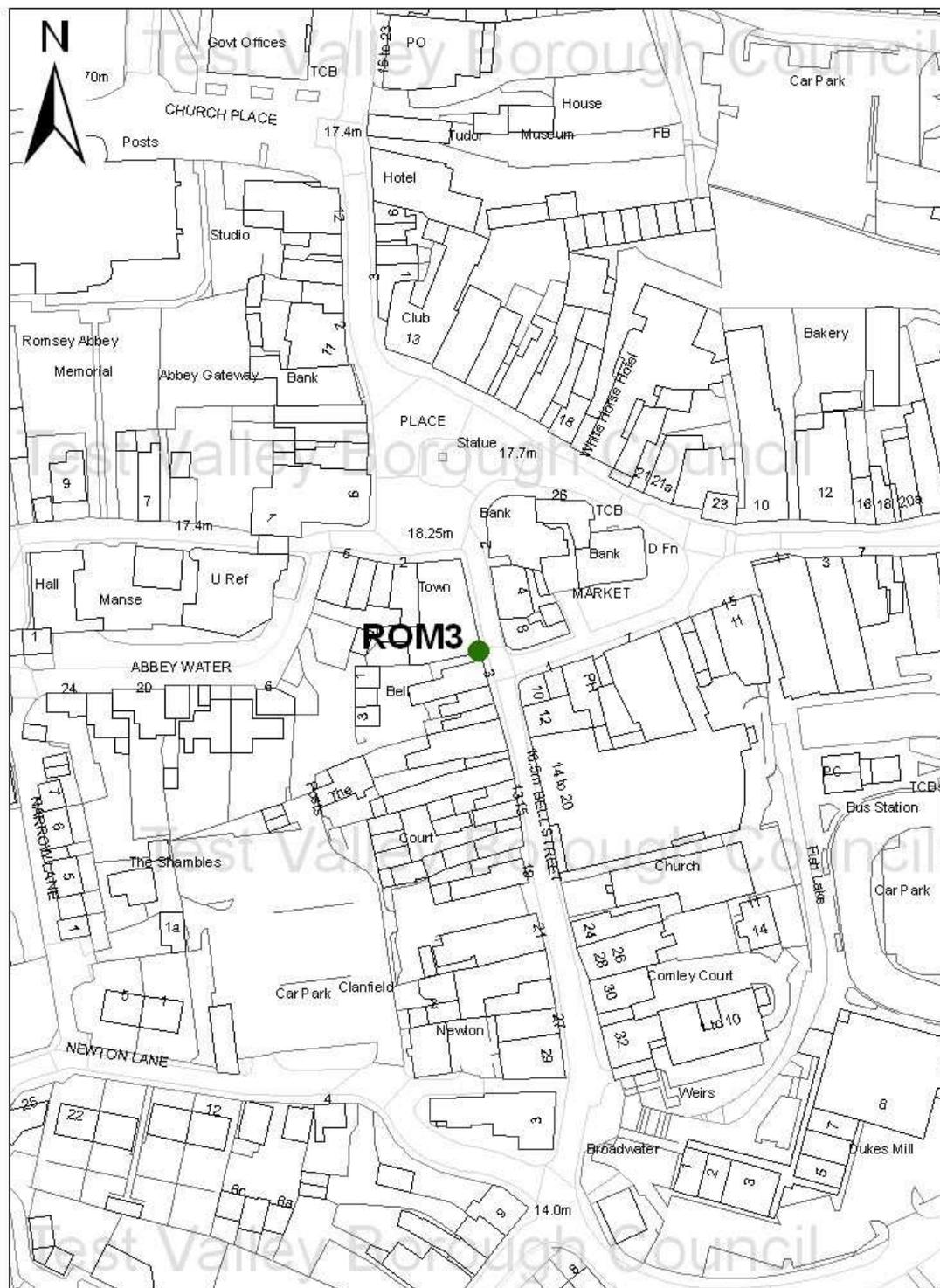


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Plan 2
Approximate location of the ROM2
nitrogen dioxide diffusion tube in Romsey

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Not to Scale

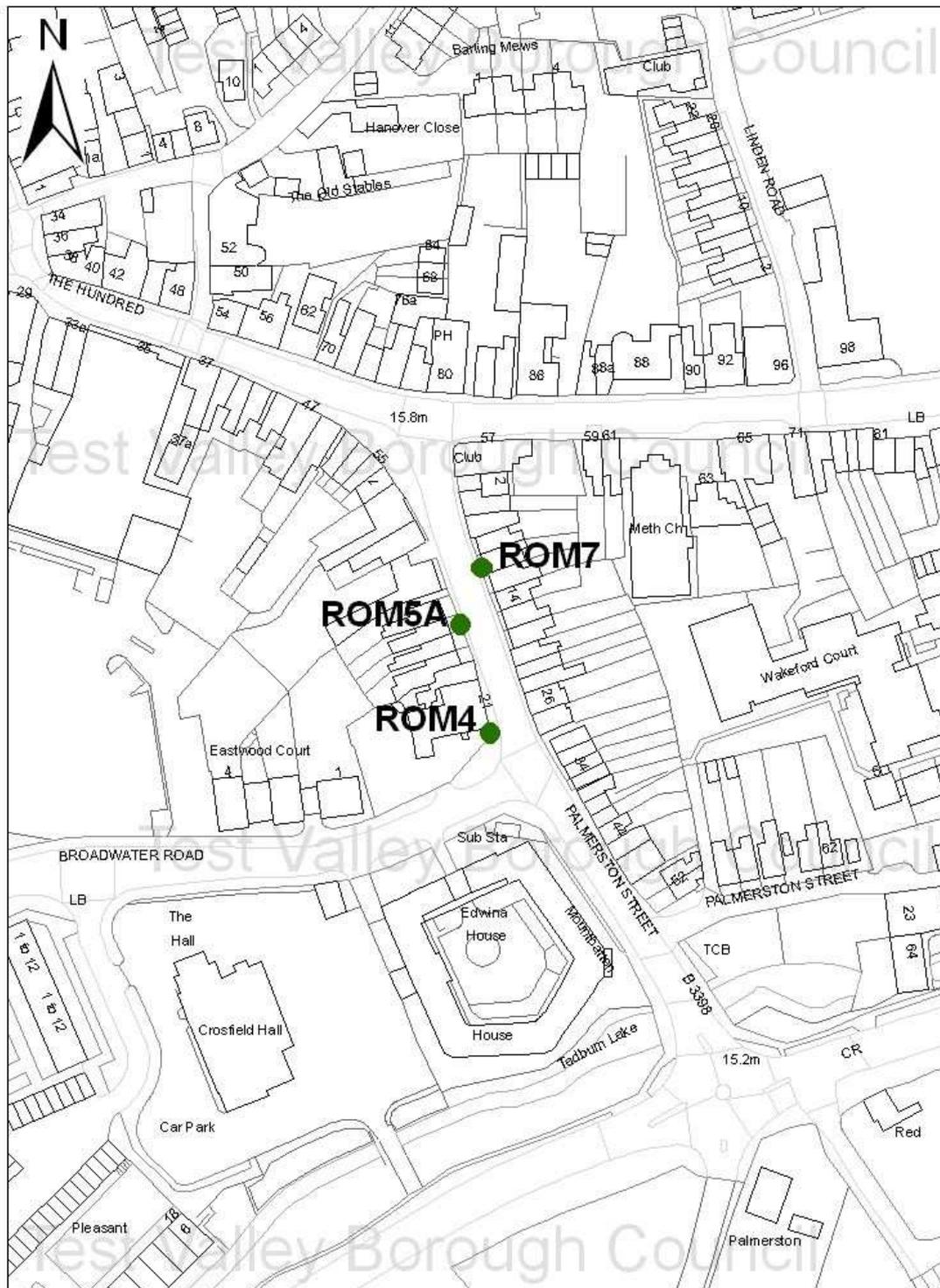


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Plan 3
 Approximate location of the ROM3
 nitrogen dioxide diffusion tube in Romsey

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Not to Scale

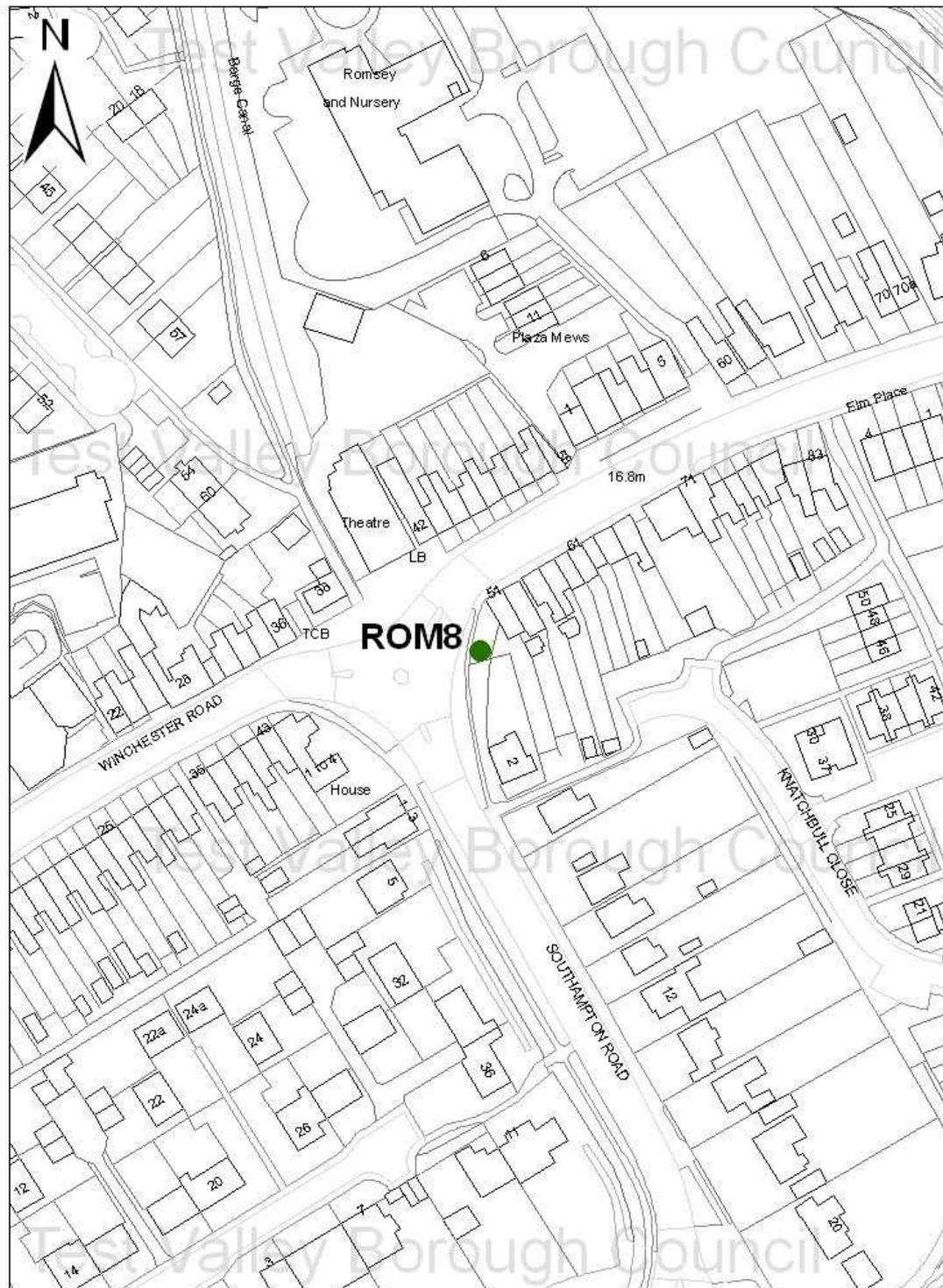


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Plan 4
Approximate location of the ROM4, ROM5A & ROM7
nitrogen dioxide diffusion tubes in Romsey

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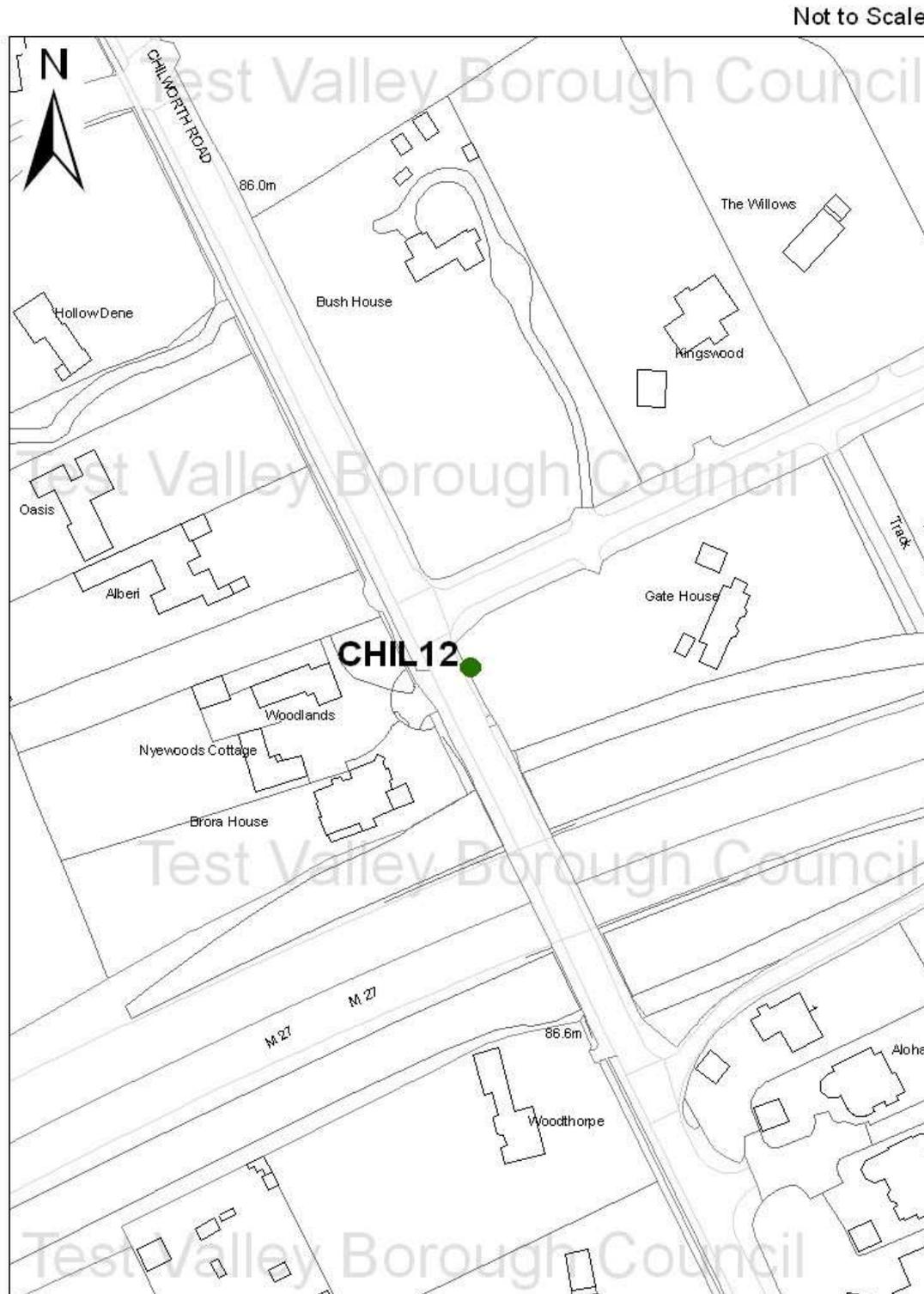
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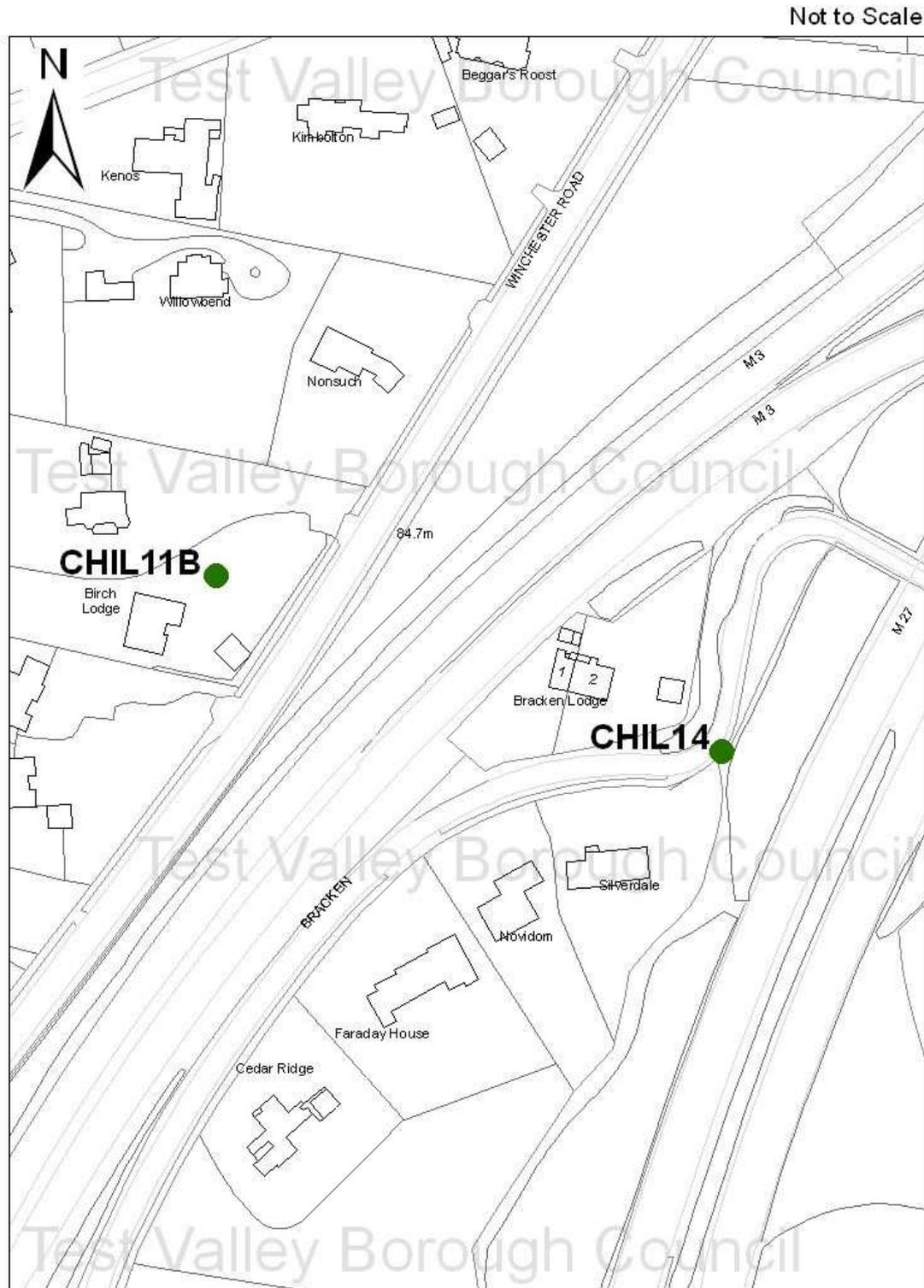
Plan 5
Approximate location of the ROM8
nitrogen dioxide diffusion tube in Romsey

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Plan 7
Approximate location of the CHIL12
nitrogen dioxide diffusion tube in Chilworth

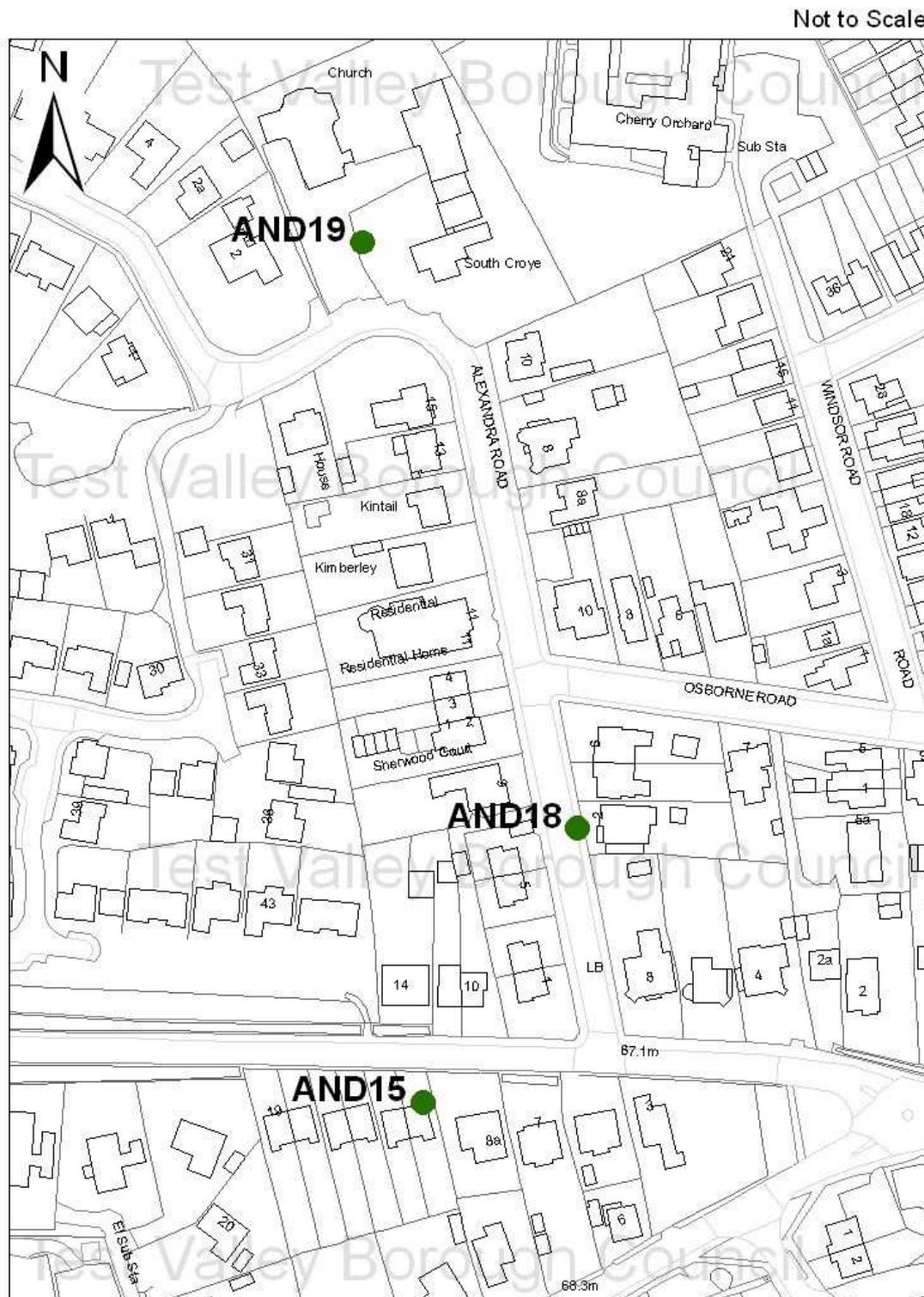
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Plan 8
Approximate location of the CHIL11B & CHIL14
nitrogen dioxide diffusion tubes in Chilworth

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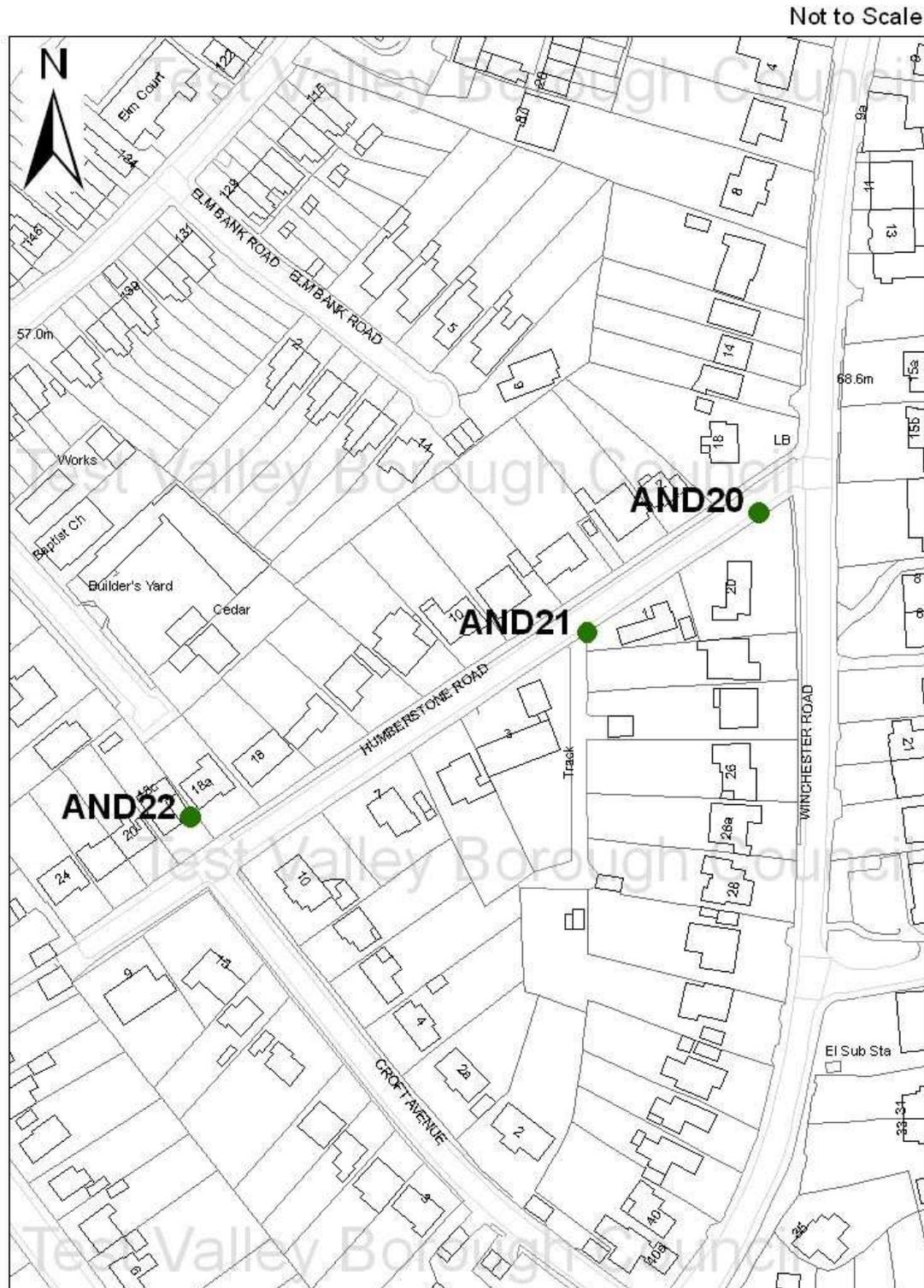


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Plan 9

Approximate location of the AND15, AND18 & AND19 nitrogen dioxide diffusion tubes in Andover

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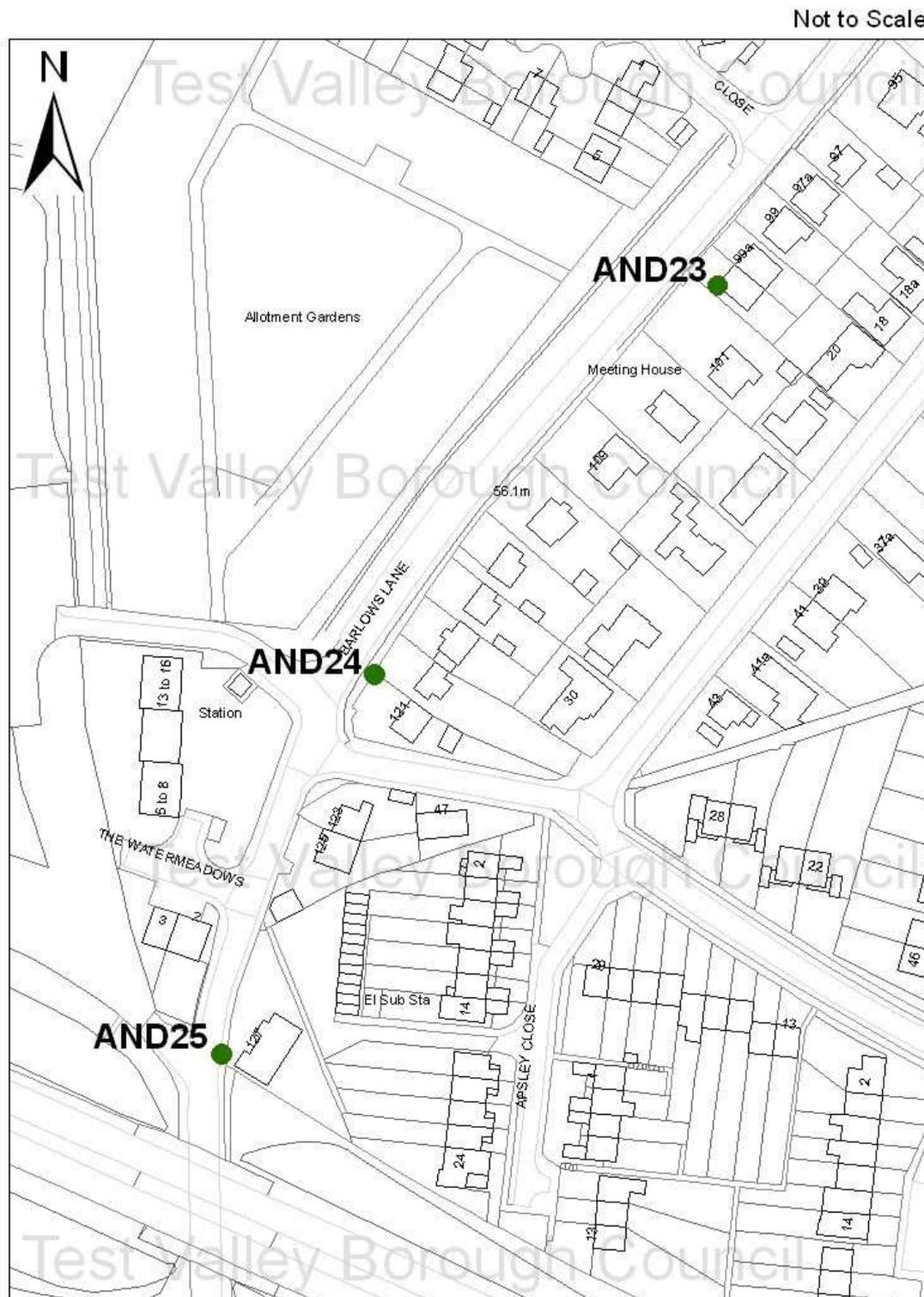


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Plan 10

Approximate location of the AND20, AND21 & AND22 nitrogen dioxide diffusion tubes in Andover

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Plan 11
Approximate location of the AND23, AND24 & AND25
nitrogen dioxide diffusion tubes in Andover

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Appendix C: Nitrogen Dioxide trend charts

