



2011 Air Quality Progress Report for

Canterbury City Council

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

June 2011

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Executive Summary

Part IV of the Environment Act 1995 places a statutory duty on local authorities to review and assess the air quality within their area and take account of Government guidance when undertaking such work.

The conclusions of the Annual Progress Report (APR) 2004 were that the annual mean nitrogen dioxide objective might not be met at two pollution hotspots: Broad Street and Sturry Road. A Detailed Assessment was undertaken for these locations in 2005, which concluded that there were predicted exceedences of the annual mean nitrogen dioxide (NO₂) objective of 40µg/m³ at relevant receptor locations along Broad Street and (adjacent) Military Road in Canterbury. No exceedences were identified in Sturry Road. The Council declared an Air Quality Management Area (AQMA) in April 2006 and has drawn up an Action Plan to improve air quality in this area.

Further 'hot spot' areas were identified in the 2007 APR, which concluded that the annual mean nitrogen dioxide objective might not be met at two locations where new monitoring sites had been installed: North Lane and Rheims Way. A Detailed Assessment of air quality undertaken in 2008 confirmed these monitored exceedences and recommended the declaration of an AQMA in these areas.

Other hot spot areas have since been identified in the Updating and Screening Assessment (USA) 2009 in Canterbury City centre area, including Sturry Road, Wincheap and St Dunstan's. Therefore the Council chose to expand the assessment area of the 2008 Detailed Assessment to encompass all these areas and aid the decision as to whether a wider AQMA declaration should be made. This took the form of a combined Detailed and Further Assessment. The report has confirmed the need to amend the current AQMA to incorporate the wider NO₂ exceedence areas in addition to the NO₂ short-term objective. The conclusions of this report were accepted by Defra.

Consultation on further declarations was carried out from 06/12/2010 to 04/03/2011. Responses are currently being evaluated so that the matter can be reported back to the council's General Purposes Committee, to decide the final size and shape of the new AQMA's, and to approve their declaration. This process is expected to be completed by the autumn of 2011.

This Annual Progress Report has assessed new monitoring data for 2010, and any changes that may have occurred which would affect air quality. The conclusions of this report are that there is no need to carry out a Detailed Assessment for any regulated pollutants.

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1 Introduction

1.1 Description of Local Authority Area

The Canterbury district is diverse in character, and has the historic city of Canterbury as its administrative centre, which encompasses a third of the district's population. To the north are the coastal towns of Whitstable and Herne Bay, which are also significant centres of population. The remaining part of the district is rural in character comprising of a number of small villages.

The main source of air pollution in the district is road traffic emissions from major roads, notably the A2, A28 and A290. An Air Quality Management Area (AQMA) was declared in April 2006 along the A28 Broad Street/Military Road in Canterbury city centre where exceedences of the annual mean Objective for nitrogen dioxide (NO₂) were predicted.

The city of Canterbury depends on a large net inflow of commuters as well as an influx of secondary school children, shoppers, University students and tourists.

Canterbury city centre suffers from significant congestion, especially on the inner ring road and inner radial routes. Other pollution sources, including commercial, industrial and domestic sources make a contribution to background pollution concentrations.

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, 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 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 $\mu\text{g}/\text{m}^3$	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	Maximum daily 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

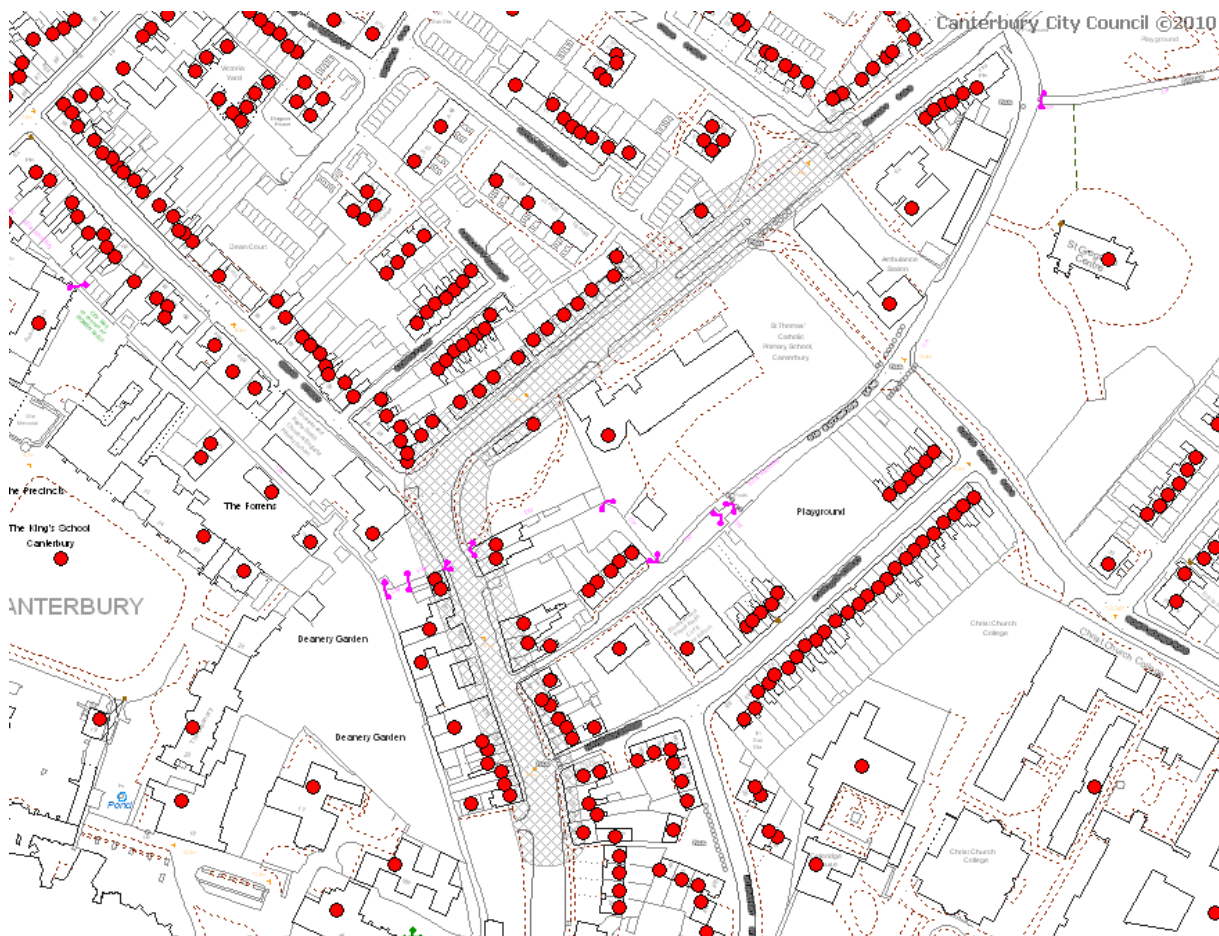
1.4 Summary of Previous Review and Assessments

Between 1998 and 2002, Canterbury City Council undertook its first round of review and assessment of air quality. The first round assessments concluded that UK Air Quality Objectives would be achieved for all pollutants and no further action was required at that time.

The first phase of the second round of review and assessment, the Updating and Screening Assessment (USA), was completed in May 2003 and this provided an update with respect to air quality issues within Canterbury. The USA concluded that there were no exceedences of the Air Quality Objectives identified within the local authority area.

The Annual Progress Report (APR) for 2004 considered monitoring data for 2003, which showed significant increases in previous monitored results due to unusually stable meteorological conditions. The conclusions of the APR were that the annual mean nitrogen dioxide objective might not be met at two pollution hotspots: Broad Street and Sturry Road.

A Detailed Assessment was undertaken for these locations in 2005 with the conclusion that there were predicted exceedences of the annual mean nitrogen dioxide (NO₂) Objective of 40µg/m³ at relevant receptor locations along Broad Street and (adjacent) Military Road in Canterbury. The Council declared an Air Quality Management Area (AQMA) in April 2006 (see **Figure 1.1**) and has drawn up an Action Plan to improve air quality in the area, which has recently formally been adopted by the Council, and approved by Defra.

Figure 1.1 Broad Street/Military Road AQMA (2006)

The first phase of the third round of review and assessment, the USA, was completed in July 2006. This concluded that there were no exceedences of the Air Quality Objectives identified within the local authority area outside of the AQMA.

The Annual Progress Report (APR) for 2007 considered monitoring data for 2006. The conclusions of the APR were that the annual mean nitrogen dioxide objective might not be met at two pollution hotspots where new monitoring sites had been installed: North Lane and Rheims Way, and a Detailed Assessment of air quality was undertaken in 2008 at these two locations.

The 2008 Detailed Assessment confirmed exceedences in North Lane and Rheims Way and recommended the declaration of an AQMA along these roads on the basis of annual mean NO_2 , where exceedences are predicted at relevant receptors. Recommendations for additional monitoring were also made including continuous monitoring in the North lane/Rheims Way area and diffusion tube monitoring in St Peter's Place.

The fourth round of review and assessment commenced with the USA, completed in June 2009. Monitoring data for 2008 confirmed the exceedences within the North Lane/Rheims Way areas and therefore the need for an AQMA in this area. Additional 'hot spot' areas were also identified in the assessment including Sturry Road, Wincheap and St Dunstan's Street. It was recommended that a Detailed Assessment also be undertaken for these areas.

Given the number of 'hot spot' areas being identified in the Canterbury City centre area, the council expanded the assessment area to incorporate the entire Canterbury city centre ring route. This took the form of a combined Detailed and Further Assessment. The report has confirmed the need to amend the current AQMA to incorporate the wider NO₂ exceedence areas, in addition to the NO₂ short-term objective.

Consultation on further declarations was carried out from 06/12/2010 to 04/03/2011. Three options were put forward to define the size and shape of the new AQMA's, and a survey has been carried out asking residents and businesses for their opinion on which option should be pursued. Responses are currently being evaluated so that the matter can be reported back to the councils General Purposes Committee, to decide on the final size and shape of the new AQMA's, and to approve their declaration. This process is expected to be completed by the autumn of 2011.

The fourth round of review and assessment included the councils Air Quality Progress Report for 2010. This did not highlight any exceedences of the objectives outside of the current Broad Street/Military Road AQMA, or the emerging AQMA's, therefore it was not necessary to proceed to a Detailed Assessment.

Reports from previous rounds of Review and Assessment carried out by Canterbury City Council can be found on the website of the Kent & Medway Air Quality Monitoring Network at:

<http://www.kentair.org.uk/reports.php>

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

2.1.1 Automatic Monitoring Sites

In 2010 the Council operated automatic air quality monitoring stations at 5 locations in Canterbury.

- Chaucer Technology School
- St.Dunstan's Street
- Military Road
- North Lane
- St.Peter's Place

Figure 2.1 shows maps of all automatic monitoring sites, and **Table 2.1** provides further details for the individual sites.

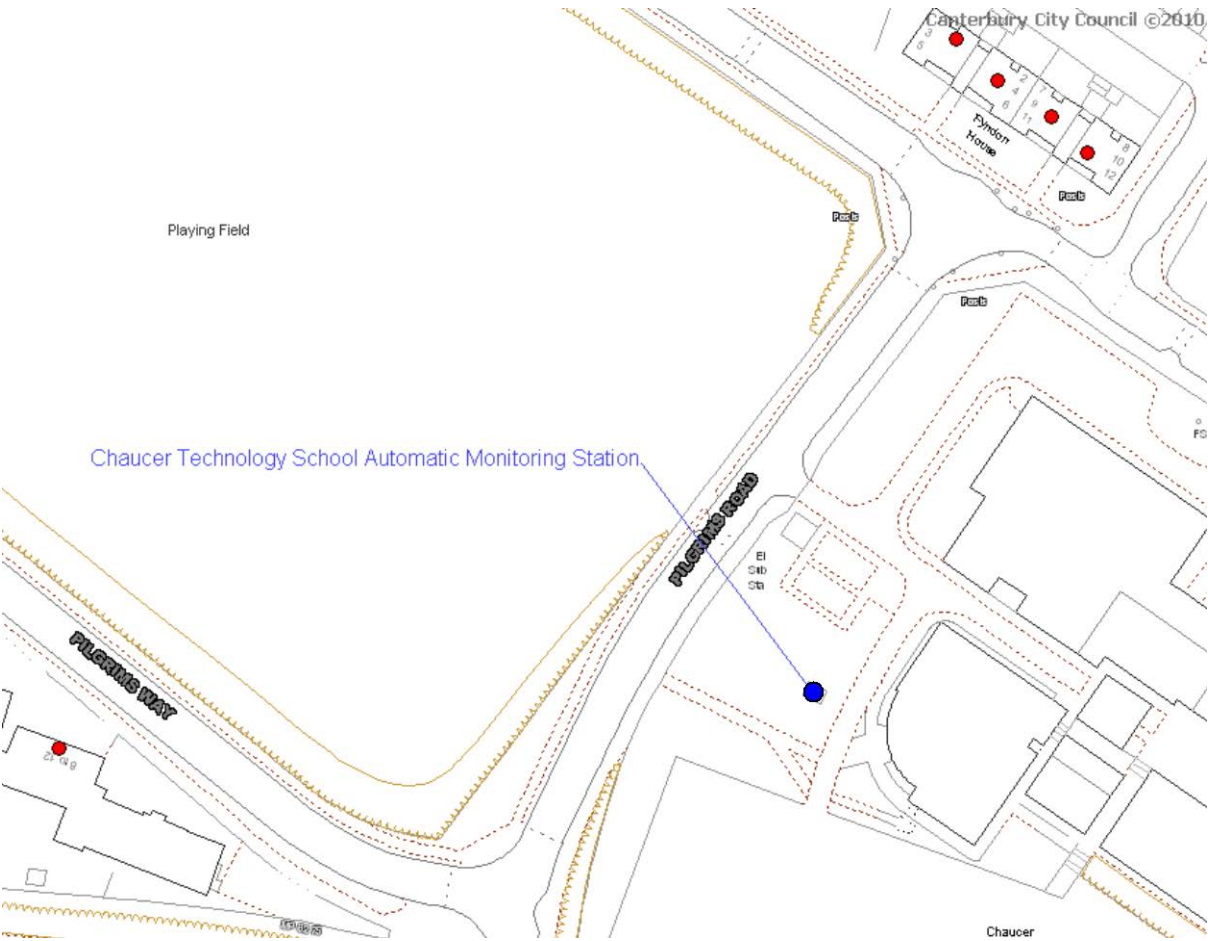
The Chaucer Technology School NO_x analyser is affiliated to the Automatic Urban and Rural Network (AURN). Monitoring is also carried out for particles (PM₁₀) at this site. However the PM₁₀ analyser was de-affiliated from the AURN in October 2007. Data for both these analysers is also reported via the Kent and Medway Air Quality Monitoring Network (KMAQMN).

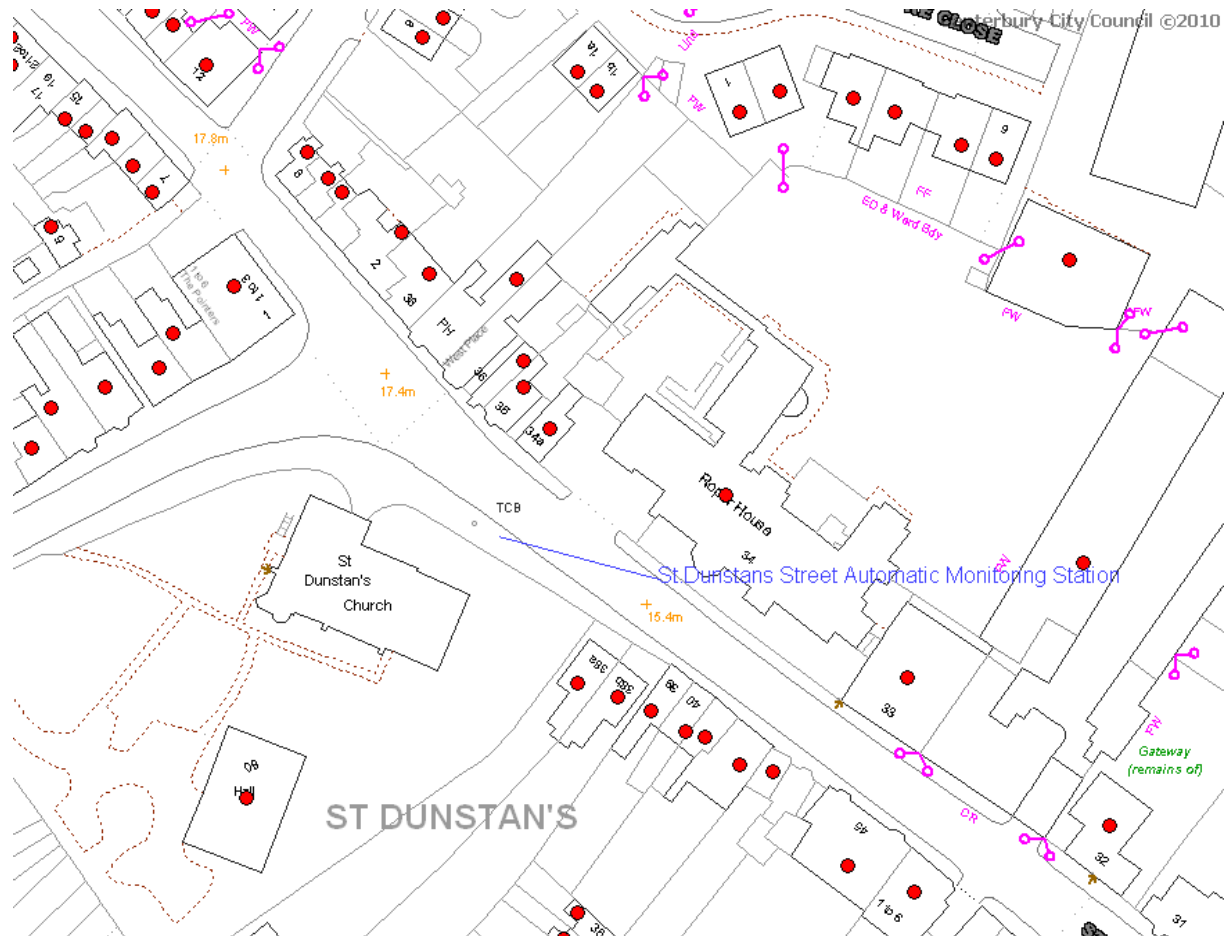
The St.Dunstan's Street, Military Road and St Peter's Place monitoring sites are affiliated to the KMAQMN, managed by AEA Technology who carry out data validation and ratification. The Quality Assurance/Quality Control (QA/QC) procedures for the KMAQMN are equivalent to those of the AURN.

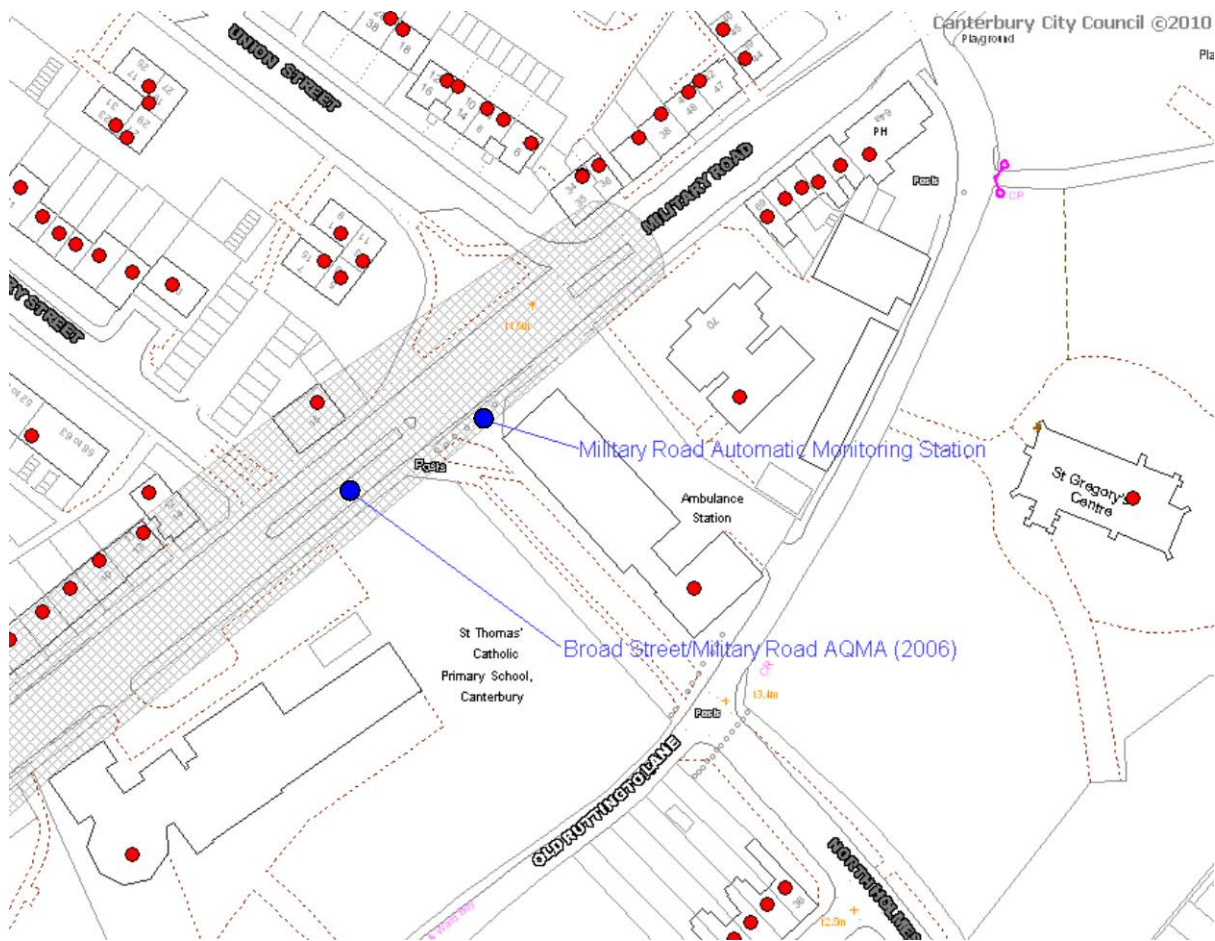
The North Lane monitoring site is currently not affiliated to the Kent network, however data for 2010 has been ratified by Air Quality Data Management.

The council calibrates analysers every two weeks. Site services are carried out every 6 months, and all sites are covered by an emergency breakdown call out service. QA/QC audits are carried out twice per year for the Chaucer Technology School, and once per year for St.Dunstan's, Military Road, St.Peter's Place and North Lane.

Figure 2.1 Maps of Automatic Monitoring Sites







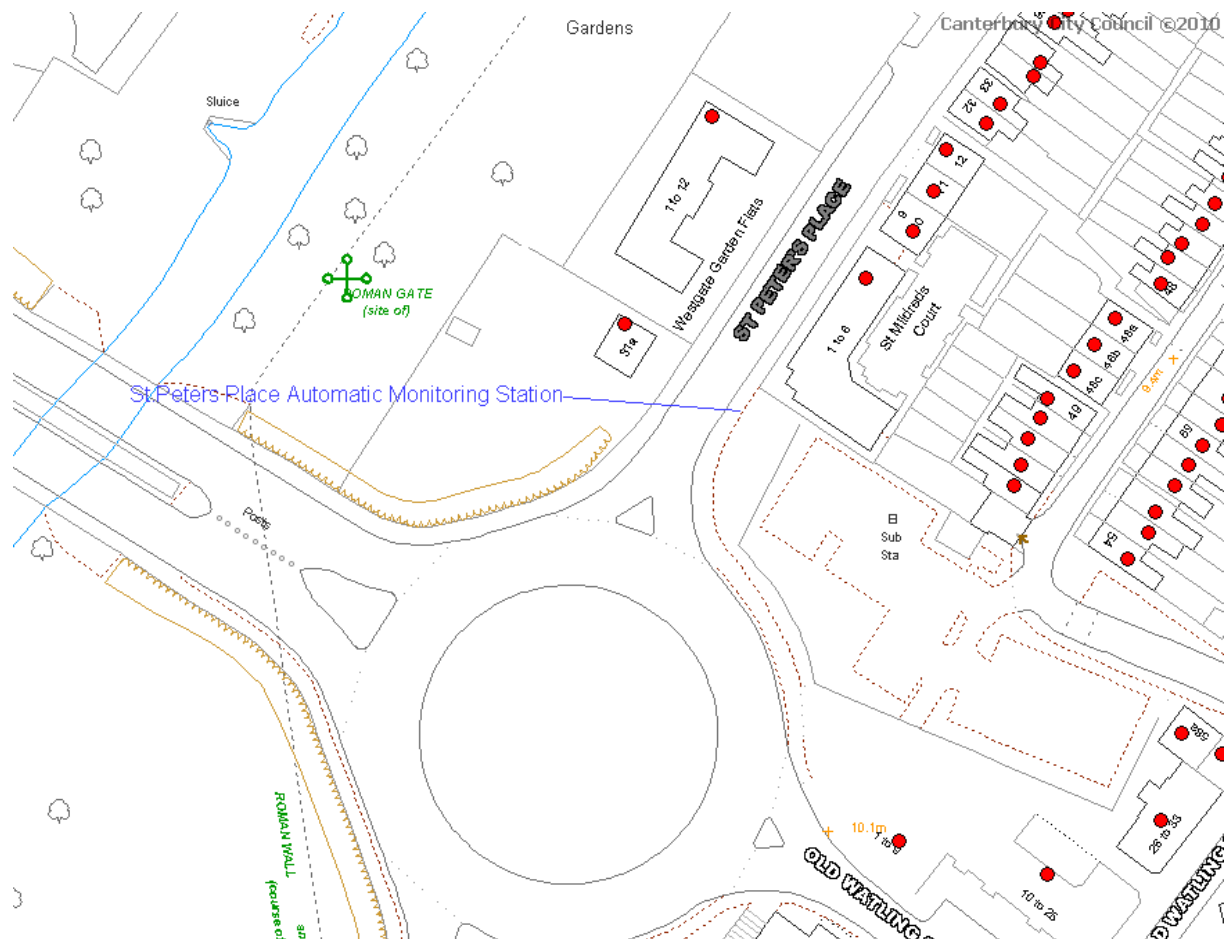


Table 2.1 Details of Automatic Monitoring Sites

Site Name	Site Type	OS Grid Ref		Pollutants Monitored	Monitoring Technique	In AQMA ?	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
Chaucer Technology School	Urban background	616186	157320	PM ₁₀	TEOM	N	Y(0m)	N/A	N/A
				NO _x	Chemiluminescent	N	Y (0m)	N/A	N/A
St.Dunstan's Street	Roadside	614259	158324	NO _x	Chemiluminescent	N*	N (but properties in line with station further along road)	1.8m	N
Military Road	Roadside	615401	158169	NO _x	Chemiluminescent	Y	N (but properties in line with station further along road)	3.2m	N
North Lane	Roadside	614668	158207	NO _x	Chemiluminescent	N*	Y(1.9m)	4.0m	Y
St.Peter's Place	Roadside	614462	157831	NO _x	Chemiluminescent	N*	N (but properties in line with station further along road)	2.2m	N

Sites within emerging Air Quality Management Areas

2.1.2 Non-Automatic Monitoring Sites

In 2010 the Council undertook non-automatic monitoring for nitrogen dioxide, using passive diffusion tubes, at 27 sites. This included two sites with triplicate diffusion tubes collocated with automatic analysers. See Appendix A for maps showing the location of these non-automatic monitoring sites. **Table 2.2** provides further details for the individual sites.

Diffusion tube monitoring sites are reviewed annually, to ensure that tubes are being used effectively. The review for the 2010 monitoring year identified 4 sites that could be redeployed to new areas.

- Wincheap 1
- Canterbury Road, Herne Bay
- St.Stephen's Road
- Upper Chantry Lane

These 4 sites showed annual mean results below the objective, so the tubes could be redeployed to areas where there are concerns. This resulted in 4 new diffusion tubes being deployed in January 2010.

- St.Martin's Hill (an area that suffers from congestion at peak periods where there has been no previous monitoring)
- Wincheap 5 (an area that suffers with congestion where there has been no previous monitoring, close to the recently completed residential development at the former Roundhouse pub on Wincheap roundabout)
- Mill Road, Sturry (close to a busy level crossing)
- Herne Street, Herne (identified in the 2009 USA as an area at risk of exceeding the annual mean objective for nitrogen dioxide, where there has been no previous monitoring)

The diffusion tubes were supplied and analysed by Harwell Scientifics utilising the 50% Triethanolamine (TEA) in acetone preparation method. Harwell Scientifics participate in the Workplace Analysis Scheme for Proficiency (WASP) for NO₂ diffusion tube analysis and the Annual Field Inter-Comparison Exercise. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO₂ concentrations reported are of a high calibre. In 2010 Harwell Scientifics was rated a category good laboratory. The lab follows the procedures set out in the Harmonisation Practical Guidance.

The overall combined bias adjustment factor for the above laboratory and preparation method, given on the Air Quality Review and Assessment Helpdesk Website is 0.85 (<http://laqm.defra.gov.uk/bias-adjustment-factors/national-bias.html>), calculated from 18 studies.

Canterbury City Council had two (triplicate) diffusion tube co-location studies in 2010, at the Chaucer Technology School AURN background site and Military Road roadside site in the Broad Street/Military Road Air Quality Management Area. The bias adjustment factors for these studies, as given on the Air Quality Review and Assessment Helpdesk website, are 0.87 and 0.71 respectively.

LAQM .TG(09) Box 3.3. provides specific factors that need to be considered when choosing the most representative bias adjustment factor to adjust annual mean diffusion tube data, and that ultimately it is up to each Local Authority to set out the reasons for their choice.

For recent rounds of review and assessment, the Council has used locally derived bias adjustment factors to correct NO₂ diffusion tube data. This is in part due to the high quality data obtained by the automatic chemiluminescence analysers, and good precision of diffusion data. Further more, the colocation study carried out at the Chaucer Technology School is at a background site with QA/QC to AURN standards, and the adjustment factor is virtually identical to that for the colocation study carried out at the Military Road roadside monitoring station, with QA/QC equivalent to the AURN. This suggests the bias adjustment factor may be representative at all diffusion tube sites.

There is also evidence that local bias adjustment factors have remained relatively consistent since the Council's first colocation study was carried out in 2006 (2006 = 0.84, 2007 = 0.84, 2008 = 0.80, 2009 = 0.78). This suggests that laboratory practices and procedures have remained consistent, as has local handling and deployment of tubes.

Therefore a locally derived bias adjustment factor has been used to correct annual mean NO₂ diffusion tube data for 2010, based on the colocation studies carried out at the Chaucer Technology School and Military Road.

This produces an overall bias adjustment factor of 0.78

The method used for calculating the local bias adjustment factor was to:

- Average the bias values expressed as a factor
- Add 1
- Calculate the inverse to give the bias adjustment factor

This is not exactly the same as the correction factor calculated using orthogonal regression, as used for the Review and Assessment Website spreadsheet, but is reasonably close.

Calculation:

Chaucer Technology School factor	0.154
Military Road factor	0.417
Average factor	0.2855
Add 1	1.2855
Inverse (1/x)	0.78

Table 2.2 Details of Non- Automatic Monitoring Sites

Site Name (Site ID)	Site Type	OS Grid Ref		Pollutants 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?
Broad Street 1 (CA01)	Roadside	615295	158001	NO ₂	Y	Y (0.4m)	1.4m	Y
Wincheap 2 (CA16)	Kerbside	614229	157091	NO ₂	N ^a	N	0.4m	N
North Lane 1 (CA22)	Kerbside	614675	158219	NO ₂	N ^a	Y (2.4m)	0.3m	Y
Old Tannery (CA23)	Kerbside	614410	157702	NO ₂	N ^a	Y (11m)	0.6m	N
Rheims Way (CA17)	Roadside	614043	158016	NO ₂	N	N	3.3m	N
Wincheap 5 (CA41)	Kerbside	614502	157335	NO ₂	N ^a	Y (2.6m)	0.5m	Y
Sturry Road 1 (CA08)	Roadside	615655	158696	NO ₂	N ^a	Y (9.5m)	1.6m	N
New Dover Road (CA09)	Kerbside	615660	157159	NO ₂	N	N	0.4m	N
St.Dunstan's 1 (CA10)	Roadside	614355	158267	NO ₂	N ^a	Y (0.2m)	2.1m	Y
High Street, Herne Bay (CA11)	Kerbside	617785	168231	NO ₂	N	Y (1.8m)	0.4m	N
High Street, Whitstable (CA12)	Kerbside	610686	166421	NO ₂	N	Y (2.7m)	0.7m	N
Kingsmead Road (CA24)	Roadside	615123	158630	NO ₂	N	N	1.7	N

Site Name	Site Type	OS Grid Ref		Pollutants 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?
Littlebourne (CA15)	Roadside	620970	157385	NO ₂	N	Y (4.5m)	1.8m	Y
Broad Street 2 (CA25)	Kerbside	615294	158033	NO ₂	Y	Y (2.5m)	0.6m	Y
Military Road 1 (CA26)	Roadside	615390	158180	NO ₂	Y	N	1.8m	N
Wincheap 3 (CA27)	Roadside	614065	156976	NO ₂	N ^a	N	1.8m	Y
Wincheap 4 (CA28)	Roadside	613902	156851	NO ₂	N ^a	N	1.7m	N
St.Martin's Hill (CA40)	Roadside	615851	157672	NO ₂	N	Y (0m)	1.2m	Y
Sturry Road 3 (CA32)	Roadside	616169	159067	NO ₂	N ^a	Y (0m)	2.0m	Y
St.Peter's Place (CA38)	Roadside	614479	157857	NO ₂	N ^a	Y (2m)	2.8m	N
St.Dunstan's 2 (CA37)	Roadside	614454	158180	NO ₂	N ^a	Y (0m)	1.8m	Y
North Lane 2 (CA39)	Roadside	614688	158251	NO ₂	N ^a	Y (1m)	1.1m	Y
Mill Road, Sturry (CA42)	Roadside	617748	160331	NO ₂	N	Y (0m)	1.3m	Y
Old Dover Road (CA35)	Roadside	615106	157382	NO ₂	N ^a	Y (0m)	0.4m	N
Herne Street, Herne (CA43)	Roadside	618242	165929	NO ₂	N	Y(0m)	0.9m	Y

Site Name	Site Type	OS Grid Ref		Pollutants 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?
Chaucer School 1/2/3 (CA18)	Urban background	616184	157318	NO ₂	N	Y (0m)	N/A	N
Military Road 2/3/4 (CA29)	Roadside	615401	158169	NO ₂	Y	N	3.2m	N

^aSites within emerging Air Quality Management Areas

2.2 Comparison of Monitoring Results with Air Quality Objectives

2.2.1 Nitrogen Dioxide Automatic Monitoring Data

Table 2.3a and **2.3b** show comparisons of monitored concentrations of nitrogen dioxide against the annual mean and 1-hour mean objectives. Exceedences are highlighted in **red**.

St.Peter's Place is the only site that monitored an exceedence against the annual mean objective in 2010, and is within an emerging AQMA. There is no relevant exposure at this monitoring site, however there are residential properties at the same distance from the kerb in St.Peters Place, as can be seen in Figure 2.1, found in section 2.1.1 of this report.

Monitoring at North Lane is also within an emerging AQMA, however it did not show an exceedence of the objectives in 2009.

Monitoring data for the long term sites in St.Dunstan's Street and Military Road have seen slight reductions in annual mean nitrogen dioxide concentrations over the past 4 years. Monitoring data for the Chaucer Technology School have remained relatively consistent in the corresponding period.

Long term trends in annual mean nitrogen dioxide concentrations at St.Dunstan's Street, Military Road and Chaucer Technology School can be seen in **Figure 2.2**.

Table 2.3b shows that only one site had exceedences of the 1-hour mean for nitrogen dioxide in 2010, this being St.Peter's Place, with 3 out of the 18 permitted exceedences.

However recent modelling for a combined Detailed and Further Assessment has indicated more widespread exceedence of the 1-hour mean at locations along Broad Street (within the current AQMA) and Wincheap, where annual mean concentrations have been predicted to be greater than $60 \mu\text{g}/\text{m}^3$.

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

Site Name	Within AQMA?	Data Capture for monitoring period %	Data Capture for full calendar year 2010 %	Annual mean concentrations ($\mu\text{g}/\text{m}^3$)			
				2007	2008	2009	2010
St.Dunstan's Street	N*	n/a	95.4	46	42	37**	36 ^c
Military Road	Y	n/a	92.5	43	40	37	34 ^c
North Lane	N*	n/a	94.2	-	-	33 ^{ab}	34
St.Peter's Place	N*	n/a	95.0	-	-	47 ^{ab}	46 ^c
Chaucer Technology School	N	n/a	99.0	18	17	16	18 ^c

^a Monitoring data available for July-December 2009 only

^b Annual means annualised as per Box 3.2 of LAQM.TG(09)

^c Data is provisional

* Sites within emerging Air Quality Management Areas

** Data capture <75% so results may not be representative

Figure 2.2 Trends in Annual Mean Nitrogen Dioxide Concentrations Measured at Automatic Monitoring Sites.

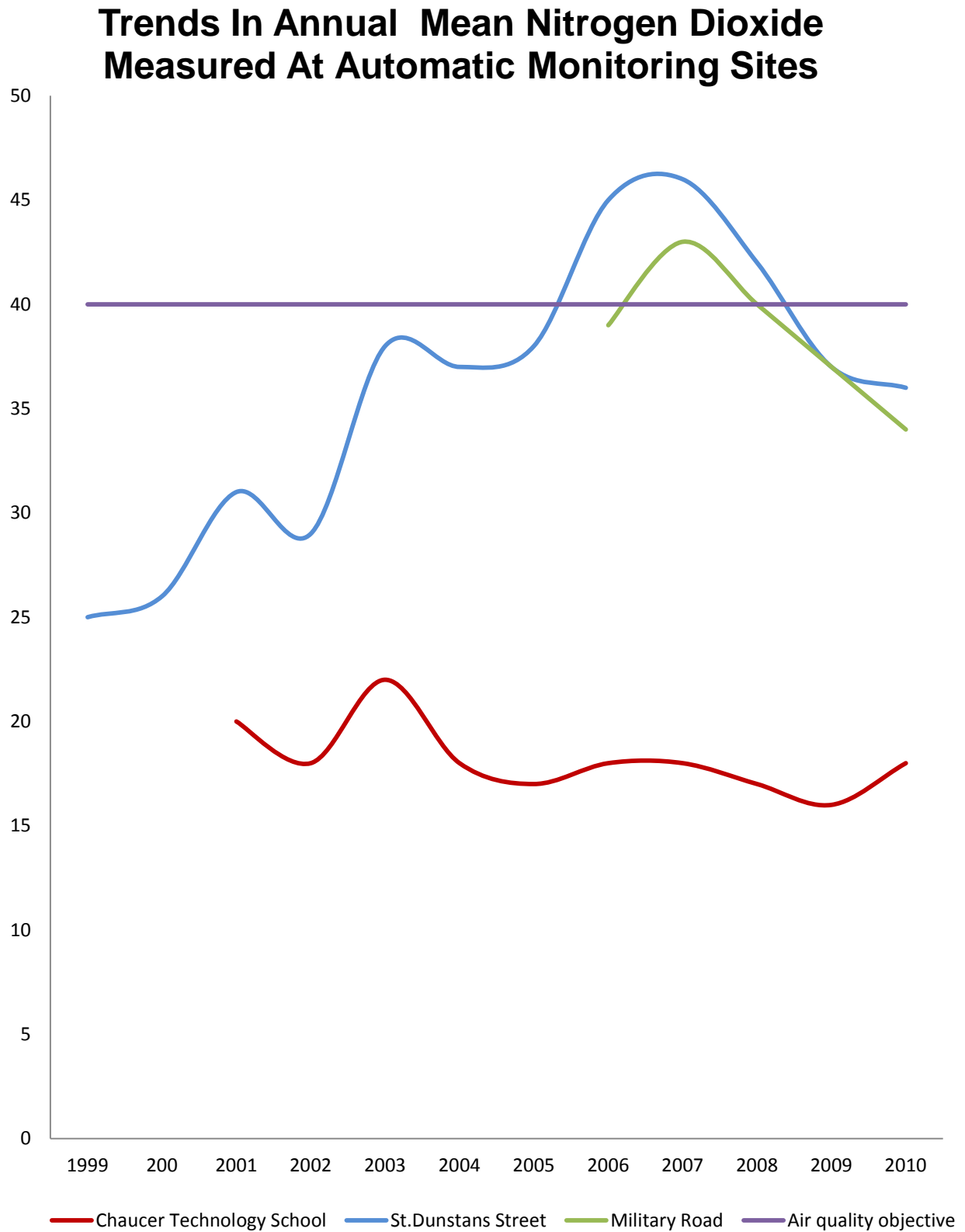


Table 2.3b Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with 1-hour Mean Objective

Site Name	Within AQMA?	Data Capture for monitoring period %	Data Capture for full calendar year 2010 %	Number of Exceedences of hourly mean (200 µg/m ³)			
				2007	2008	2009	2010
St.Dunstan's Street	N*	n/a	95.4	0	6	0**	0 ^b
Military Road	Y	n/a	92.5	0	2	9	0 ^b
North Lane	N*	n/a	94.2	-	-	0 (115.7) ^a	0
St.Peter's Place	N*	n/a	95.0	-	-	0 (78.0) ^a	3 ^b
Chaucer Technology School	N	n/a	99.0	0	0	0	0 ^b

^aData available for year <90% (99.8th percentile of hourly means provided in brackets)

^bData is provisional

*Sites within emerging Air Quality Management Areas

**Data capture <75% so results may not be representative

2.2.2 Diffusion Tube Monitoring Data

Table 2.4 shows a comparison of annual mean diffusion tube results against the annual mean objective for NO₂. Exceedences are highlighted in **red**.

The exceedences highlighted for Broad Street 1, Broad Street 2 and Military Road 1 are all within the current Broad Street/Military Road AQMA. There is relevant exposure at the Broad Street 1 and Broad Street 2 monitoring sites, but not at the Military Road 1 site.

The exceedences highlighted for North Lane 1, Old Tannery, St.Dunstan's 2, Wincheap 3, Wincheap 4, Wincheap5, Sturry Road 3 and St.Peter's Place are all within emerging Air Quality Management Areas. There is relevant exposure at all of these monitoring sites, with the exception of Wincheap 3 and Wincheap 4. However there are residential properties at similar distances to the kerb in close proximity to these sites.

There are no other exceedences outside of the current Broad Street/Military Road AQMA, or emerging AQMA's in the process of being declared.

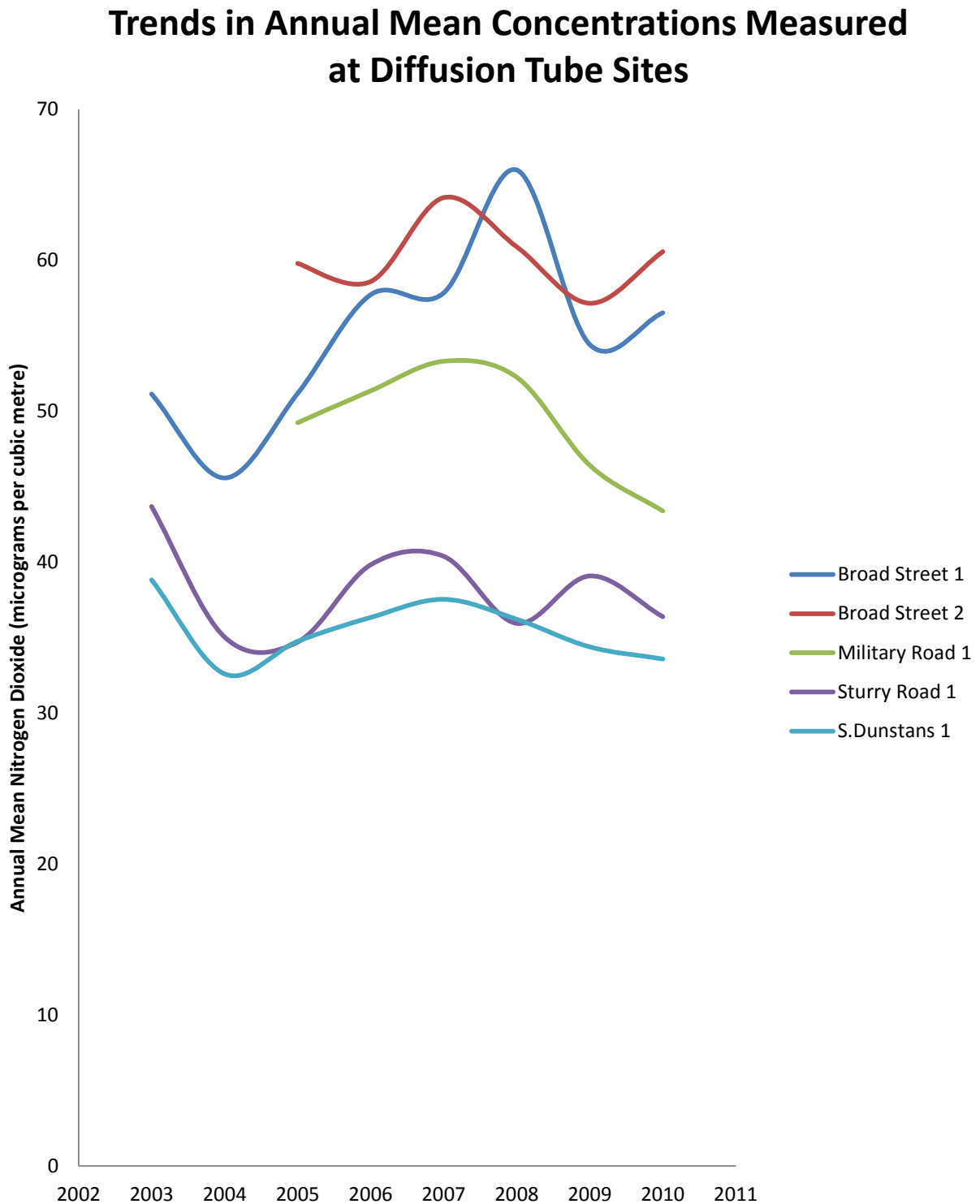
Trends in measured concentrations at a selection of sites can be seen in **Figure 2.3**. This shows a selection of long term sites where monitoring has been carried out for 5 or more years. The overall trend is that measured concentrations have increased since 2003, however in recent years these increases have stabilised in general, and we are now seeing slight reductions at some sites since 2008. Please note that raw annual mean data has been corrected for diffusion tube bias, with the exception for 2004, where there is no suitable bias adjustment factor.

Table 2.4 Results of Nitrogen Dioxide Diffusion Tubes: Comparison with Annual Mean Objective

Site Name (Site ID)	Within AQMA?	Data Capture for full calendar year 2010 %	Annual mean concentrations ($\mu\text{g}/\text{m}^3$)		
			2008 (Bias factor 0.80)	2009 (Bias factor 0.78)	2010 (Bias factor 0.78)
Broad Street 1 (CA01)	Y	100	66.0	54.4	56.5
Wincheap 2 (CA16)	N*	100	44.5	34.1	36.8
North Lane 1 (CA22)	N*	100	44.5	40.8	43.1
Old Tannery (CA23)	N*	100	49.2	48.2	49.3
Rheims Way (CA17)	N	100	28.9	28.7	26.8
Wincheap 5 (CA41)	N*	100	-	-	49.0
Sturry Road 1 (CA08)	N*	100	36.0	39.1	36.4
New Dover Road (CA09)	N	100	28.3	25.7	29.2
St.Dunstan's 1 (CA10)	N*	100	36.2	34.3	33.6
High Street, Herne Bay (CA11)	N	100	35.2	32.9	31.6
High Street, Whitstable (CA12)	N	100.	37.3	34.3	32.1
Kingsmead Road (CA24)	N	100	34.3	33.9	32.7
Littlebourne (CA15)	N	100	37.4	33.0	31.2
Broad Street 2 (CA25)	Y	100	60.9	57.2	60.6
Military Road 1 (CA26)	Y	100	52.2	46.4	43.4
Wincheap 3 (CA27)	N*	100	53.9	49.6	48.6
Wincheap 4 (CA28)	N*	100	54.5	51.8	52.6
St.Martin's Hill (CA40)	N	100	-	-	33.9
Sturry Road 3 (CA32)	N*	100	52.9	52.2	49.5
St.Peter's Place (CA38)	N*	100	40.8	40.9	41.9
St.Dunstan's 2 (CA37)	N*	100	56.6	56.1	51.1
North Lane 2 (CA39)	N*	100	35.5	33.0	31.9
Mill Road, Sturry (CA42)	N	100	-	-	33.4
Old Dover Road (CA35)	N*	100	40.3	40.4	39.5
Herne Street, Herne (CA43)	N	100	-	-	37.3
Chaucer School 1/2/3 (CA18)	N	100	17.9	15.6	16.2
Military Road 2/3/4 (CA29)	Y	100	39.6	37.8	37.3

*Sites within emerging Air Quality Management Areas

Figure 2.3 Trends in Annual Mean Nitrogen Dioxide Concentration (Bias corrected) Measured at Diffusion Tube Monitoring Sites.



2.2.3 PM₁₀ Monitoring data

In 2010 the Council carried out automatic monitoring for PM₁₀ at the Chaucer Technology School. The monitoring site is located within the grounds of the school therefore there is relevant exposure as an urban background location.

Table 2.5a and **Table 2.5b** show comparisons of monitored concentrations of PM₁₀ against the annual mean and daily mean objectives. This shows that there were no monitored exceedences in 2010.

LAQM.TG (09) sets out the calculation required for TEOM results using the Volatile Correction Model (VCM) to estimate the gravimetric equivalent. This replaces use of the previous 1.3 factor.

Appendix B shows a summary sheet from the VCM. Data for 2009 and 2010 has been corrected using the VCM. Data for 2008, and in brackets, uses the 1.3 factor.

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

Site Name	Within AQMA?	Data Capture for monitoring period %	Data Capture for full calendar year 2009 %	Annual mean concentrations (µg/m ³)		
				2008	2009	2010
Chaucer Technology School	N	-	98.8	23	19 (19)	20 (18)

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

Site Name	Within AQMA?	Data Capture for monitoring period %	Data Capture 2009 %	Number of Exceedences of daily mean objective (50 µg/m ³)		
				2008	2009	2010
Chaucer Technology School	N	-	98.5	6	0	0

2.2.4 Benzene, 1,3-butadiene, Carbon Monoxide, Lead, Sulphur Dioxide and Non-regulated Pollutants

The Council did not carry out monitoring for any other pollutants in 2010 that are included in the regulations, and for which air quality objectives have been prescribed. These pollutants are:

- benzene
- 1,3-butadiene
- carbon monoxide
- lead
- sulphur dioxide

The Council's last Updating and Screening Assessment (USA), submitted in 2009, showed that the objectives for these pollutants are likely to be achieved at all locations within the Council's area. The next USA is due in April 2012.

There have been no major changes since the USA in 2009 that would influence levels of these pollutants.

The Council did not carry out monitoring for any other pollutants not covered by the Regulations (for example ozone), however the Environmental Protection Section logs, and investigates nuisance complaints caused by odours, dust, smoke and fumes from premises.

Table 2.6 shows a summary of the relevant complaints received during 2010. All complaints were resolved without the need to serve a Notice, or take legal action.

Table 2.6 Nuisance Complaints received during 2010 under the Environmental Protection Act 1990

Nature of complaint	Number of complaints received
Domestic bonfire	43
Non-domestic bonfire	21
Smoke from chimney	8
Grit or dust	4
Other smoke	1
Agricultural odours	0
Industrial odours	3
Domestic fumes	6
Non-domestic fumes	5
Dark smoke	1

2.2.5 Summary of Compliance with AQS Objectives

Canterbury City Council has examined the results from monitoring in the district for 2010. Concentrations outside of the Broad Street/Military Road AQMA, and the emerging AQMA's, are below the objectives at relevant locations, therefore there is no need to proceed to a Detailed Assessment.

3 New Local Developments

3.1 Commercial and Domestic Sources

Canterbury City Council's offices in Military Road can now be heated using woodchip from Blean Woods following the successful installation of a woodchip boiler.



Woodchip boiler

The initiative is part of the council's efforts to take the lead on environmental issues and set the right example to others. With the woodchip coming from a local source, at around 48 cubic metres per monthly delivery, transport costs are also reduced.

It is estimated the boiler will save the council around £4,000 a year in gas costs and also results in a grant from the government's Renewable Heat Incentive scheme of approximately £10,000 a year.

With the project coming in at around £112,000, including supply, installation, fuel delivery equipment and some building moderations, it means the council will have covered its costs in just eight years

Canterbury City Council has identified the following new or previously unidentified local developments which may impact on air quality in the Local Authority area.

Canterbury City Council biomass boiler

This will be taken into consideration in the next Updating and Screening Assessment, scheduled for 2012.

4 Local / Regional Air Quality Strategy

Canterbury City Council does not currently have a formal Air Quality Strategy. However, Government guidance recommends that all authorities, especially those without designated AQMA's should do so.

The Council has recently produced its first Air Quality Action Plan, covering the Broad Street/Military Road AQMA. With the AQMA's emerging this action plan is likely to be amended to include these new areas, and become much more of an overarching local strategy. The Air Quality Action Plan is discussed in section 9 of this report.

Canterbury City Council continues to be a member of the Kent and Medway Air Quality Partnership. The partnership meets on a regular basis to discuss issues related to Local Air Quality Management (LAQM), including transport planning, review and assessment progress etc.

The partnership is essential in helping its members to meet their obligations under the regulations, and provides greater co-ordination of LAQM work across the County:



The major aims and objectives of the Partnership are:

- To facilitate a co-ordinated approach throughout Kent and Medway to the Local Air Quality Management (LAQM) obligations placed on local authorities under the Environment Act 1995.
- To compile, update and maintain an Emissions Inventory of air pollution sources in and around Kent, to assist with the LAQM process.
- To comment on and influence the economic, planning and transport policies within the county so that air quality issues are properly considered and dealt with.
- To gain an understanding of the health implications associated with poor air quality and the extent to which air quality threatens the health of Kent and Medway's communities.

- To work with national agencies, neighbouring authorities and European partners to promote an awareness of air quality issues and to participate in joint initiatives to further the knowledge and understanding of air quality issues.
- Liaise with DEFRA and government bodies to assist with the implementation of the National Air Quality Strategy.

The Partnership co-ordinates a county-wide air quality monitoring network, the Kent & Medway Air Quality Monitoring Network, which is funded in partnership with all the Kent local authorities. The K&MAQP represents the views of Kent at regional and national Air Quality Management Groups.

5 Planning Applications

In 2010, air quality assessments were requested/submitted for 4 Planning Applications.

- 1) CA/10/00854 – Sladdens, Wincheap (12 flats, 4 houses) – An air quality assessment was requested, and Section 106 monies requested. The application is still to be determined, but it is unlikely that S 106 will be supported by Development Control.
- 2) CA/10/00809 – Halletts Garage, St Dunstons (student accom – 30 units & 1 retail unit) – An air quality assessment was submitted. This concluded that the proposal will not worsen the air quality in the area, but some flats close to the road will be affected by already poor air quality. Section 106 monies were requested but not supported by Development Control. A condition relating to air quality has been placed on the planning permission:

All residential accommodation facing St Dunstan's Street shall be provided with mechanical ventilation and extraction drawing air from and discharging air to the rear of the building or the roof, in accordance with the recommendations of the Air Quality Statement prepared by "All Together Better" and submitted to accompany the application. REASON: Air quality in St Dunstan's Street is poor and an alternative source of air to the rooms fronting that street is required in the interests of human health.

- 3) CA/10/00813 – 41 St Georges Place (204 student rooms, 10 student houses and student centre) – An air quality assessment was submitted. This concluded that the proposal will not worsen the air quality in the area. A Condition relating to air quality has been placed on the permission:

Full details of the measures to be incorporated into the development to reduce the impact of noise from traffic and the adjoining nightclub and deteriorating air quality affecting the site shall be submitted to and approved by the Local Planning Authority. The measures shall accord with and meet the expectations set out in the relevant remediation strategies that accompanied the application. Thereafter the works shall be constructed fully in accordance with the approved details. REASON: To limit the impact of noise and fumes to ensure the provision of satisfactory living conditions for future residents.

- 4) CA/10/01193 – Roper Rd/St Dunstan's (revised application – now for 49 sheltered apts for elderly, 1 retail unit) – An air quality assessment was submitted. This concluded that future residents will be subject to unacceptable levels of poor AQ. A request for Section 106 monies was refused for the previous application. Conditions were requested for mechanical ventilation as per the previous permission.

6 Air Quality Planning Policies

6.1 Canterbury District Strategy (2009)

The Canterbury District Strategy has been developed through the Canterbury Partnership. The Canterbury Partnership was established in September 2008 to strengthen the connection between public sector agencies, local government, the voluntary and community sectors, businesses and local residents in the Canterbury district. It acts as an overarching partnership providing a strategic vision to other partnerships in the district. The Partnership leads on issues that impact on the future well being of the district.

The Partnership's vision is "Through focused and environmentally sustainable growth by 2030 the Canterbury district will be defined by a dynamic strong economy and a distinctive cultural and visitor experience from which our communities will prosper."

There are seven theme groups that directly help to deliver the aims and objectives of the Canterbury District Strategy. These groups are:

Canterbury District Community Alliance
Canterbury4Business
Community Health and Wellbeing
Safer Canterbury District Partnership
Culture@canterbury
Environment Group
Canterbury District Transport Steering Group

The Canterbury District Strategy sets out the long-term vision for the district and sets out actions for the medium term to achieve this vision. This vision is also shared with Canterbury City Council's Corporate Plan and the Local Development Framework for the district. Other important policies such as the Economic Strategy and Cultural Policy also aim to meet the aspirations of this vision. The seven theme groups of the Canterbury Partnership have an important role in delivering actions to realise our shared vision. The structure of the Canterbury District Strategy action plan is therefore based around each of the seven theme groups of the Canterbury Partnership. Each group (and the partnership itself) has developed an action plan around the following four outcomes:

- 1 Delivering the Knowledge Economy
- 2 Delivering the Experience Economy
- 3 Delivering the Green Economy
- 4 Creating Sustainable Communities

An annual monitoring report will be produced setting out progress against the following action plans and the strategy itself will be annually reviewed.

A number of the actions considered by the Environment Group and in particular the Canterbury District Transport Steering Group include improving travel choices and reducing traffic congestion, which will lead to air quality improvements. These are listed below:

Outcome 1: Growing the Knowledge Economy**Objective 4: Site and Infrastructure improvement to support the delivery of the Knowledge Economy**

Action: A2 slip roads to be all- movement
 Target: Wincheap London bound on-slip road by 2010; Wincheap off-slip by 2012; in principle agreement from Highways Agency for Harbledown slip roads and Bridge interchange by 2010.

Outcome 2: Delivering the Experience Economy**Objective 1: Improve the infrastructure needed to support the Experience Economy**

Action: Implement an effective Car Parking Strategy to provide sufficient high quality car parking facilities.
 Target: Implement Actions identified in Canterbury Parking Strategy 2006 to 2016.

Outcome 3: Delivering the Green Economy**Objective 1: Minimise contribution to and adapt to the consequences of climate change**

Action: Improve Travel Choice by investing in alternative methods of transport to the car to encourage more journeys to be made by bus, train, walking and cycling.

Target: Increase the percentage share of cycling as a mode of transport to 5% by 2012 (currently 2%); Increase patronage of bus travel by 3% per annum; Improve punctuality of buses on QBP routes to 95%.

Action: Investigate the feasibility and implications of road charging and a workplace parking levy as a means to reduce congestion and improve air quality.

Target: Complete a city wide multi-modal transport model by 2010.

Action: Encourage large employers in Canterbury to develop and monitor green travel plans as part of the Travel Plan Forum.

Target: Reduce the percentage of employees and students travelling into the city by car.

Outcome 4: Sustainable Communities**Objective 2: A well connected district with well connected communities**

Action: Reduce Travel Demand by locating development close to good transport links and local facilities.

Target: Use appropriate transport modeling techniques to inform the LDF to be adopted in 2010.

Action: Provide more rural transport services.

Target: Increase number of people using 'Dial a Ride' by 10% per annum.

Objective 5: Regeneration of coastal communities

Action: Improve pedestrian and cycle linkages between Herne Bay seafront and town centre.

Target: Delivered as part of Herne Bay Action Plan; Phase one Oyster Bay Trail

(Reculver to Swalecliffe by 2009); Phase two (Swalecliffe to Seasalter by 2011).

Objective 9: An inclusive district

Action: Improve transport facilities for disabled people.

Target: Increase number of people using 'Dial a Ride' by 10% per annum;
Deliver bus stop infrastructure improvements through the Quality Bus Partnership.

6.2 Canterbury City Council Corporate Plan (2008-2012)

The Council has produced a Corporate Plan for 2008-2012, which sets out the Council's approach to delivering against its corporate priorities.

The Corporate Plan has 7 themes or aims. These are not stand alone and overlap in different ways in practice.

1. Reputation
2. Focusing on people
3. Creating a quality district
4. Encouraging innovation and enterprise
5. Promoting participation in culture, leisure and play by all
6. Promoting and providing environmental leadership;
7. Improving accessibility, links and connectivity.

Under each theme, the Council has set a number of corporate objectives, which the Council will work towards, by setting a number of actions.

Air quality is considered under **Objective 35** 'Protect communities from flooding, erosion and pollution', with a proposed action to implement the Air Quality Management Plan.

Objective 36 is to develop better transport infrastructure to help reduce traffic congestion. The proposals are to:

Implement measures to reduce traffic congestion,
Work with Kent County Council and the Highways Agency to deliver all movement junctions on the A2 at Wincheap, Harbledown and Bridge.
To lobby rail authorities to ensure existing rail capacity is kept and the frequency of normal commuter services is maintained.
Improve the links from Canterbury West station to the High Street

Objective 37 is to expand opportunities to travel other than by car, particularly journeys to School by:

Extending the Park & Ride service
Working with Kent County Council to improve the cycle and pedestrian network
Encouraging development and implementation of company and school travel plans
Work with Stagecoach and Kent Highways to increase patronage of public transport, including the provision of dedicated bus lanes

Objective 38 is to Improve accessibility for all by Continue to support the Dial A Bus scheme provided jointly with the Kent County Council to ensure that elderly and disabled people and anyone living in rural areas has good access to the three urban centres in the district and to ensure the take-up of the concessionary travel scheme by disabled users.

6.3 Canterbury Environment Policy (2009)

Canterbury City Council's approved Corporate Plan for the period 2008-2012 makes the preparation of an Environment Policy a corporate commitment. The Environment Policy sets out in more detail the council's policies and actions in the environmental field over the same period, and was adopted in July 2009. Whilst setting a strategic direction for Environmental Policy over the four-year period, it will be necessary to monitor and review the policy each year to ensure its actions are being undertaken and its objectives are being met.

The council has three interlinked roles which will help to address environmental issues in the district, and the policy aims to cover all three roles. The roles are:

- The council's own operations as an organisation – to lead by example
- The services the council delivers for the community
- The council's community leadership role – actions it can take in partnership with others or by encouraging other organisations and individuals in the district to take action for themselves

The main content of the policy is set out under seven themes:

- A Minimising waste and increasing recycling**
- B Tackling pollution**
- C Reducing the need for travel and promoting sustainable modes of transport**
- D Reducing energy use and the consumption of natural resources**
- E Protecting and enhancing the natural and built environment**
- F Adapting to changing climatic conditions**
- G Public information and promotion**

For each theme there is a section introducing the issues involved, then a section setting out the council's achievements in recent years, which ought to be fully recognised, and then a section outlining the council's policy commitments. Given this current baseline of activity and policy commitment the next section sets out what the council aims to achieve next. Proposals for additional or continuing activity during the 2008 – 2012 period (or over the longer term in some cases) are set out. These include those already in existing plans and strategies which are provided for in planned or proposed city council budgets, together with proposals for the broad direction of future activity. In many cases funding from other public or private sources is or will become available and the council will want to maximise the use of these

partnerships and external resources to achieve as much as possible in the next few years.

The Corporate Plan commits the council to develop and define the Canterbury Standard for environmental policy through this policy document. This document sets out the council's approach and therefore defines the Canterbury Standard for development and other activity expected in the district. The approach is to carefully assess the most appropriate standard of activity in relation to each theme, and to set this out. In many cases the Canterbury approach is to require a standard in excess of that required by central government. The most notable examples of this are to require all new developments in the district to be constructed to a Code for Sustainable Homes standard higher than required by government as well as the recent procurement of Canterbury Park and Ride buses to an emissions standard higher than that currently required by government.

6.4 Canterbury City Council Local Development Framework

The Local Development Framework (LDF) together with the Regional Spatial Strategy (South East Plan) provides the framework for development in the Canterbury district and as such will be the basis upon which planning applications are determined. The LDF is a collection of planning documents that will eventually take over from the current Local Plan and the Kent and Medway Structure Plan.

Canterbury City Council has produced a Local Development Scheme (LDS), which sets out the timetable for the review of the current draft Local Plan, and the preparation of a Local Development Framework for Canterbury district. The planning policy documents that will be produced are Development Plan Documents (DPDs) and Supplementary Planning Documents (SPDs).

One of the first documents to be prepared by the Council is the Core Strategy. To inform the development of the Core Strategy, the Council has, with other public bodies and local stakeholders been involved in developing a Futures Study. This looks at how the district might change over the next 25 years, and develops some realistic scenarios for the future. The Council is intending to prepare the Core Strategy and a Development Land allocations DPD (following preparation of the South East Plan). The Core Strategy should be adopted by mid 2011. Most of the adopted Local Plan is proposed to be saved and will be progressively reviewed through the LDF process.

In order to assess the transport implications of future development, Canterbury City Council and KCC are jointly funding a strategic multi-modal VISUM model for the district. The model will be used to test various development scenarios and the results in terms of traffic and air quality impact will be used as part of the evidence based decision process.

6.5 Canterbury District Local Plan First Review (2006)

The adopted Local Plan, which forms part of the overall development plan for Canterbury up to 2011, details the land use planning policies and proposals for the District.

The Plan has several functions:

- To set out a strategy for fulfilling the Government's policy towards land use planning at a district level, including its objective of securing sustainable development;
- To give an opportunity and invitation to participate in the planning process, through giving people the chance to express their views on local planning issues;
- To set out objectives to ensure the district is an excellent location in which to live, invest, work, learn and visit;
- To take into account the principal social, economic and environmental influences on the district in the plan against which planning applications for development will be assessed; by identifying sites for particular purposes, by defining areas to which policies apply and by setting out details of these policies in terms of standards and criteria; and
- To conform with the Kent and Medway Structure Plan (2006). (The Kent and Medway Structure Plan has now been superseded by the South East Plan)

It is fundamental to the achievement of the aims of the Air Quality Action Plan to have a Local Plan that recognises the importance of air quality in terms of the environmental impact of development and the need for sustainable transport measures. Canterbury District Local Plan incorporates a policy with respect to air quality, as outlined below.

"POLICY C39

Development that could directly or indirectly result in additional air pollutants and worsening levels of air quality within the area surrounding the development site will not be permitted unless mitigation measures are agreed and fully implemented as part of the proposal."

6.6 South East Plan (Regional Spatial Strategy) (2009)

The South East Plan is the Regional Spatial Strategy for South East England, which will cover the period up to 2026. It provides the statutory regional framework that forms the context within which Local Development Documents and Local Transport Plans need to be prepared, as well as other regional and sub-regional strategies and programmes that have a bearing on land use activities. These include the regional economic and housing strategies as well as strategies and programmes that address air quality, biodiversity, climate change, education, energy, environment, health and sustainable development.

The Integrated Regional Framework (IRF) provides an essential part of the context for the plan, establishing a shared regional vision and set of objectives, which all organisations in the region should use to try and achieve more sustainable development. It reflects overall Government policy on sustainable development. One

of the IRF objectives is *“To reduce air pollution and ensure air quality continues to improve.”*

The South East Plan sets out the housing provision for the period 2006–2026 to be made in Local Development Frameworks for the completion in the sub-region of 10,200 dwellings. In the Canterbury district, the number of dwellings proposed during this period up to 2026 is 7200. The growth at each location will be supported by the phased and co-ordinated provision of infrastructure, employment, environmental improvement and community services.

Town centres and inner urban areas will be given greater emphasis as locations for regeneration and employment growth in services and cultural activity. Ashford and Canterbury are identified in the plan as Regional Hubs for employment. Canterbury is also identified as a major location for the expansion of higher and further education. Improvement of the A2 junctions at Canterbury is expected to assist with the economic contribution of the city and reduce pressure on the World Heritage site.

The plan contains a number of relevant policies, which will work towards improving air quality and reducing transport emissions:

“Policy NRM9: Air Quality

Strategies, plans, programmes and planning proposals should contribute to sustaining the current downward trend in air pollution in the region. This will include seeking improvements in air quality so that there is a significant reduction in the number of days of medium and high air pollution by 2026. Local development documents and development control can help to achieve improvements in local air quality through:

- i Ensuring consistency with Air Quality Management Plans*
- ii Reducing the environmental impacts of transport and congestion management, and support the use of cleaner transport fuels*
- iii Mitigating the impact of development and reduce exposure to poor air quality through design, particularly for residential development in areas which already, or are likely to, exceed national air quality objectives*
- iv Encouraging the use of best practice during construction activities to reduce the levels of dust and other pollutants.*
- v Assessing the potential impacts of new development and increased traffic levels on internationally designated nature conservation sites, and adopt avoidance and mitigation measures to address these impacts.”*

“Policy T1: Manage and Invest

Relevant regional strategies, Local Development Documents and Local Transport Plans will ensure that their management policies and proposals:

- i Are consistent with, and supported by, appropriate mobility management measures*
- ii Achieve a rebalancing of the transport system in favour of sustainable modes as a means of access to services and facilities*
- iii Foster and promote an improved and integrated network of public transport services in and between both urban and rural areas*
- iv Encourage development that is located and designed to reduce average journey lengths*
- v Improve the maintenance of the existing transport system*
- vi Include measures that reduce the overall number of road casualties*

vii Include measures to minimise negative environmental impacts of transport and, where possible, to enhance the environment and communities through such interventions.

viii Investment in upgrading the transport system should be prioritised to support delivery of spatial strategy by:

- a. supporting the function of the regions international gateways and inter-regional movement corridors*
- b. developing the network of regional hubs and spoke (Canterbury is identified as a Regional Hub)*
- c. facilitating urban renewal and urban renaissance as a means of achieving a more sustainable pattern of development*
- d. improving overall levels of accessibility.*

“Policy T4: Parking

Local Development Documents and Local Transport Plans should, in combination:

i Adopt restraint-based maximum levels of parking provision for non-residential developments, linked to an integrated programme of public transport and accessibility improvements

ii Set maximum parking standards for B1 land uses within the range 1:30 m2 and 1:100m2

iii Set maximum parking standards for other non-residential land uses in line with PPG13, reducing provision below this in locations with good public transport

iv Include policies and proposals for the management of the total parking stock within regional hubs that are consistent with these limits

v Apply guidance set out in PPG3 on residential parking standards, reflecting local circumstances

vi Support an increase in the provision in parking at rail stations where appropriate

vii Ensure the provision of sufficient cycle parking at new developments including secure cycle storage for new flats and houses which lack garages.”

“Policy T5: Travel Plans and Advice

Local authorities should ensure that their Local Development Documents and Local Transport Plans identify those categories of major travel generating developments, both existing and proposed, for which travel plans should be developed. Local Transport Authorities should also consider piloting the concept of transport planning advice centres for regional hubs in their Local Transport Plans.”

7 Local Transport Plans and Strategies

7.1 Local Transport Plan for Kent (2006–2011)

In 1998, the Government published a Transport White Paper "A New Deal for Transport" which outlined their commitment to a more integrated and sustainable transport system with greater emphasis on alternative forms of transport to the private car. The Government also introduced a system of Local Transport Plans (LTPs) which each highway authority had to prepare every five years which would outline their aims to improve local transport and the funding they required to do this. In the second round of LTPs 2006-11, the Government outlined four shared priorities for local transport, one of which was air quality and required LTPs to consider improvements to the transport network which would reduce air pollution in all declared Air Quality Management Areas.

The Local Transport Plan for Kent 2006-11, which was submitted in March 2006, aims to "stabilise and, where possible, reverse the adverse effect of transport and its infrastructure on the natural and built environment and on local communities". Specifically, the LTP contains an air quality policy EHC1 "to seek a reduction in traffic pollution on the local road network".

Since Kent lacks one large urban area with a population above 250,000, KCC is not currently required to set an LTP target for reducing congestion, but congestion and its impact on Kent's economy and communities is a priority for KCC. Canterbury has been highlighted as one of the urban areas which suffers from the worst congestion issues. The road network in Canterbury City centre is heavily congested in the morning and evening peak periods and maintains above average hourly traffic flows throughout the day, especially on the inner ring road and inner radial routes.

In Canterbury, a number of measures are proposed to help alleviate congestion.

These include:

- Use of Intelligent Transport Systems to manage road traffic and other modes of transport;
- A sustained TravelWise Canterbury campaign, phased over a number of years;
- Marketing car sharing schemes in Canterbury;
- Investigation of the potential of establishing Car Club schemes in Canterbury;
- Continued investment in the existing QBP in Canterbury, with implementation of the Punctuality Improvement Plan.
- Extension of the cycle route network in Canterbury.

7.2 Canterbury District Transport Action Plan (2004)

Canterbury City Council and Kent County Council worked in partnership to produce the Canterbury District Transport Action Plan. This was adopted in March 2004 and provides a framework for the provision of transport services and facilities in the district.

The action plan focuses on what can be done to improve alternatives to the car for journeys to and from Canterbury City centre, in particular where traffic congestion is at its worst during school term times.

The main objectives for Canterbury City are:

- To extend Park and Ride provision by constructing or extending a site to serve the north-west approach.
- To extend operating times and increase flexibility and integration including letting the sites become transport terminals for the urban minibus network, some rural bus services and set down and pick up points for some school buses and health transport provision.
- To improve access to the A2 Canterbury bypass, by building extra slip roads at all 3 junctions around Canterbury. This will reduce the need for some cross-city trips to be made using the existing inner routes and ring road allowing reallocation of road space to bus priorities, cycle routes and pedestrian crossings.
- To give priority to buses, walking and cycling routes, and to maintain essential vehicle access to and from the city centre, by introducing phased traffic management schemes in key areas.

The main district-wide objectives are:

- To work in partnership with bus and train operators to improve public transport reliability, integration, facilities and information;
- To continue improving the network of safer walking and cycling routes concentrating on improving routes for commuting;
- To offer more 'Safer Routes to School' and walking buses and seek other ways in which journeys to school by car can be reduced;
- To introduce more road safety initiatives, including extra 20mph traffic calmed zones in residential areas, and improved speed enforcement;
- To continue to monitor air quality and work towards reducing the effects of traffic emissions in sensitive areas due to traffic congestion;
- To extend Travel Wise initiatives and to encourage more individual travel plans by offering targeted discounts at park and ride for commuters and students, and for those who car share;
- To continue implementing the Freight Quality Partnership Action plan to reduce the impact of HGVs on the local environment.

7.3 Canterbury District Bus Strategy (2002)

The aim of the Canterbury Bus Strategy is to review and promote improvements to all aspects of bus service provision in the District, in particular through Bus Quality Partnership initiatives.

The Bus Quality Partnership core consists of:

- Stagecoach East Kent – providing new vehicles; and
- Kent County Council / Canterbury City Council – providing bus priorities, new roadside infrastructure and better information (including Real Time Information)

-

The Strategy proposes a two phase Bus Quality Partnership:

- Phase 1 – Coastal Route – Canterbury, Whitstable, Herne Bay (services 4 & 6). Canterbury – Thanet Corridor.
- Phase 2 - Canterbury city centre minibus network.

The first phase is already underway. Phase 2 has been partially implemented.

In addition, more priority recently has been given to improving the bus stock and the bus infrastructure. The improvements have included low floor buses, Real Time timetabling and bus stop upgrades.

7.4 Canterbury Parking Strategy (2006–2016)

The Canterbury Parking Strategy was published by CCC in April 2008. The aim of the strategy is to reduce the need for car travel to and from the City Centre, while providing parking to meet a sustainable demand. The Parking Strategy is vital in controlling vehicles entering the city.

The most relevant principles and actions with respect to potential improvements in local air quality in the city centre are:

Principles

- P4: To continue a gradual redistribution in parking provision from the city centre car parks to Park and Ride sites, provided that there is sufficient overall capacity;
- P6: To continue to support the introduction of new bus lanes that improve journey times for Park and Ride and service buses;
- P8: To continue the local planning policy of low car parking provision in sustainable developments, to reduce car usage and dependency in line with PPS3;
- P9: To allow residents of low car parking provision developments the ability to purchase on or off-street parking permits only where there is clear evidence of spare capacity.

Actions

- A8: To provide a Park and Ride site that intercepts vehicles from the north-western approach to the city;

- A9: To implement a 150 to 200 space expansion at New Dover Road Park and Ride;
- A10: To investigate a limited expansion at the current Wincheap Park and Ride site and a more significant expansion as part of the Wincheap Industrial Estate redevelopment, which would also cater for traffic from the north-west;
- A11: To implement measures to make Sturry Road Park and Ride more attractive to motorists and increase usage;
- A13: To investigate ways of increasing passenger capacity on Park and Ride buses at peak times;
- A15: To investigate through the Travel Plan Forum the potential of using Park and Ride sites as transport interchanges;
- A16: To replace the current limited car park management system with a UTMC compatible one, extend coverage to all main car parks and provide variable message signs capable of displaying real-time traffic and parking information;
- A18: To set up a Travel Plan Forum for the major employers and higher academic establishments in Canterbury to promote and develop travel plans and investigate partnership working with stakeholders and transport providers;
- A19: To produce a residential parking standard matrix for the Canterbury District in line with PPS3 which considers the availability of alternative modes of transport.
- A27: To investigate the introduction of a reduced annual permit charge for low polluting vehicles.

8 Climate Change Strategies

8.1 Nottingham Declaration On Climate Change

Launched in October 2000 in Nottingham, the Declaration has now been signed by more than 300 English Councils. Many local partner organisations, such as Fire & Rescue Services, National Park Authorities, Primary Care Trusts, and Waste Disposal Authorities have also signed the Declaration.

Canterbury City Council signed the Nottingham Declaration in December 2007 acknowledging the increasing impact that climate change will have on the community and the Council's commitment to tackling the causes and effects of a changing climate on the district.

The Council, through this Declaration, is committed to tackling climate change issues in a systematic and appropriate way. An Environmental Policy Working Group which includes both officers and members has been set up to prepare and take forward the climate change strategy. The Council has participated in the Local Authority Carbon Management Programme with the Carbon Trust, which has provided a baseline for CO₂ emissions from council services. A series of actions have been proposed as a result of this to improve the energy efficiency of the Council.

9 Implementation of Action Plans

The councils air quality action plan, covering the Broad Street/Military Road AQMA received Defra approval in January 2010, and was subsequently formally adopted by the council.

The action plan contains a range of measures that aim to reduce emissions within the AQMA (Direct Measures), and to improve air quality across the district as a whole (General Measures).

A summary of the measures included in the final Action Plan is shown in **Table 9.1** and **Table 9.2**, together with an update of any progress made during 2010.

Table 9.1 Summary of Action Plan Direct Measures

Action	Description	Organisation responsible	Date to be achieved	Cost/ Funding	Air quality Improvement in AQMA	Other potential impacts	Performance Indicator	Progress in last 12 months	Estimated completion date
DM1	CCC will work in partnership with KCC and freight operators to implement the Freight Quality Partnership Action Plan	CCC/KCC/ Freight operators	Ongoing	Moderate LTP2	High	Reduction in congestion; improved journey times; improved city centre environment	implementation of improvement schemes	C.C.C applied for funding under the 2010/11 air quality grant programme, but was unsuccessful. Alternative means of funding the measure shall be investigated by C.C.C (for example Section 106 developer contributions, air quality grant programme).	
DM2	CCC will work in partnership with KCC to implement traffic management improvements in the city centre, particularly within the Broad Street/Military Road AQMA	KCC/CCC	2010/11	Moderate LTP2	Moderate	Reduction in congestion; improved journey times; improved city centre environment	implementation of traffic management measures	Cameras and variable message signs for UTMC have been installed at key points on the local road network, notably along the A28 corridor and inner ring road. The cameras and message signs have not been linked as of yet to the Maidstone control centre, and we do not have a date for when the system will go live. We have not received any updates as to other improvement works in Canterbury District.	
DM3	CCC will work in partnership with the Highways Agency and KCC to deliver the New A2 Slip Roads Schemes	Highways Agency /KCC/CCC	2010-2014	High LTP2/ Highways Agency	Low	Reduced congestion; improved journey times; improved city centre environment	implementation of new A2 slips	Work on the northbound A2 on slip at Thanington commenced in July 2010. The work is expected to be completed by August 2011. No update is available for other slip road schemes on the A2 corridor.	
DM4	CCC will continue to work with partners to	KCC/CCC	2006-2016	High LTP2	Moderate	Reduced congestion; improved journey times;	Implementation of additional Park & Ride provision.	A new park and ride service started on 4 October 2010. C.C.C and the East Kent University Hospitals NHS	

Action	Description	Organisation responsible	Date to be achieved	Cost/ Funding	Air quality Improvement in AQMA	Other potential impacts	Performance Indicator	Progress in last 12 months	Estimated completion date
	implement measures within the Canterbury Parking Strategy, including enhancement of Park and Ride					increased public transport use; improved city centre environment	Passenger numbers. Number of Parking spaces.	Foundation Trust worked with Kent Top Travel to provide an exclusive service to and from the Kent & Canterbury Hospital for staff, patients and visitors. Buses leave the New Dover Road park and ride site every 20 minutes starting at 8am until 5.40pm. Return buses depart from the hospital outpatients department. Each ticket allows the driver, plus 6 passengers, to use the service so offers a cost effective and hassle free parking alternative. At £2.50 for the day, the ticket provides a substantial saving when compared to a whole days stay at a hospital or city centre car park. Frequent users can benefit by purchasing a pre-paid card, offering a 20% discount off the price of a daily ticket.	
DM5	CCC will work in partnership with KCC to implement the Canterbury Bus Strategy and support the Quality Bus Partnership with Stagecoach East Kent in Canterbury	KCC/CCC	On going	High LTP2	Low	Reduced congestion; improved journey times; increased public transport use; improved city centre environment	Implementation of the improvement schemes. Passenger numbers.	A bus priority scheme has been proposed for the Tourtel Road roundabout, which leads into the Broad Street/Military Road AQMA. The proposal is designed to improve bus journey times into the city centre by introducing bus priority traffic lights at the roundabout to allow buses to get out of the existing bus lane onto the Tourtel Road roundabout. The expected start date for the scheme is March 2011.	
DM6	CCC will work	KCC/CCC	On going	Low	Low	Reduced	Passenger	In the minutes of the JTB	

Action	Description	Organisation responsible	Date to be achieved	Cost/ Funding	Air quality Improvement in AQMA	Other potential impacts	Performance Indicator	Progress in last 12 months	Estimated completion date
	in partnership with KCC to continue with the Kent Freedom Pass scheme in Canterbury			LTP funding		congestion; improved journey times; safer roads; increased public transport use; improved city centre environment	numbers; modal shift.	meeting on 23 March 2010 it was stated that on the triangle route, bus patronage has increased over the past five years by 2% per annum, and is projected to increase by a similar amount in 2009/10. This reflects the high level uptake of the Freedom Pass in Canterbury. Punctuality has improved from 90.5 in 2007/08 to 91.1% in 2009/10. Actual scheduled mileage operated has also improved from 99.7% to 99.8 in the same period. Improvements have also been made to bus route infrastructure such as raised kerbs at bus stops, bus stop clearways, and C.C.C continues to enforce the clearways and provide a small number of new bus shelters each year. Modal shift data is not available for Canterbury district for the Freedom Pass scheme, however information received from Kent County Council shows that car travel is down from 25% in 2009 to 21.9% in 2010, and public transport is up to 38.8% from 37.9% in the same period. Freedom pass numbers for children attending school in the Canterbury district increased from 3269 in 2009 to 3691 in 2010 (13% increase).	
DM7	CCC will investigate the	CCC	2010	Low	Low	Improved education and	% failure rate	C.C.C have investigated the use of a remote sensing device to	Autumn/winter 2011

Action	Description	Organisation responsible	Date to be achieved	Cost/ Funding	Air quality Improvement in AQMA	Other potential impacts	Performance Indicator	Progress in last 12 months	Estimated completion date
	potential for Roadside Emissions Testing in Canterbury, in particular within the Broad Street/Military Road AQMA			AQ Grant		awareness raising		carry out a survey of vehicle emissions within the Broad Street/Military Road AQMA, and other emerging AQMA's in the city. The aim of the survey is to identify the gross emitters in the local vehicle fleet, which will enable C.C.C to target further work to reduce emissions from these vehicles, for example via a freight quality partnership or quality bus partnership. Subject to funding being obtained the project is likely to be carried out during 2011. Funding streams being considered include Section 106 contributions, C.C.C budgets, the 2011/12 air quality grant programme and other external funding.	
DM8	CCC will request S106 contributions for developments likely to have a direct impact on air quality in the AQMA	CCC	Ongoing	Low	Low	Socio-economic implications of increased costs for development	Contributions secured for air quality through S106	S106 Agreement secured for £8000 for the Development of a commercial site (Roundhouse) to residential. Monies to be used towards AQMA declaration and Action Plan measures. S106 Agreement requested for £6000 (redevelopment of a commercial site (Halletts Garage) to residential in an emerging AQMA) for Action Plan measures including integration of AQ information into the UTMC. Request refused by Development Control.	

Action	Description	Organisation responsible	Date to be achieved	Cost/ Funding	Air quality Improvement in AQMA	Other potential impacts	Performance Indicator	Progress in last 12 months	Estimated completion date
								S106 Agreement requested for £4000 (redevelopment of commercial site (Sladdens) to residential in an emerging AQMA) to help establish a Freight Quality Partnership (Action Plan Measure. Application has not yet been decided but indications are that the s 106 is unlikely to be supported by DC.	
DM9	CCC will investigate the potential for use of NO _x reducing paving and paints within the AQMA	CCC	2010	Low (1000m ² paving is approx £60,000) AQ Grant	Low	Potential improvements to city centre environment	implementation of improvement schemes	An application was previously made for funding under the air quality grant programme, which was unsuccessful. Currently there is no budget provision at C.C.C at present for this measure.	
DM10	CCC will consider investing in and making more use of LPG or electric cars and vehicles	CCC	Post 2012	Moderate Possible future budget provision	Low	Potential improvements to city centre environment	implementation of improvement schemes	C.C.C are investigating the installation of electric vehicle charging points in its pay and display car parks.	
DM11	CCC will work in partnership with KCC to investigate a route for a new A28/A257 link road.	KCC/CCC	Post 2011	High Developer funding	High	Reduced congestion; improved journey times; improved city centre environment	implementation of improvement schemes	No update available for this measure at present. A new link road is only likely to be progressed as part of the redevelopment of the MOD occupied land.	

Table 9.2 Summary of Action Plan General Measures

Action	Description	Organisation responsible	Date to be achieved	Cost/Funding	Air quality Improvement in AQMA	Other potential impacts	Performance Indicator	Progress in last 12 months	Estimated completion date
General District-wide Measures									
GM1	CCC will work in partnership with KCC to increase uptake and implementation of School and Workplace Travel Plans, particularly where likely to impact on the AQMA	KCC/CCC/Schools/Businesses	Ongoing	Low	Low	Reduced congestion	Number of new travel plans	Requests for an update sent to C.C.C colleagues/K.C.C but no update received.	
GM2	CCC will continue to develop and implement the Council Travel Plan	CCC	Ongoing	Low CCC existing budgets	Low	Reduced congestion, health benefits to staff	Implementation of Council Travel Plan; progress with targets.	Requests for an update sent to C.C.C colleagues/K.C.C but no update received.	
GM3	CCC will continue to work with KCC and other partners to deliver improvements in emissions standards, where practicable	KCC/CCC/Public transport operators	Ongoing		Low moderate	Socio-economic implications of increased costs to transport operators, contractors and CCC.	Number of new/improved vehicles within fleets	In the minutes of the JTB meeting on 23 March 2010 it was stated that the triangle route has benefited from investment by Stagecoach East Kent in 19 new buses with lower emissions, which were also low floor, and easy access.	
GM4	CCC will continue to work with partners to actively support and promote the Kent-wide car share scheme, to encourage	CCC	Ongoing	Low CCC existing budgets	Low	Reduced congestion	Number new joiners to share lifts.	Requests for an update sent to C.C.C colleagues/K.C.C but no update received.	

Action	Description	Organisation responsible	Date to be achieved	Cost/ Funding	Air quality Improvement in AQMA	Other potential impacts	Performance Indicator	Progress in last 12 months	Estimated completion date
	greater uptake								
GM5	CCC will explore, with KCC and other partners, the potential for operation of Car Club Schemes in Canterbury	CCC/KCC	2010/11	Low CCC existing budgets	Low	Reduced congestion and parking pressures	Introduction of Car Club	Requests for an update sent to C.C.C colleagues/K.C.C but no update received.	
GM6	CCC will work in partnership with KCC to implement improvements to the Canterbury local cycle network	KCC/CCC	Ongoing	Moderate CCC existing budgets LTP2	Low	Reduced congestion; health benefits; better quality environment	Number miles new cycle lanes/ routes.	The first part of the Oyster Bay Trail coastal cycle route linking Reculver and Swalercliffe has been completed comprising approximately five miles of promenades, new traffic-free cycle paths (around Bishopstone Glen and through Reculver Country Park) and lightly trafficked residential roads. A further 1.5 miles are signed along the traffic calmed Western Esplanade and Central Parade in Herne Bay which has benefitted from the introduction of a 20mph speed limit. The Canterbury-Chartham cycle route has been completed. It is 4.5km long and provides a safe, off road alternative to the A28 linking the city centre and local secondary schools.	
GM7	All relevant CCC Departments including Environmental Protection,	CCC	Ongoing	Low CCC existing budgets	Low	Health benefits for residents in new development	Number of planning applications with air quality conditions/	In 2010, air quality assessments were requested/submitted for 4 Planning Applications. 1) CA/10/00854 –	

Action	Description	Organisation responsible	Date to be achieved	Cost/ Funding	Air quality Improvement in AQMA	Other potential impacts	Performance Indicator	Progress in last 12 months	Estimated completion date
	<p>Planning Policy and Development Control will continue working closely together, to ensure that air quality is taken into account in the planning process when considering future land uses particularly with sites in or close to AQMAs or in areas marginally below air quality objectives.</p>					proposals	assessments	<p>Sladdens, Wincheap (12 flats, 4 houses) – AQ assessment requested, S 106 monies requested. Application still to be determined but unlikely that S 106 will be supported.</p> <p>2) CA/10/00809 – Halletts Garage, St Dunstons (student accom – 30 units & 1 retail unit) – AQ assessment submitted – concluded that proposal will not worsen the AQ in the area but some flats close to the road will be subject to the already poor AQ. S 106 monies requested but not supported by DC. Condition relating to AQ have been placed on the planning permission:</p> <p>All residential accommodation facing St Dunstan's Street shall be provided with mechanical ventilation and extraction drawing air from and discharging air to the rear of the building or the roof, in accordance with the recommendations of the Air Quality Statement prepared by "All Together Better" and</p>	

Action	Description	Organisation responsible	Date to be achieved	Cost/ Funding	Air quality Improvement in AQMA	Other potential impacts	Performance Indicator	Progress in last 12 months	Estimated completion date
								<p>submitted to accompany the application.</p> <p>REASON: Air quality in St Dunstan's Street is poor and an alternative source of air to the rooms fronting that street is required in the interests of human health.</p> <p>3) CA/10/00813 – 41 St Georges Place (204 student rooms, 10 student houses and student centre) – AQ assessment submitted – concluded that proposal will not worsen the AQ in the area. Condition relating to AQ has been placed on the permission:</p> <p>Full details of the measures to be incorporated into the development to reduce the impact of noise from traffic and the adjoining nightclub and deteriorating air quality affecting the site shall be submitted to and approved by the Local Planning Authority. The measures shall accord with and meet the expectations set out in the relevant remediation strategies that accompanied the application. Thereafter the works shall be constructed fully in accordance with the</p>	

Action	Description	Organisation responsible	Date to be achieved	Cost/ Funding	Air quality Improvement in AQMA	Other potential impacts	Performance Indicator	Progress in last 12 months	Estimated completion date
								<p>approved details.</p> <p>REASON: To limit the impact of noise and fumes to ensure the provision of satisfactory living conditions for future residents.</p> <p>4) CA/10/01193 – Roper Rd/St Dunstan’s (revised application – now for 49 sheltered apts for elderly, 1 retail unit) – AQ assessment submitted concluded that future residents will be subject to unacceptable levels of poor AQ. Request for S106 monies refused at previous application. Conditions requested for mechanical ventilation as per previous permission granted.</p>	
GM8	CCC will develop through the Kent & Medway Air Quality Partnership a planning guidance document to assist with air quality assessments of development proposals	CCC/ K&MAQP	2009/10	Low CCC existing budgets	Low	Improved quality of assessments	Completion of planning guidance	<p>Consultation has been carried out on the draft guidance document, and consultation responses are being evaluated. The document will require updating annually to take into account any major changes, for example planning policies. C.C.C is considering adopting the guidance for use by developers as an example of best practice.</p>	2011
GM9	CCC will	CCC	Ongoing	Low	Low	Enable	Number of	Data capture for C.C.C	

Action	Description	Organisation responsible	Date to be achieved	Cost/ Funding	Air quality Improvement in AQMA	Other potential impacts	Performance Indicator	Progress in last 12 months	Estimated completion date
	continue their commitment to undertake local air quality monitoring within the District to ensure a high standard of data is achieved to assess against air quality objectives			CCC Existing budgets/ Air Quality Grant		effective monitoring and evaluation of progress	monitoring sites % data capture	continuous monitoring sites during 2010 were as follows: Chaucer Technology School 99.0% St.Dunstans 95.4% St.Peters Place 95.0 Military Road 92.5% North Lane 94.2 % Monitoring data for these sites (with the exception of North Lane) are available on the KentAir website.	
GM10	CCC will make details of the Action Plan measures and annual progress reports available on its website to ensure accessibility to the consultation and implementation process	CCC	Ongoing	Low CCC Existing budgets	Low	Improved awareness	Availability of recently published reports on the Website	Recent review and assessment reports are published via the C.C.C web pages. These reports, and those from previous rounds of review and assessment are also available on the KentAir web site. The 2010 AQMA consultation had a dedicated C.C.C web page, which included an online survey of the options being proposed. C.C.C will continue to use its own web pages and KentAir to publish reports and aid other initiatives, such as public consultations, as needed.	
GM11	CCC will investigate the potential for setting up an airTEXT service in Canterbury	CCC	2010	Low CCC Existing budgets/ Air Quality Grant	None	Improved awareness and support to sufferers of air pollution symptoms	Implementation of AirText scheme	The provision of an air pollution early warning system is being considered as part of the tender for the next Kent & Medway Air Quality Monitoring Network contract, as a cost effective way of delivering this measure with other Kent authorities.	2012
GM12	CCC will continue to	CCC	Ongoing	Low CCC Existing	Low	Improved awareness	Membership of the Partnership	Membership of the partnership continued in 2010. Partnership	

Action	Description	Organisation responsible	Date to be achieved	Cost/ Funding	Air quality Improvement in AQMA	Other potential impacts	Performance Indicator	Progress in last 12 months	Estimated completion date
	support and be a Member of the Kent and Medway Air Quality Partnership and Monitoring Network Group. Canterbury will also work together with the Kent & Medway Air Quality Partnership on air quality studies within the County to raise the profile of air quality in Canterbury and County-wide.			budgets			and Network continued.	meetings were attended, as was the partnership seminar 14 October 2010. Details for the seminar can be found on the KentAir website.	
GM13	CCC will continue to proactively enforce industrial pollution control and nuisance legislation to minimise pollutant emissions from these sources in the Canterbury area.	CCC	Ongoing	Low CCC Existing budgets	Low	Reduction in nuisance complaints	Annual survey of regulated processes	Inspection information is now submitted via the Defra annual statistical survey for pollution control. For 2009/10 100% of inspections were completed, and no enforcement action was necessary. The environmental protection section had a 20% reduction in the number of nuisance complaints (dust, smoke, odours etc) in 2010, compared to 2009. The total numbers of these types of complaints was 115 in 2009, compared with 92 in 2010.	
GM14	CCC will continue to work together with the	CCC/Kent Energy Centre	Ongoing	Low CCC Existing	Low	Improved energy efficiency;	% improvement in energy efficiency	Further information on progress with this measure can be found separately below.	

Action	Description	Organisation responsible	Date to be achieved	Cost/ Funding	Air quality Improvement in AQMA	Other potential impacts	Performance Indicator	Progress in last 12 months	Estimated completion date
	Kent Energy Centre and other partners to promote and implement energy efficiency measures in Canterbury			budgets		reduced CO ₂ emissions; reduced costs	Standard Assessment Procedure rating		

Progress with GM14

The Homestay team is the Canterbury City Council home improvement agency. It provides advice and support on energy efficiency, and provides grants for renewable energy projects. **Table 9.3** summarises the data obtained from the Homestay team and the Creative Environmental Network (CEN) showing what progress has been made in the 2009/10 and 2010/11 financial years for energy efficiency and renewable energy projects in the Canterbury district.

The renewable data indicates the full total spent on a project, including that of the client who utilised the councils grant procedures, which in 2009/10 allowed for a maximum grant contribution of £600 towards the costs of the works, whilst in 2010/11 this maximum contribution increased to £1000.

The information relevant to the CEN produced data shows small differences in totals of actual jobs completed against that of the totals for works completed and costs. This is due to some projects having separate items included, such as boiler and controls installation, which have been separated out for the purposes of clarity.

Table 9.3 Renewable energy and energy efficiency projects for 2009/10 and 2010/11

2009/2010					
	No. of Payments	Cost of Works	No. of Solar PV	No. of Solar Thermal Hot Water	No. of Wood Fuel Boiler
Quarter 1	1	£ 600.00	0	1	0
Quarter 2	4	£ 3,538.92	0	3	1
Quarter 3	4	£ 3,716.72	0	4	0
Quarter 4	10	£ 8,534.81	1	8	0
Totals	19	£ 16,390.45	1	16	1
2010/2011					
	No. of Payments	Cost of Works	No. of Solar PV	No. of Solar Thermal Hot Water	No. of Wood Fuel Boiler
Quarter 1	3	£ 3,197.66	2	1	0
Quarter 2	6	£ 5,787.11	3	3	0
Quarter 3	11	£ 11,829.29	7	4	0
Quarter 4	6	£ 6,194.66	5	1	0
Totals	26	£ 27,008.72	17	9	0

2009/10 Install Totals

Item	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Totals
Boiler Replacement	13	10	20	29	72
Central Heating	2	3	2	14	21
Gas Fired Central Heating System	0	0	0	0	0
Oil Fired Central Heating System	0	0	0	0	0
Storage Heaters	0	0	0	0	0
TRVs	2	4	3	7	16
Loft Insulation	0	0	2	9	11
Cavity Wall Insulation	1	0	0	7	8
Draught Proofing	2	1	1	3	7
Replacement Heating Controls	1	6	0	6	13
Park Home Solid Wall Insulation	0	0	0	0	0
Park Home Roof/Floor Insulation	0	0	0	0	0
New Gas Supply	1	1	0	1	3
Ancillary Works Required	0	0	0	3	3
Attention to Asbestos Boiler	0	0	0	0	0
Warmfront Top Ups	1	0	3	1	5
Installation of Oil Storage Tank	0	0	0	1	1
Jobs Resolved	23	25	31	81	160

2010/11 Install Totals

Item	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Totals
Boiler Replacement	16	14	12	9	51

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Central Heating	12	4	3	4	23
Gas Fired Central Heating System	0	0	0	3	3
Oil Fired Central Heating System	0	1	0	0	1
Storage Heaters	4	0	0	0	4
TRVs	5	3	3	2	13
Loft Insulation	5	0	1	1	7
Cavity Wall Insulation	1	4	2	1	8
Draught Proofing	1	0	1	2	4
Replacement Heating Controls	3	3	9	8	23
Park Home Solid Wall Insulation	0	0	2	0	2
Park Home Roof/Floor Insulation	0	0	6	9	15
New Gas Supply	3	1	0	1	5
Ancillary Works Required	2	1	0	0	3
Attention to Asbestos Boiler	0	0	0	2	2
Warmfront Top Ups	1	1	1	3	6
Jobs Resolved	53	32	40	45	170

RENEWABLE INSTALLATION DATA

	Month	No. of Jobs	Cost of Works
2009/10 Quarter 1			
2009	4	1	3,667.36
2009	5	4	12,390.58
2009	6	5	18,631.55
Total		10	34,689.49
2009/10 Quarter 2			
2009	7	4	13,939.95
2009	8	6	11,858.26
2009	9	8	28,361.00
Total		18	54,159.21
2009/10 Quarter 3			
2009	10	15	46,913.98
2009	11	12	36,121.09
2009	12	10	31,983.49
Total		37	115,018.56
2009/10 Quarter 4			
2010	1	28	94,090.87
2010	2	25	82,634.01
2010	3	35	117,952.22
Total		88	294,677.10
Overall Total		153	498,544.36
2010/11 Quarter 1			
2010	4	18	52,162.00
2010	5	12	57,575.05
2010	6	10	37,637.13
Total		40	147,374.18
2010/11 Quarter 2			

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2010	7	12	46,345.30
2010	8	7	22,640.14
2010	9	3	13,137.82
Total		22	82,123.26
2010/11 Quarter 3			
2010	10	8	28,078.79
2010	11	14	81,167.56
2010	12	5	21,185.28
Total		27	130,431.63
2010/11 Quarter 4			
2011	1	17	83,971.20
2011	2	10	34,945.88
2011	3	24	114,602.76
Total		51	233,519.84
Overall Total		140	593,448.91

10 Conclusions and Proposed Actions

10.1 Conclusions from New Monitoring Data

Monitoring data for 2010 shows that exceedence of the Annual Mean Objective for nitrogen dioxide continues in the Broad Street/Military Road AQMA. There is also continuing exceedence of the Annual Mean Objective in the emerging AQMA's in St.Dunstan's Street, North Lane, Rheims Way, St.Peter's Place, Wincheap and Sturry Road.

There were no other exceedences monitored during 2010.

10.2 Conclusions relating to New Local Developments

Canterbury City Council has identified one new local development that will require more detailed consideration:

Canterbury City Council biomass boiler

This development will be taken into consideration in the next Updating and Screening Assessment, to be carried out in 2012.

10.3 Proposed Actions

There have been no monitored exceedences of the Air Quality Objectives outside of the areas listed in section 10.1 above; therefore a Detailed Assessment is not required.

The following actions are proposed for 2011/12:

- Declare one or more AQMA's covering St.Dunstan's Street, North Lane, St.Peter's Place, Rheims Way, Wincheap and Sturry Road areas
- Amend the Broad Street/Military Road AQMA to include exceedence of the 1-hour Mean Objective for nitrogen dioxide
- Submit the 2012 Updating and Screening Assessment April 2012
- Continue implementing measures in the current Air Quality Action Plan and amend if necessary to include any area specific measures for the emerging AQMA's

11 References

Kent County Council Local Transport Plan for Kent 2006–2011

Canterbury City Council Canterbury District Local Plan First Review 2006

Canterbury City Council Canterbury's District Transport Action Plan 2004

Canterbury City Council Canterbury Corporate Plan 2008- 2012

Canterbury City Council District Bus Strategy 2002

Canterbury City Council Parking Strategy 2006-2016

Canterbury City Council District Strategy 2009

Canterbury Environment Policy 2009

SEERA South East Plan (Regional Spatial Strategy) 2009

Defra Technical Guidance LAQM.TG(09)

Environment Act 1995

Canterbury City Council Updating and Screening Assessment 2003

Canterbury City Council Annual Progress Report 2004

Canterbury City Council Detailed Assessment Report 2005

Canterbury City Council Updating and Screening Assessment 2006

Canterbury City Council Annual Progress Report 2007

Canterbury City Council Detailed Assessment Report 2008

Canterbury City Council Updating and Screening Assessment 2009

Canterbury City Council Combined Detailed and Further Assessment Report 2010

Canterbury City Council Air Quality Action Plan 2009

Canterbury City Council Air Quality Progress Report 2010

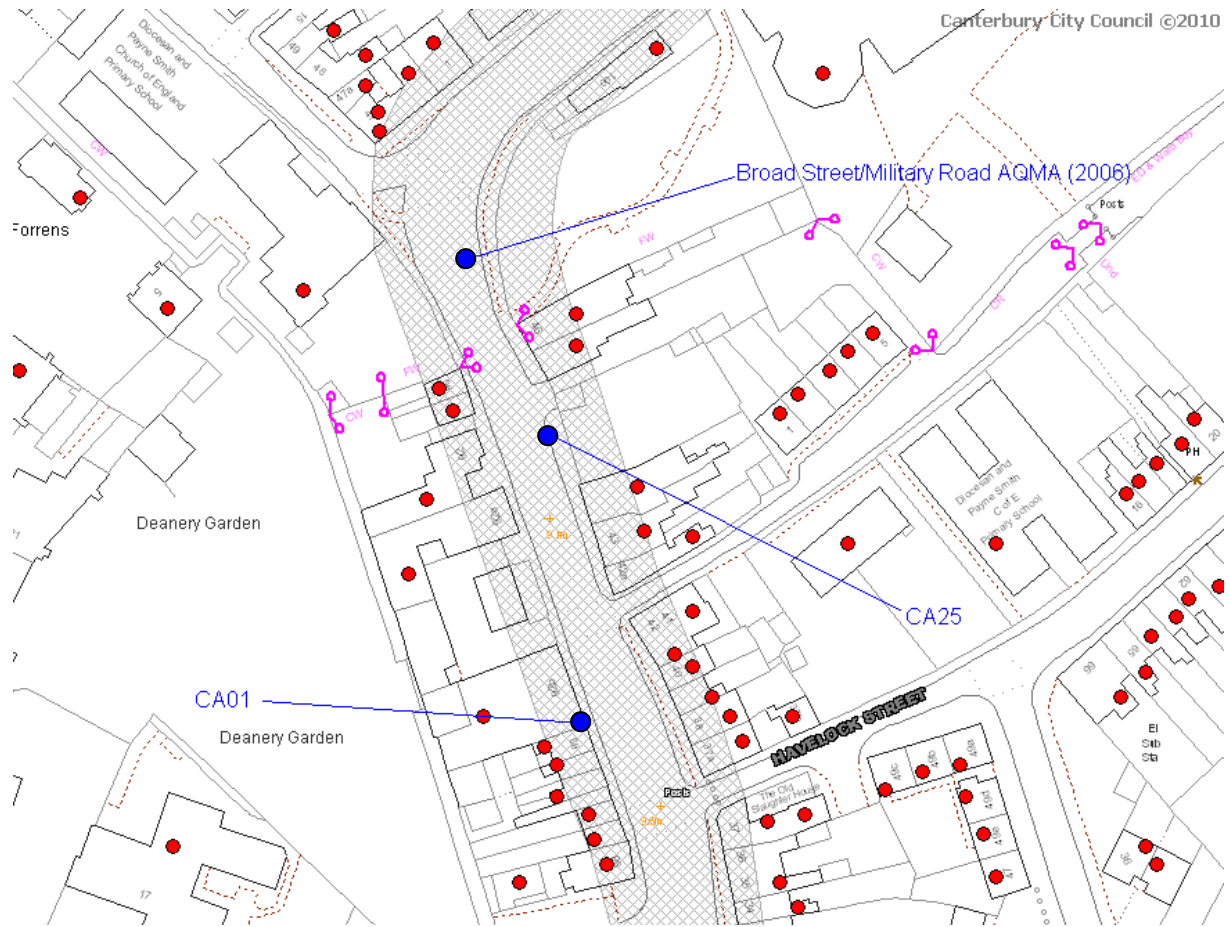
Appendices

Appendix A: Maps of Non-Automatic Monitoring Sites

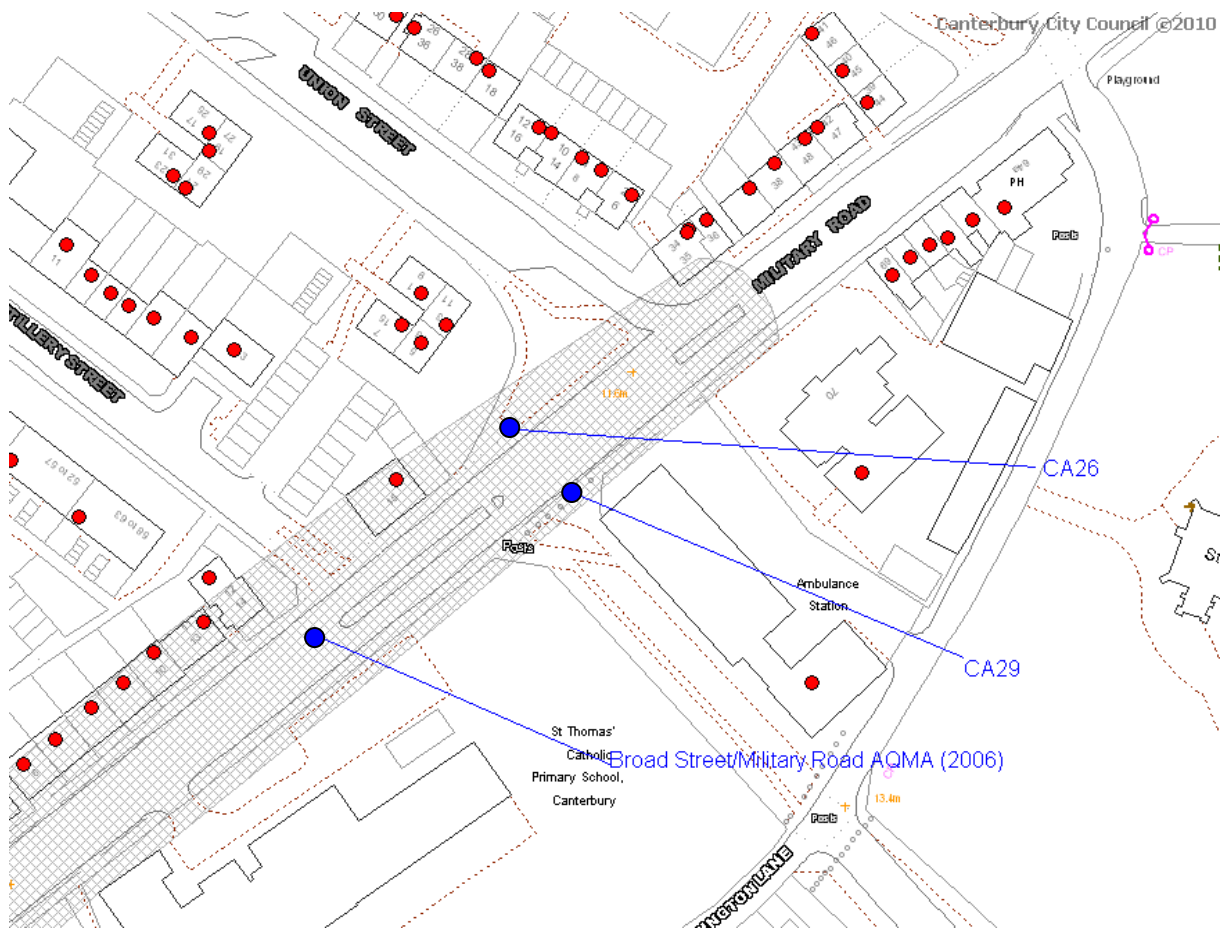
Appendix B: QA/QC Data

Appendix A: Maps of Non-Automatic Monitoring Sites

Broad Street1 (CA01) and Broad Street 2 (CA25)

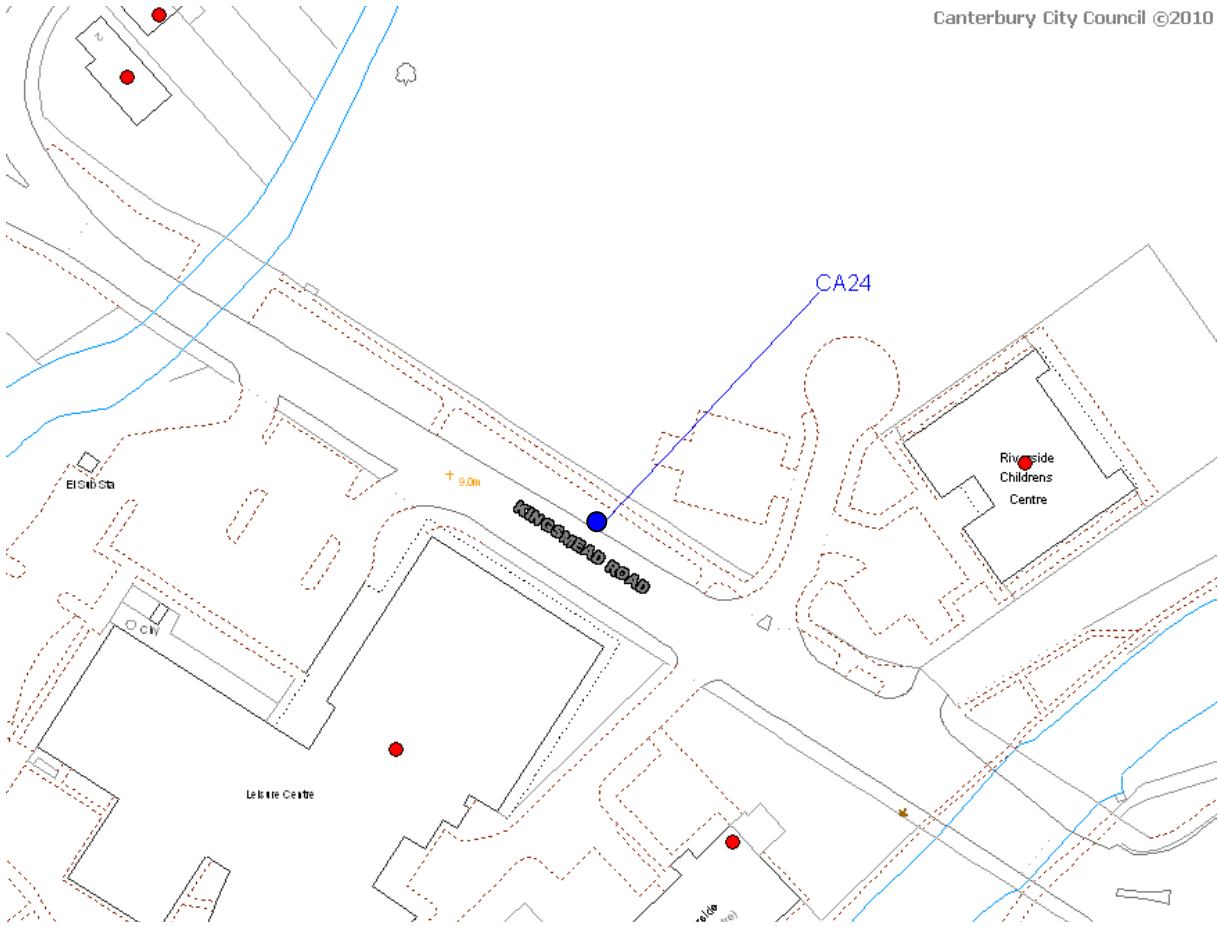


Military Road 1 (CA26) and Military Road 2/3/4 (CA29) collocated with automatic analyser

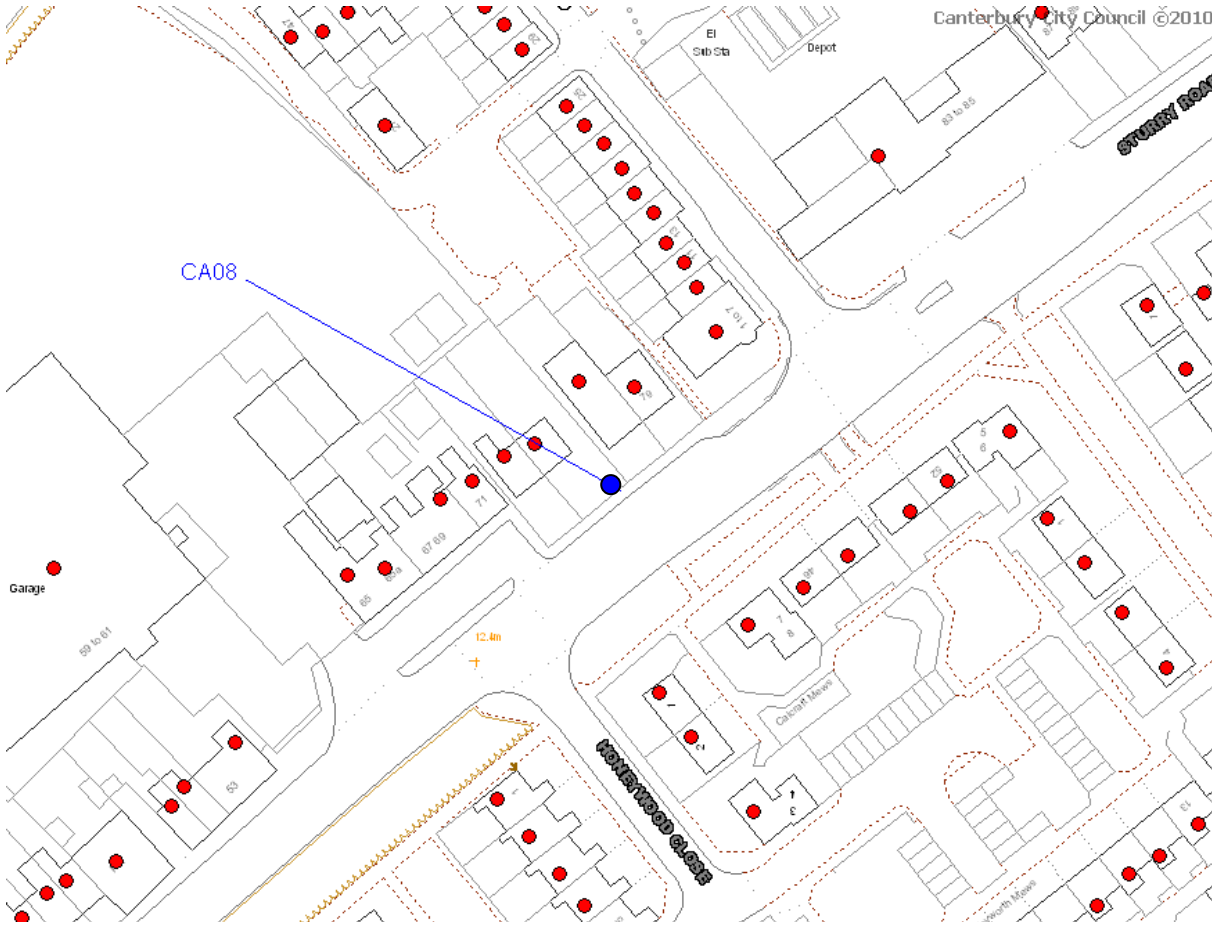


Kingsmead Road (CA24)

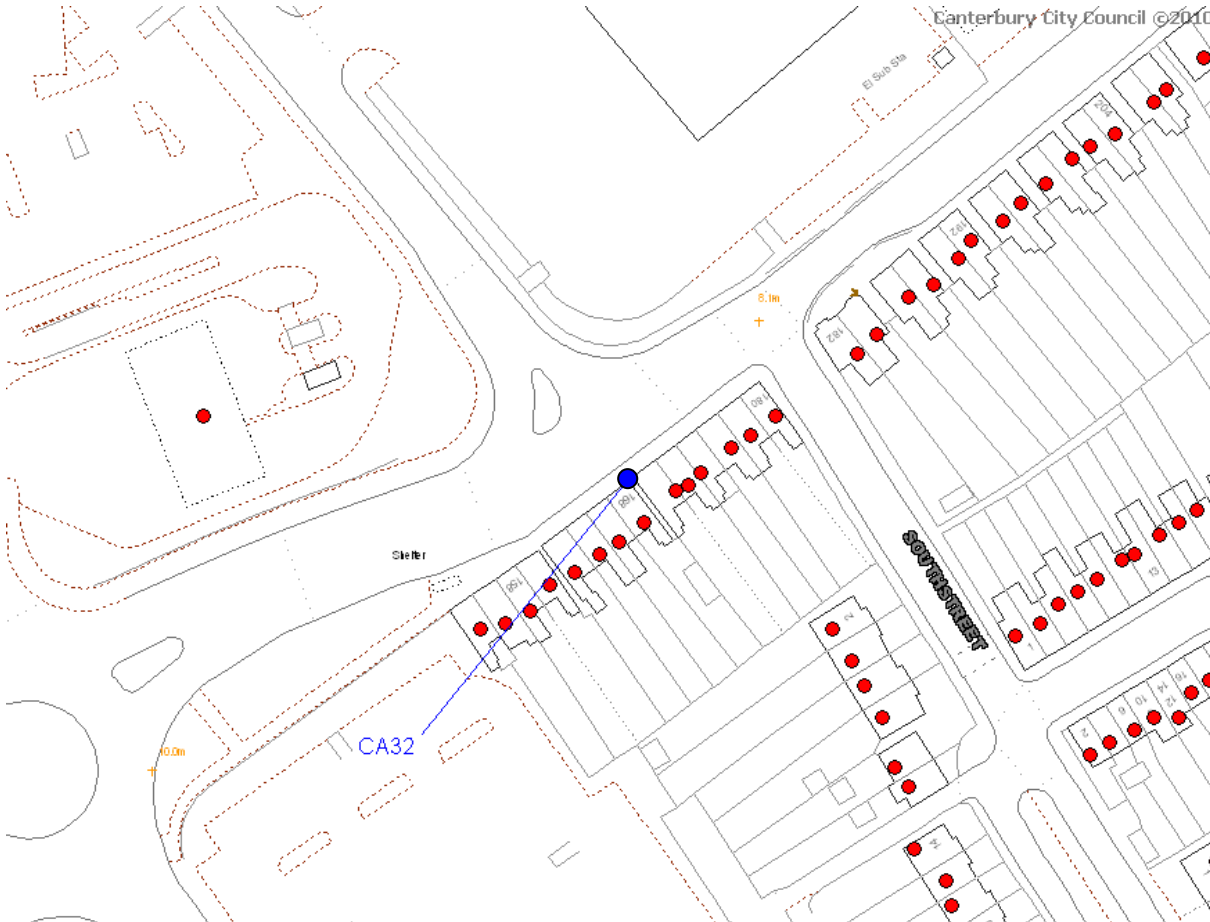
Canterbury City Council ©2010



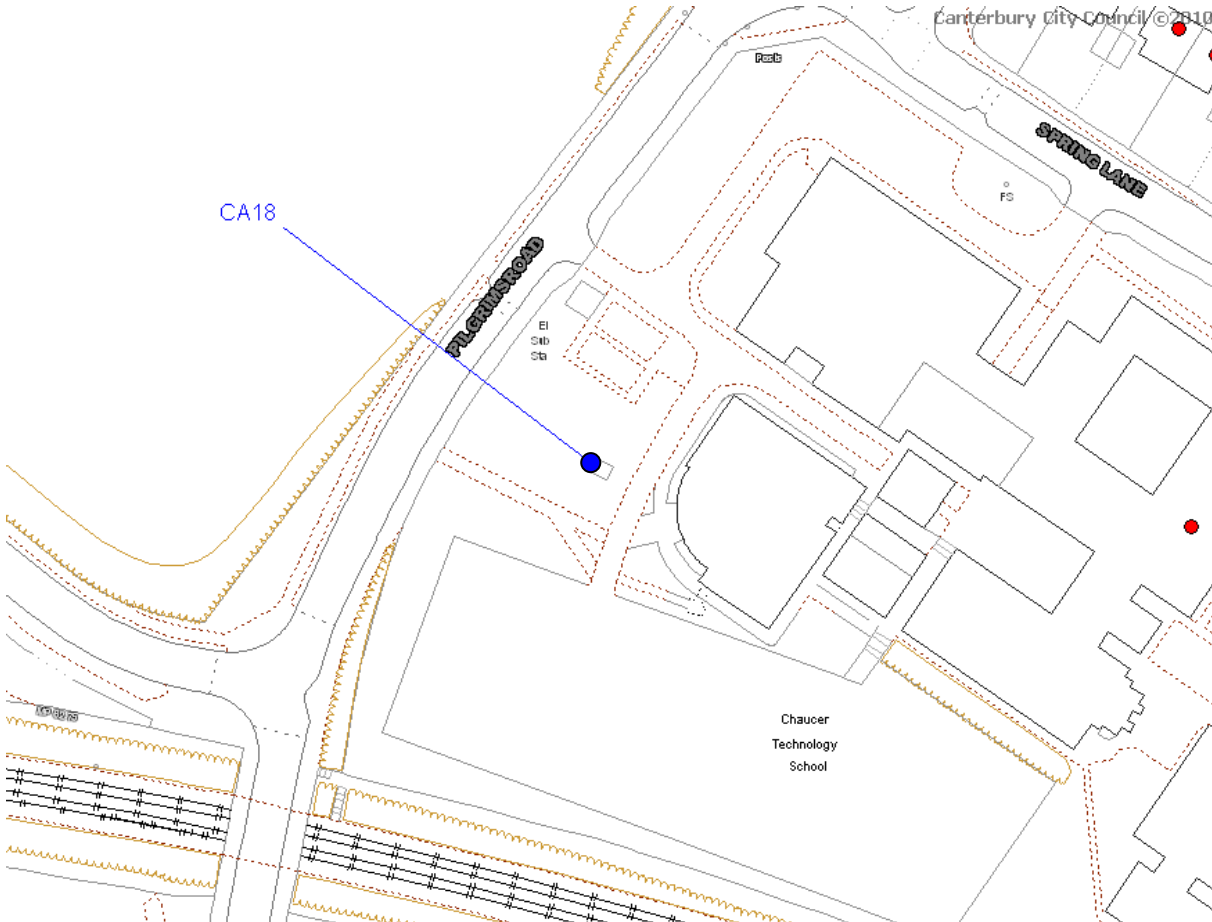
Sturry Road 1 (CA08)



Sturry Road 3 (CA32)



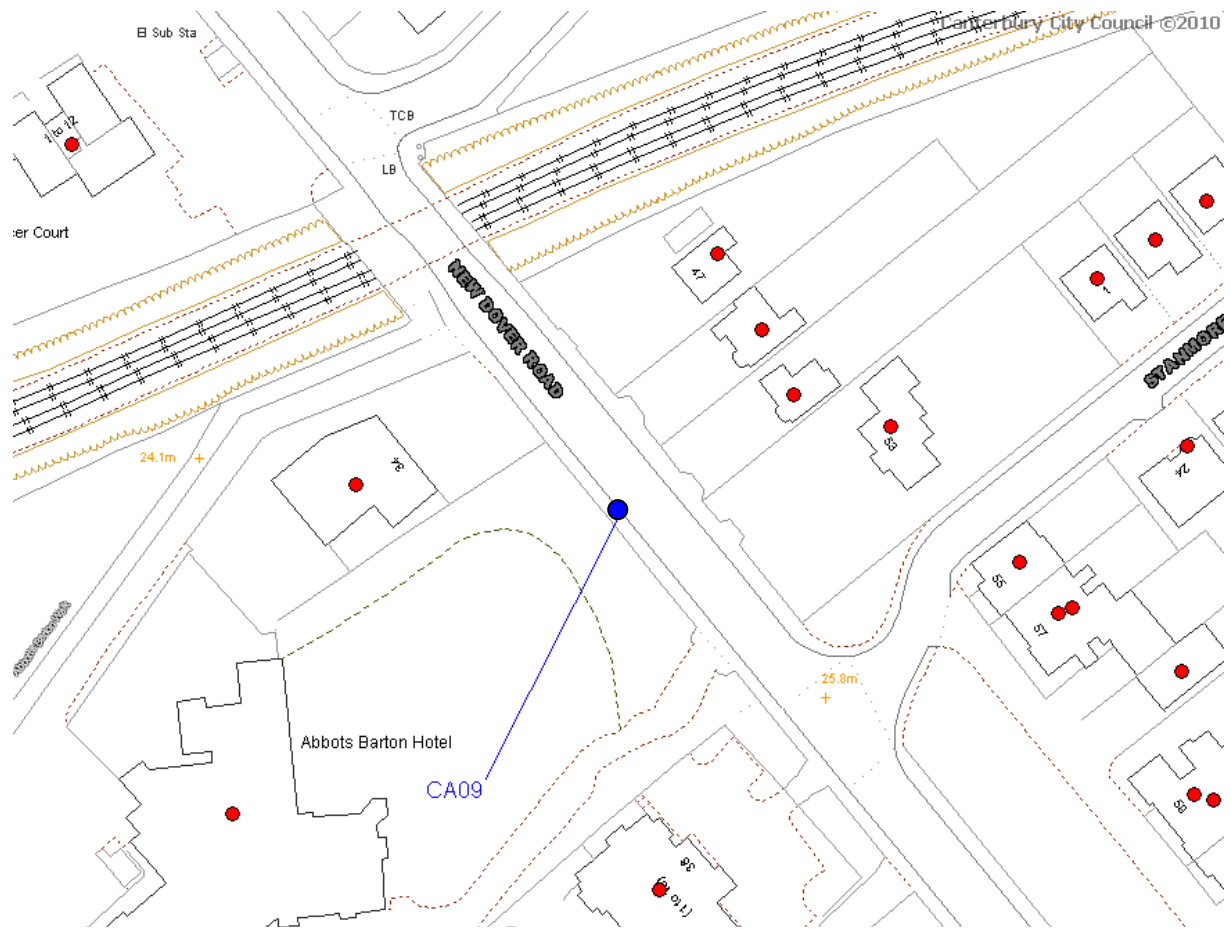
Chaucer School 1/2/3 (CA18) collocated with automatic analyser



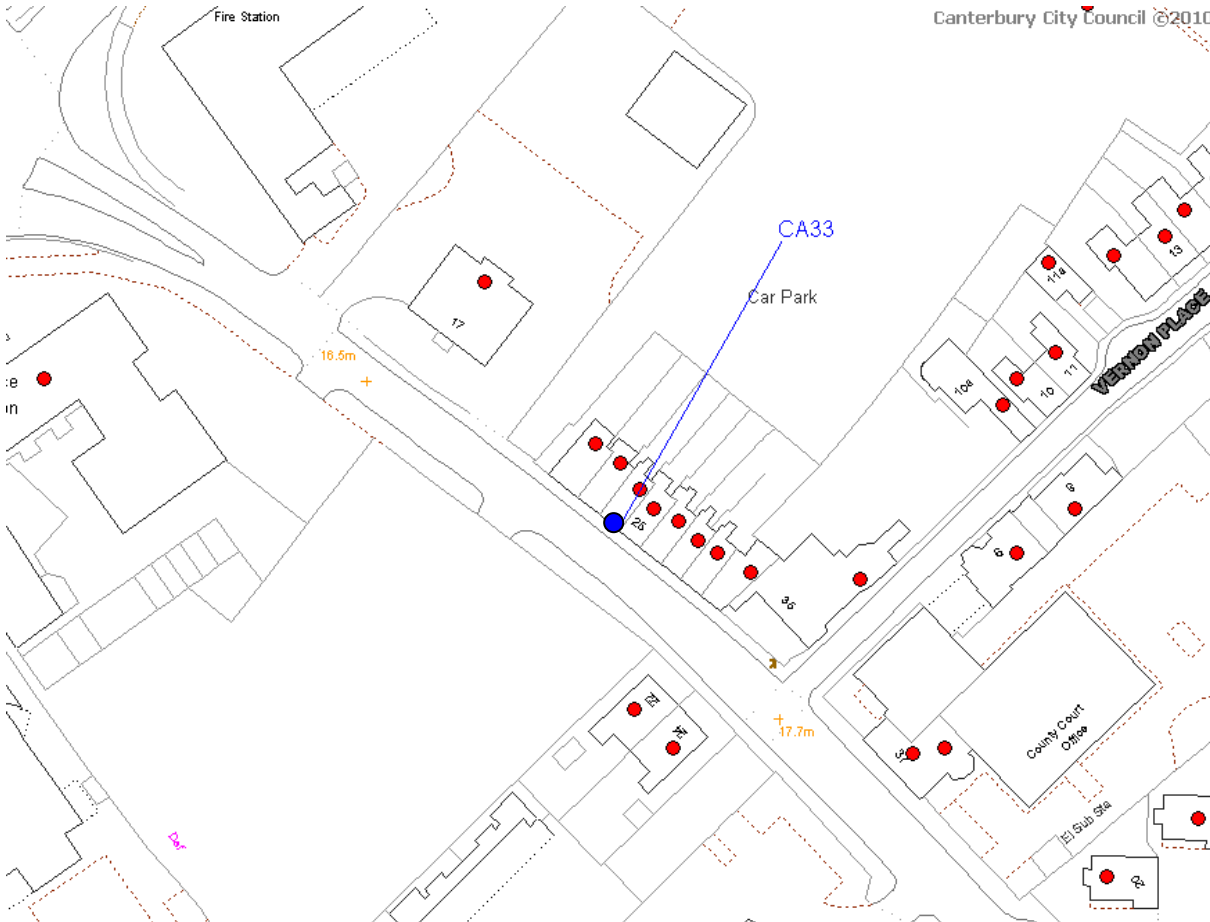
Littlebourne (CA15)



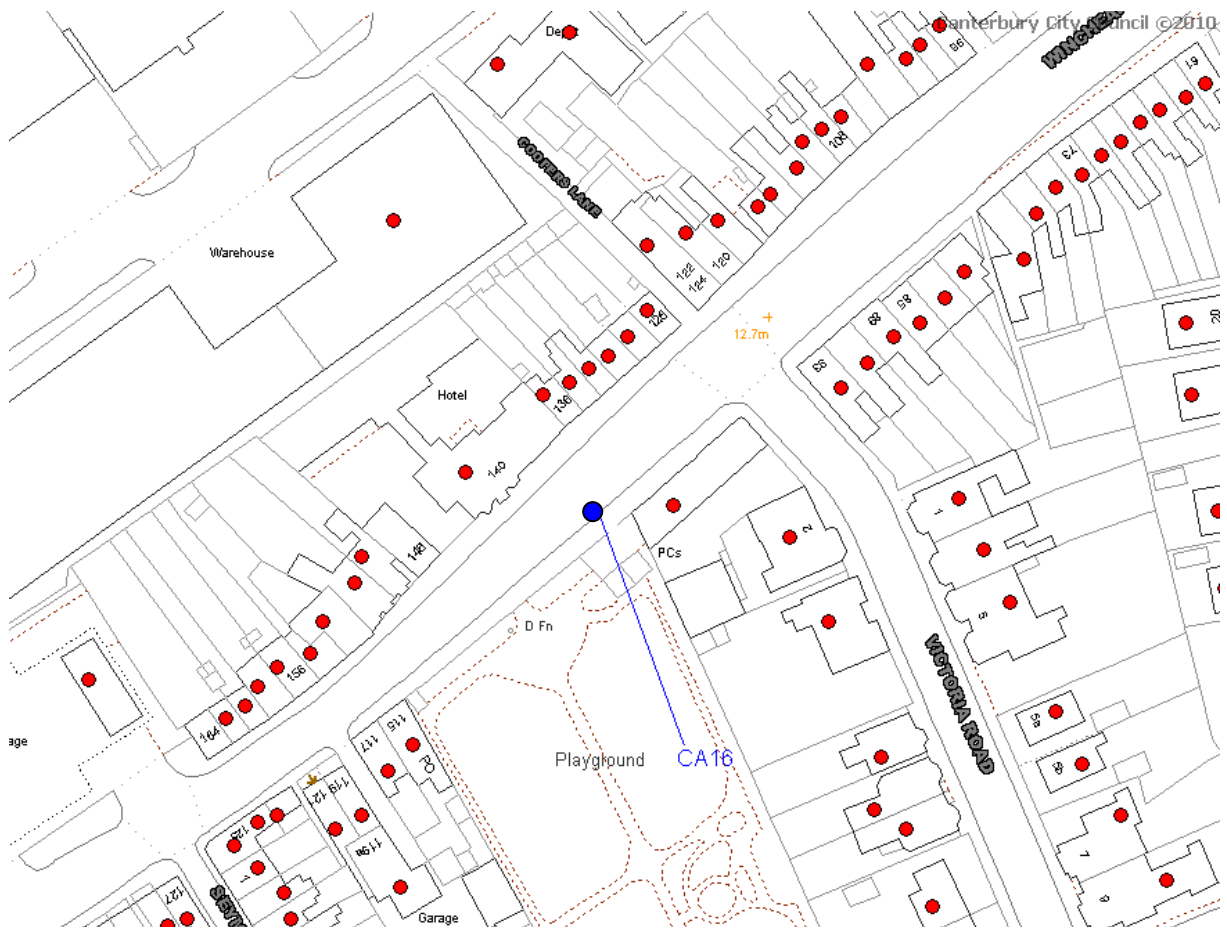
New Dover Road (CA09)



Old Dover Road (CA33)



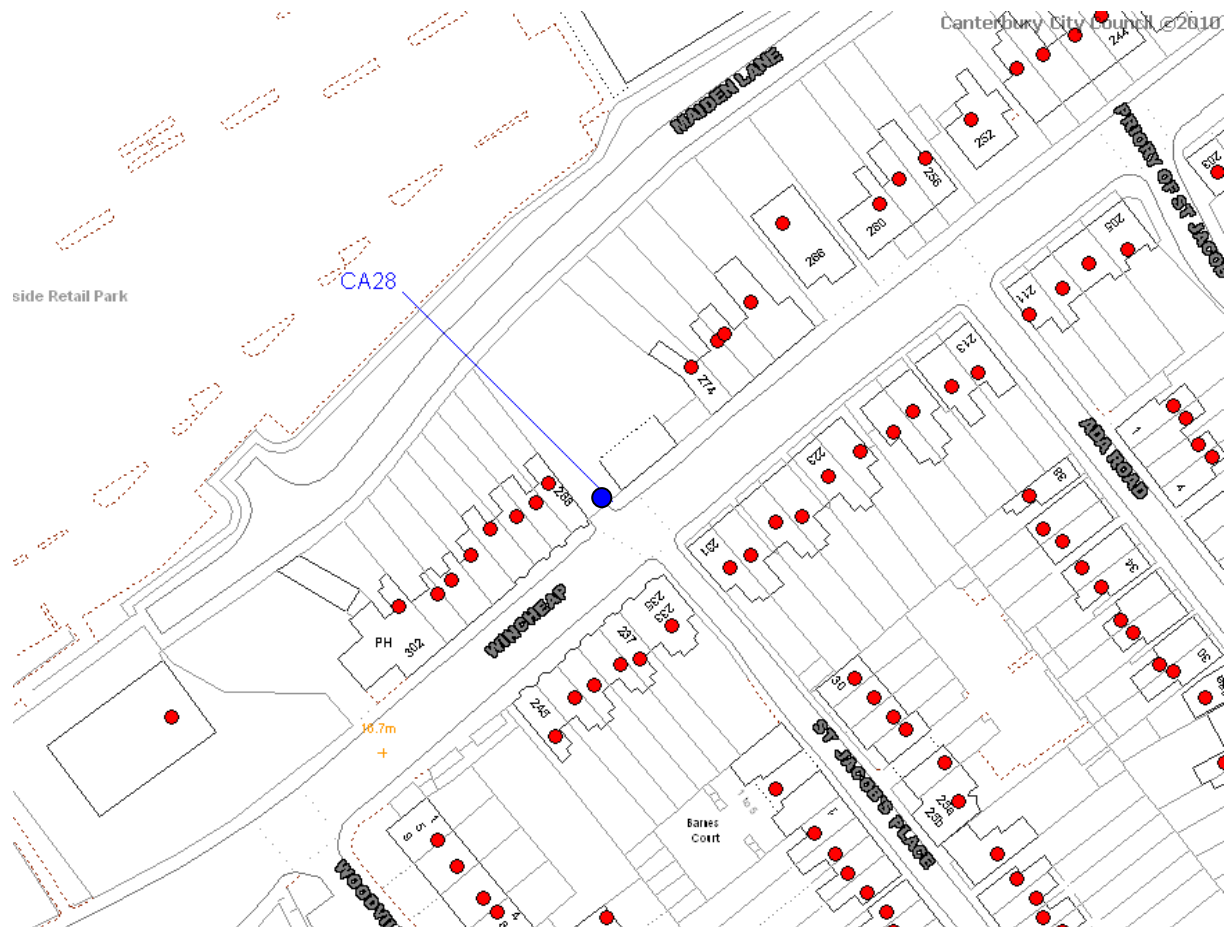
Wincheap 2 (CA16)



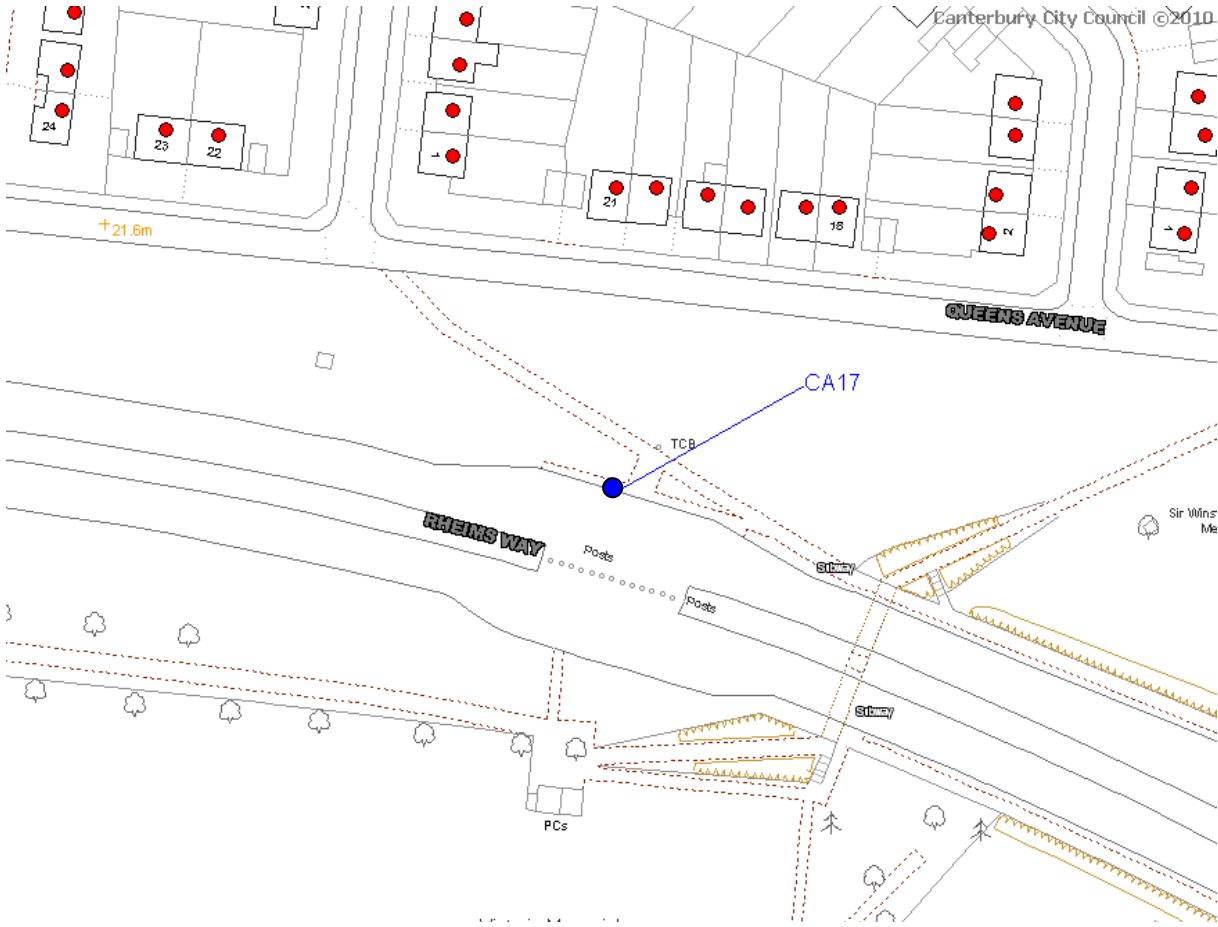
Wincheap 3 (CA27)



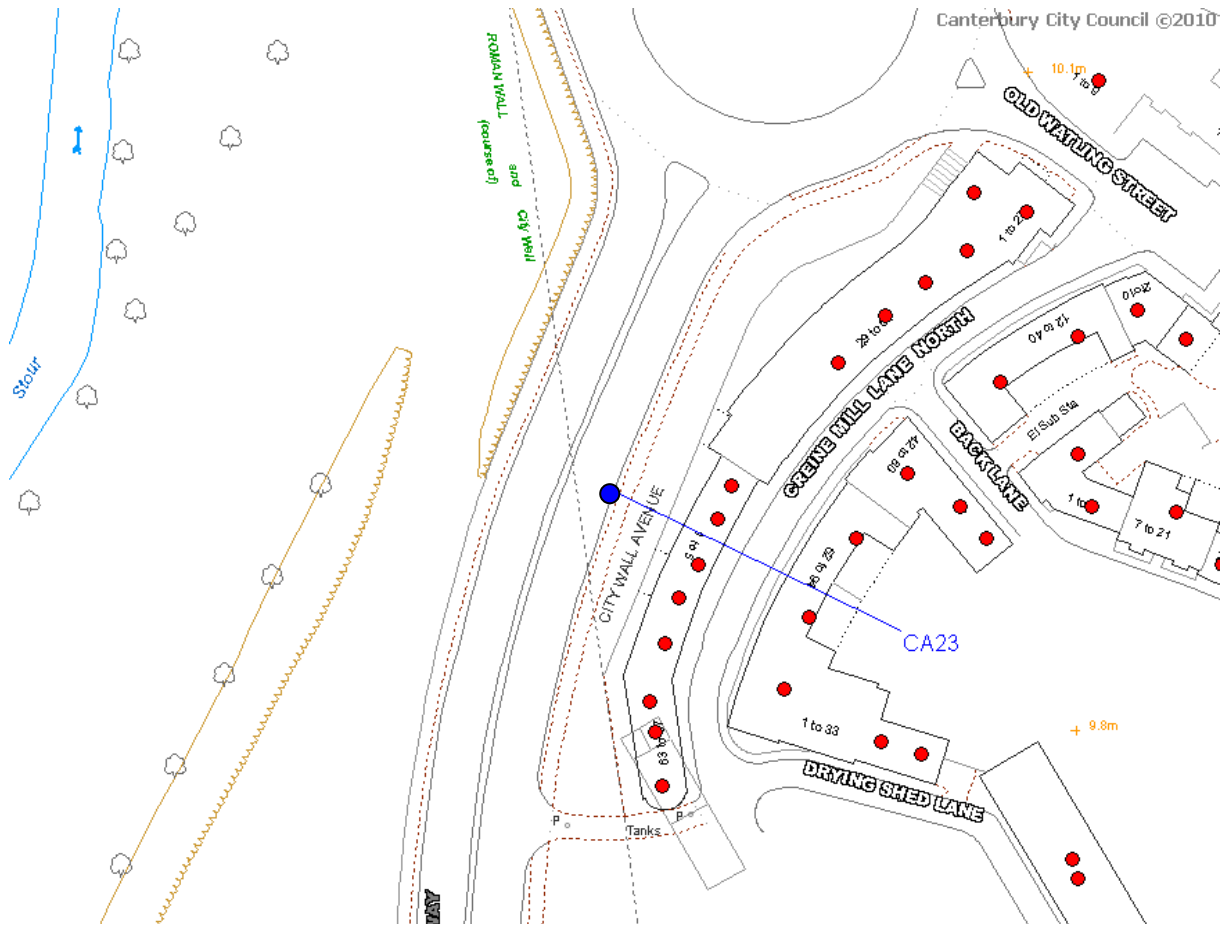
Wincheap 4 (CA28)



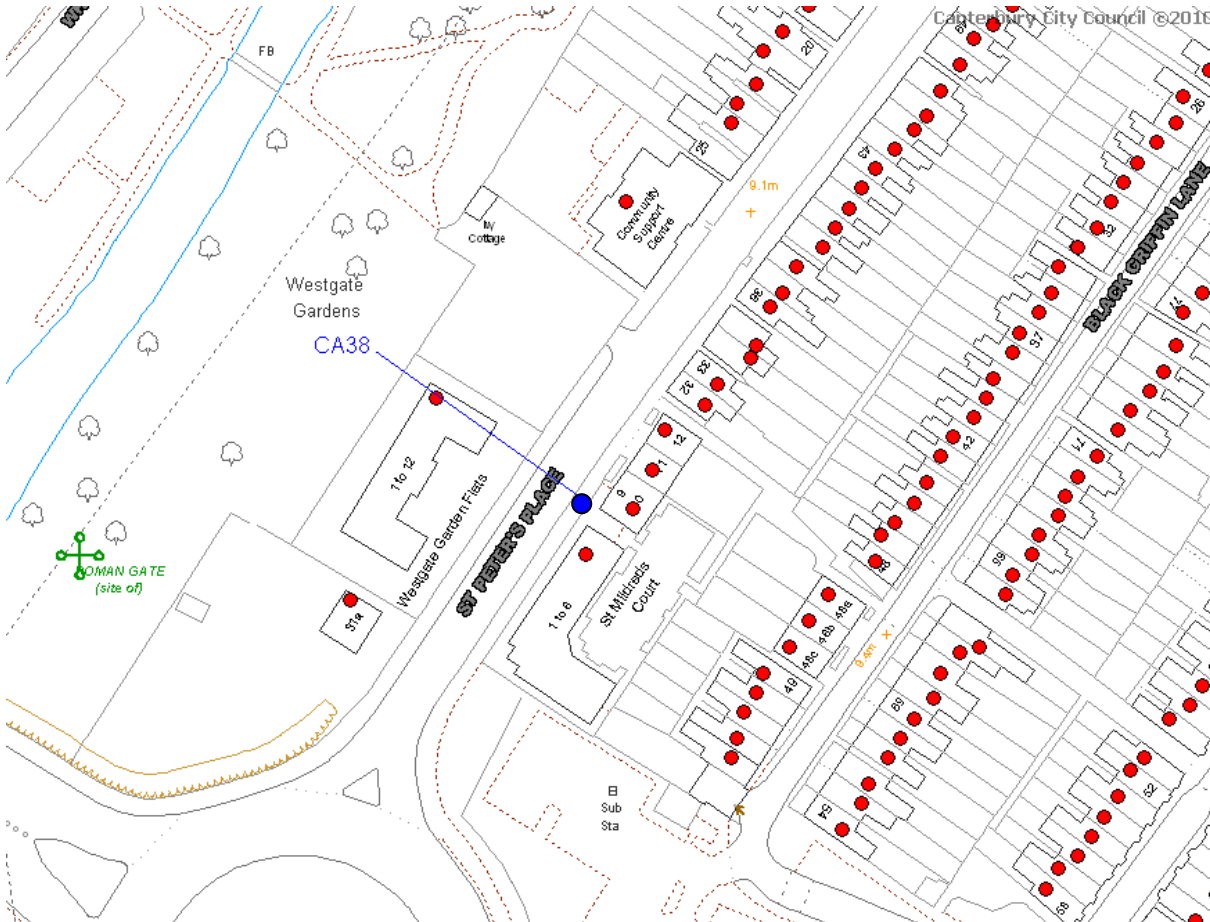
Rheims Way (CA17)



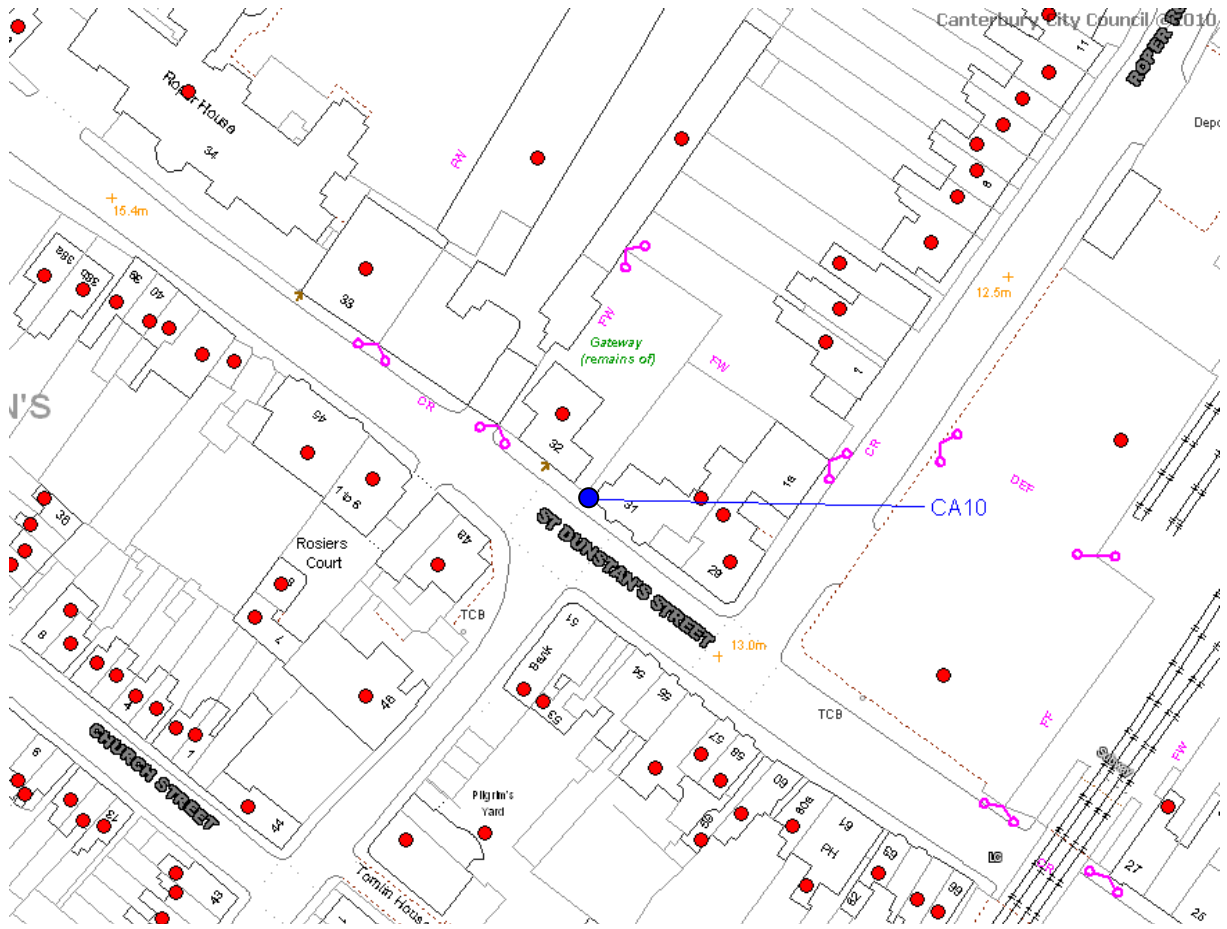
Old Tannery (CA23)



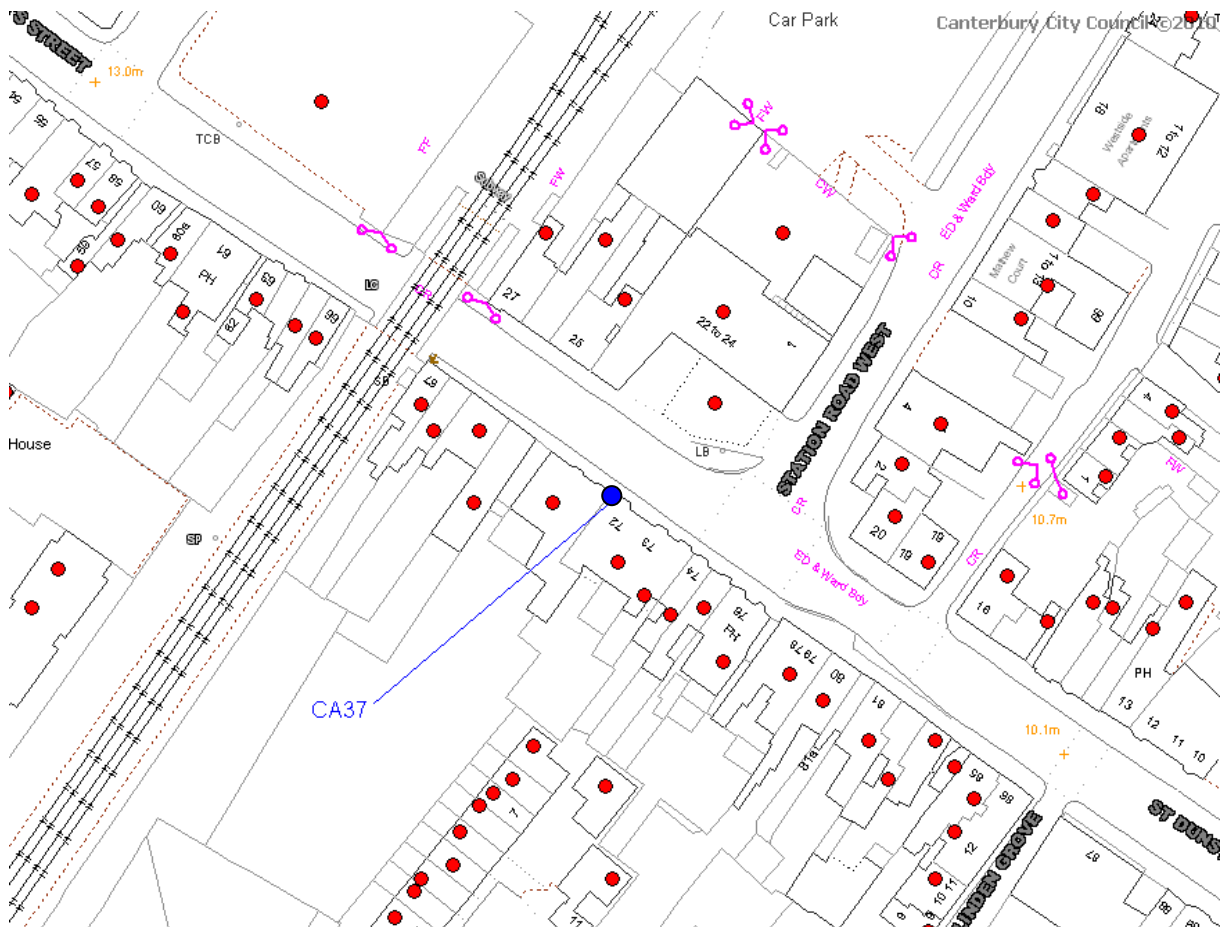
St.Peter's Place (CA38)



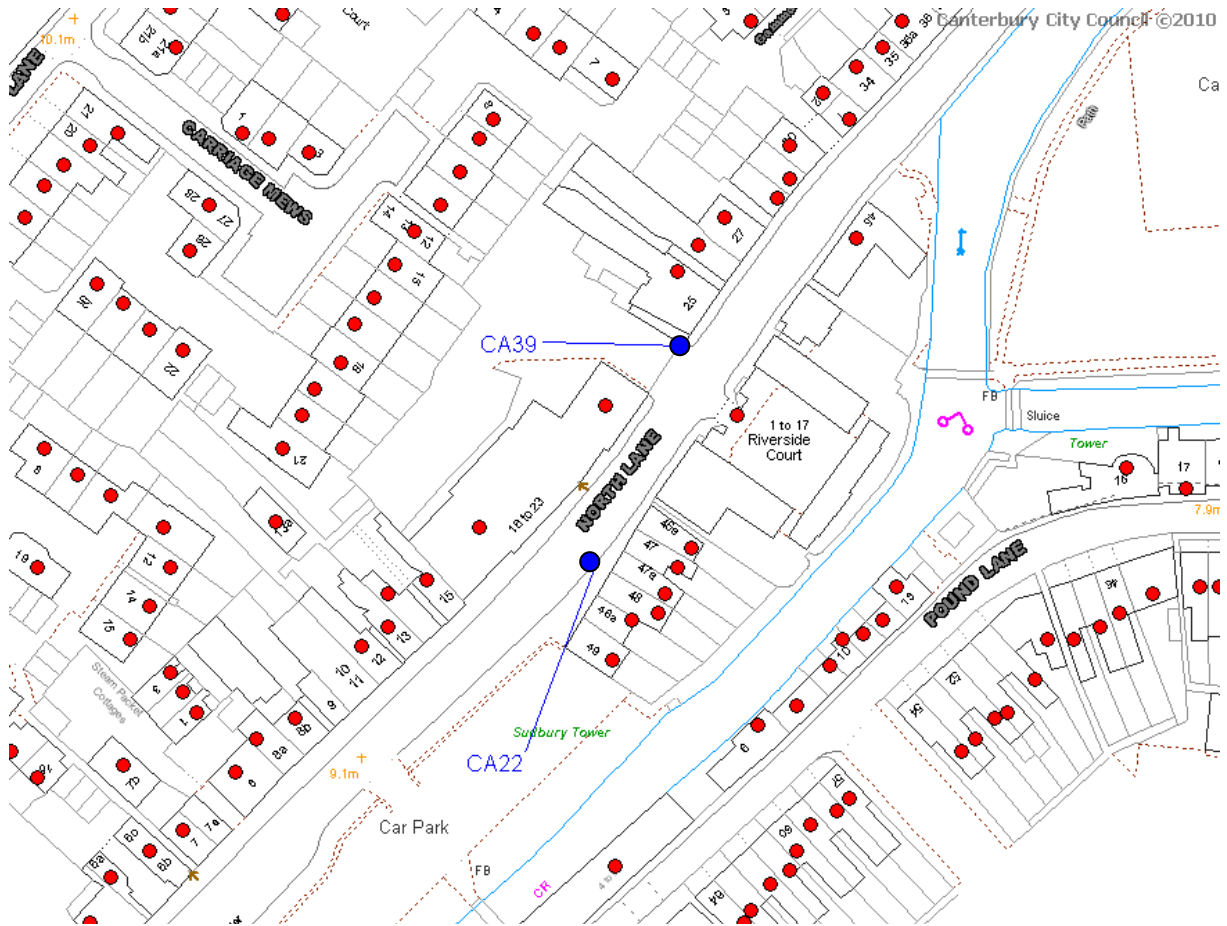
St.Dunstan's 1 (CA10)



St.Dunstan's 2 (CA37)



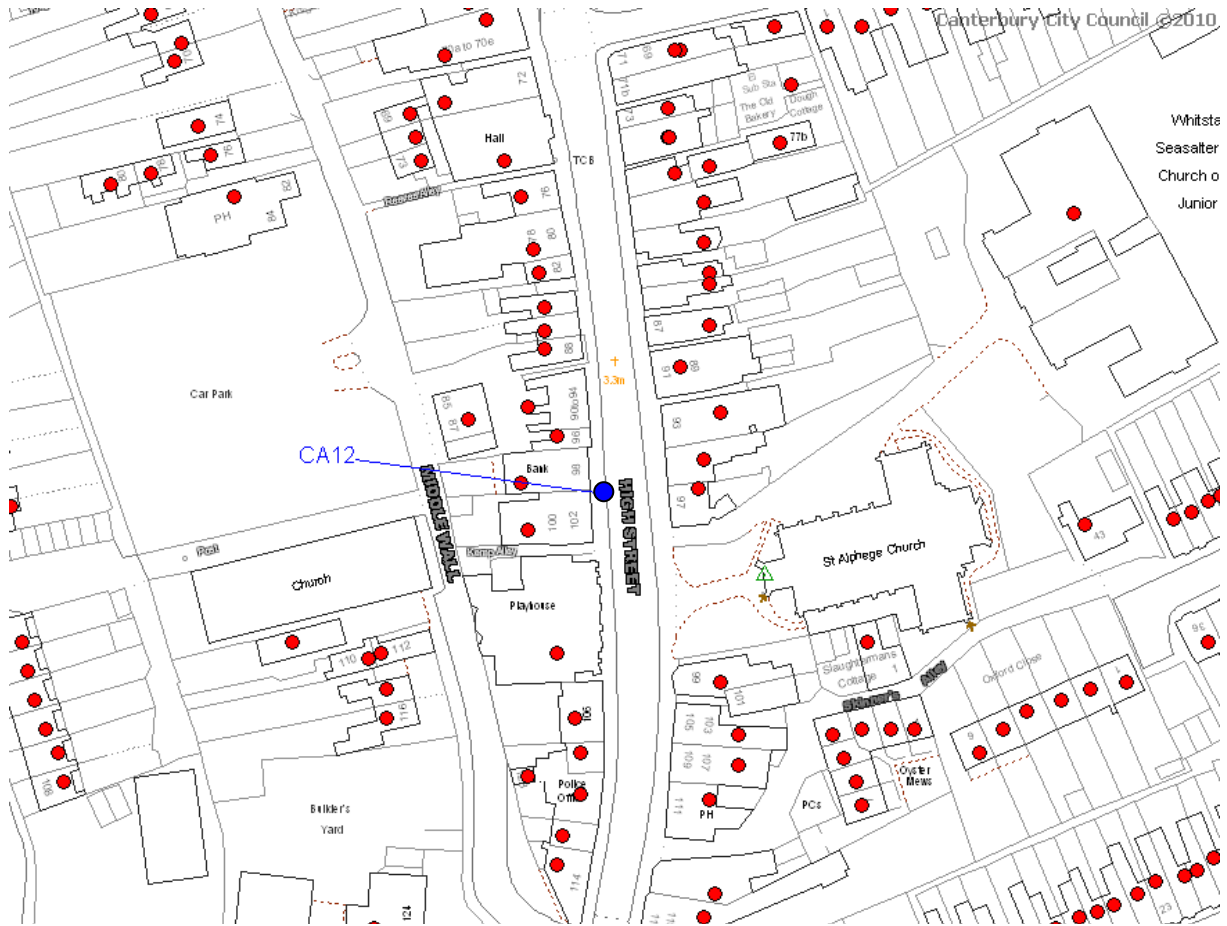
North Lane 1 (CA22) and North Lane 2 (CA39)



High Street, Herne Bay (CA11)

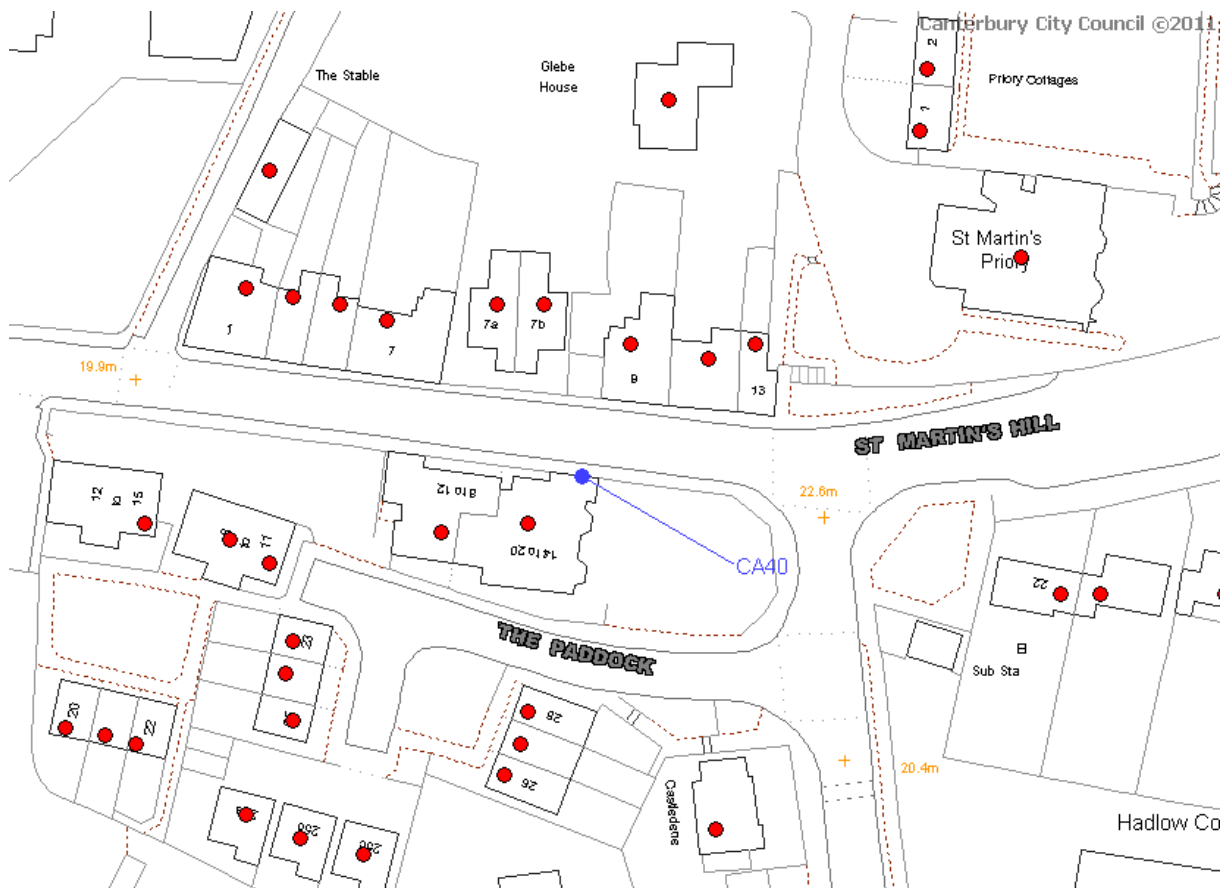


High Street, Whitstable (CA12)

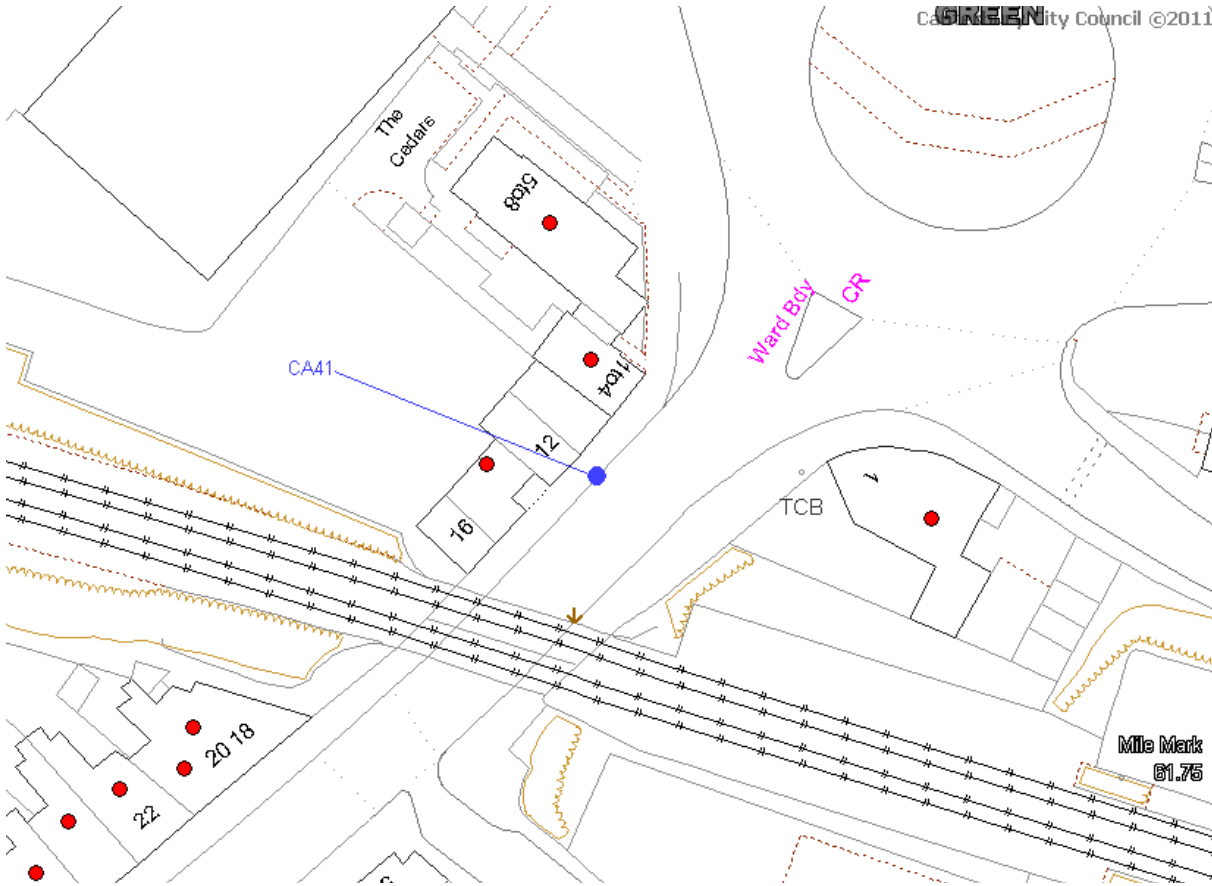


Whitste
Seasalter
Church o
Junior

St.Martin's Hill (CA40)



Wincheap 5 (CA41)



Mill Road, Sturry (CA42)



Herne Street, Herne (CA43)



Appendix B: QA/QC Data

Summary Sheet from Volatile Correction Model

Summary	Text	Value
Site Name	Canterbury PM10	
Organisation		
Start Date	01/01/2010	
End Date	31/12/2010	
TEOM data already corrected with 1.3 factor	Yes	
EPA Constant A		3
EPA Constant B		1.03
Instrument Temperature		25
Instrument Pressure		1013
Instrument reports to local ambient readings	No	
Timescale	Hourly	
Pressure Site	Greenwich and Bexley - Falconwood FDMS (GB0)	
Pressure Site Warning		
Temperature Site	Greenwich and Bexley - Falconwood FDMS (GB0)	
Temperature Site Warning		
FDMS Site 1	Greenwich and Bexley - Falconwood FDMS (GB0)	
FDMS Site 1 Warning	FDMS1 Correction includes unratified data.	
FDMS Site 2	Greenwich - A206 Burrage Grove (GN0)	
FDMS Site 2 Warning		
FDMS Site 3	Average of remaining sites within range	
FDMS Site 3 Warning	FDMS3 Correction includes unratified data.	