



2013 Air Quality Progress Report for Sevenoaks District Council

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

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Executive Summary

This Air Quality Progress Report has been prepared as part of the Local Air Quality Management (LAQM) system introduced in Part IV of the Environment Act 1995.

The Local Air Quality Management Technical Guidance LAQM.TG (09) has been closely followed in the preparation of this report.

Sevenoaks District Council hereafter referred to as the District Council has used monitoring information to assess and predict future air quality against the objectives prescribed by the Air Quality Regulations 2000 (as amended).

There are no new local developments of sources which are considered to have a significant effect on the air quality of the district.

A Detailed Assessment of the Birchwood Road Junction has estimated levels of NO₂ to be 57 ug/m³ at the worst affected property and therefore confirmed the need to designate an AQMA at this site.

The proposal for a new AQMA at this site was approved by cabinet on the 11th April 2013.

A new monitoring station is in the process of being set up for use at the Sevenoaks Quarry site which will be used to provide information for a Detailed Assessment into possible fugitive particulate emissions from the quarry.

The proposed revocation of AQM's 5, 9, 11 and 12 and the declaration of a new AQMA, running the length of the A25 from the boundary with Tonbridge and Malling Council to the boundary with Tandridge District Council, was approved by Cabinet on the 11th April 2013.

No significant improvement or deterioration in air quality has been observed. Most sites identified in 2011 as exceeding Nitrogen dioxide objectives continue to do so.

In addition to the indication of likely exceedance of the 1-hour NO₂ objective at Sevenoaks High Street identified in the 2011 Progress Report, further exceedances of this objective have been identified at Bat and Ball, and Birchwood Road Junctions.

The Council is shortly to launch an Air Alert service to inform susceptible individuals and medical professionals of predicted episodes of poor air quality.

The District Council has made progress with undertaking an extensive variety of measures contained within the 2009 Air Quality Action Plan, with several assisted by Section 106 funding from planning developments and Defra air quality grants.

Future work is likely to be tempered though by the reductions in local authority funding arising from the national economic situation

Under the Local Air Quality Management process, we will continue to monitor, review and assess air quality and undertake where possible appropriate action to ensure that the Air Quality Action Plan 2009 is delivered.

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1 Introduction

1.1 Description of Local Authority Area

Sevenoaks District



Sevenoaks District is in West Kent, bordering Greater London, Surrey and East Sussex and covers an area of 142 square miles.

The main towns are Edenbridge, Sevenoaks and Swanley and there are many other small villages and settlements, of which the largest are Hartley, Hextable, New Ash Green, Westerham and West Kingsdown.

The primary source of air pollution is from traffic. The district is traversed by three major motorways and these have a considerable flow of continental HGVs using the port at Dover and the Channel Tunnel. Local journeys, school runs, commuting to London or connection with London contribute significantly to a number of hot spots in Sevenoaks, Swanley and Westerham.

Main communications and transport links

The M25, M20 and M26 motorways are easily accessible as they cross the District. Gatwick and Heathrow airports and the Channel Ports and Channel Tunnel Rail Link are all within easy reach.

The railway service to London is very good. The average journey time is 35 minutes.

A description of Sevenoaks District

All of Sevenoaks District is within the Green Belt. Much of the area is rural in character and it includes many picturesque villages and hamlets and large areas of beautiful countryside. The area is rich in historical sites including Penshurst Place, Hever Castle, Winston Churchill's former home at Chartwell, Lullingstone Castle and Roman Villa, and Knole Park.

Each of the major towns has its own character. Edenbridge is a popular point of call for visitors to the area, while Sevenoaks offers a range of small to medium sized shops in a traditional high street setting. Swanley's market attracts shoppers from a wide area.

Sevenoaks District is a popular place to live. Because of the close proximity to London, there is considerable pressure for development and local planning policies attempt to achieve a balance between legitimate development needs and conserving the District's environment.

There are a wide range of leisure facilities, including community sports and leisure centres at Edenbridge, Sevenoaks, Wilderness and Swanley. There are also sports grounds, recreation areas and scenic country walks.

There are no major industrial sources within the district or close to its boundary. There is one large sand quarry co-located with a landfill site. There are 31 authorised processes, mainly petrol stations and dry cleaners.

1.2 Purpose of Progress Report

This report fulfils the requirements of the Local Air Quality Management process as set out in the Environment (Northern Ireland) Order 2002, the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 and the relevant Policy and Technical Guidance documents. The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where

exceedences are considered likely, the local authority must then declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives.

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

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

The Council has completed all 4 stages of Round 1 and all three stages (USA, DA, FA) of Rounds 2 and 3. Following the 2009 USA the Council is undertaking two Detailed Assessments expected to report later in 2011.

Round 1

In 1999, the first round of Air Quality Review and Assessment, consultants, Kings College London, were employed to carry out the complex computer dispersion modelling required to identify any areas where objectives might be exceeded.

They reported that the daily objective for PM¹⁰ and the annual average objective for NO₂ were likely to be exceeded along the routes of the M20, M25, M26, A20 (T), A21, and at the junction of the A25 and A224 at Riverhead.

As a result AQMAs 1 to 5 were designated in 2002 for PM₁₀ and NO₂.

A Further Assessment in 2004 confirmed exceedance of the PM₁₀ and NO₂ objectives but with the PM₁₀ affected areas being smaller in size and the NO₂ areas larger than had been originally thought.

In 2005, this reassessment resulted in the revocation of the PM₁₀ designations for all but a section of the M25 which was then separately designated for PM₁₀ and given the reference AQMA 6.

This overlaps AQMA 2 which covers the whole of the M25 within the district.

All the areas were enlarged due to NO₂ exceedance being more widely spread than originally predicted. Most areas are skewed to the north, northeast or east by the prevailing south-westerly winds.

AQMAs 1 - 6

AQMA 1 M20 - from Junction 3 of the M25 to the district boundary with Tonbridge and Malling Borough Council (6.9 miles).

AQMA 2 M25 - County border with Surrey to district border with Dartford, including Junctions 3, 4 and 5 and the extension of Junction 5 to connect with the A25 at Bessel's Green (13.5 miles).

AQMA 3 M26 - from junction 5 of the M25 to the district boundary with Tonbridge and Malling Borough Council (5.6 miles).

AQMA 4 A20 (T) Swanley Bypass - from junction 3 of the M25 to the district boundary with the London Borough of Bromley (2.7miles).

AQMA 5 A25 Riverhead - between its northern and southern junctions with the A224 (155m).

AQMA 6 M25 - Junction 5 to Kent / Surrey border

Round 2

In September 2006, following the second round of reviews, 5 further areas were designated for traffic-related exceedance of NO₂. A Further Assessment of these AQMAs was completed in 2007 which concluded that the concentrations of NO₂ in AQMAs 8-12 had not changed substantially since the Detailed Assessment carried out in 2006

AQMAs 8 – 12

AQMA 8	B2173	Swanley – London Road (East); High Street; Bartholomew Way and parts of Central town area	for NO ₂
AQMA 9	A25	Seal – High Street	for NO ₂
AQMA 10	A225	Sevenoaks – High Street	for NO ₂
AQMA 11	A25	Westerham – High Street; Market Square; Vicarage Hill; London Road (A233)	for NO ₂
AQMA 12	A25	Sevenoaks – Bat & Ball junction with A225	for NO ₂

Please note: There is no AQMA 7

Round 3

During 2007 and following the third round of review and assessment, a Detailed Assessment concluded that the boundaries of existing AQMA's 1, 5 and 10 should be extended because of traffic related exceedance of NO₂.

The following areas were formally designated as AQMAs in December 2007:

- Part of London Road, Sevenoaks (Extends AQMA 10)
- Part of London Road, Riverhead (Extends AQMA 5 to join AQMA 3)
- Part of London Road, Dunton Green (Extends AQMA 5 to join AQMA 3)
- Part of the A20 Farningham (Extends AQMA 1)

A Further Assessment, November 2008, concluded that:

- AQMA 10 be modified to include the properties surrounding the London Road and Pembroke Road junction
- AQMA 5 is extended to cover the properties where exceedances were predicted to the west of the London Road and Maidstone Road (Bradbourne Vale) roundabout (London Road, Riverhead).
- No modifications to the boundary of the existing AQMA 1 - Farningham

Round 4

The 2009 USA identified a road junction in Swanley (Birchwood Rd / London Rd) as an area of potential NO₂ (annual) exceedance and also an area adjacent to a large quarry/landfill in Sevenoaks for potential fugitive PM₁₀ exceedance.

Consultants were engaged to undertake Detailed Assessments of these sites. In December 2011, a Detailed Assessment confirmed the likely exceedance of NO₂ in Swanley (Birchwood Rd/London Rd) and the need to declare an AQMA.

Extensions to existing AQMAs along the A25 were also identified as needed. It was proposed that as these AQMAs and new areas of exceedance all arise from the heavy and at times congested traffic on this road, it would be better to join up the AQMAs to form one single corridor AQMA along its entire length within the District.

Round 5

The 2012 Updating and Screening Assessment confirmed continuing exceedances outside of the current AQMAs along the A25.

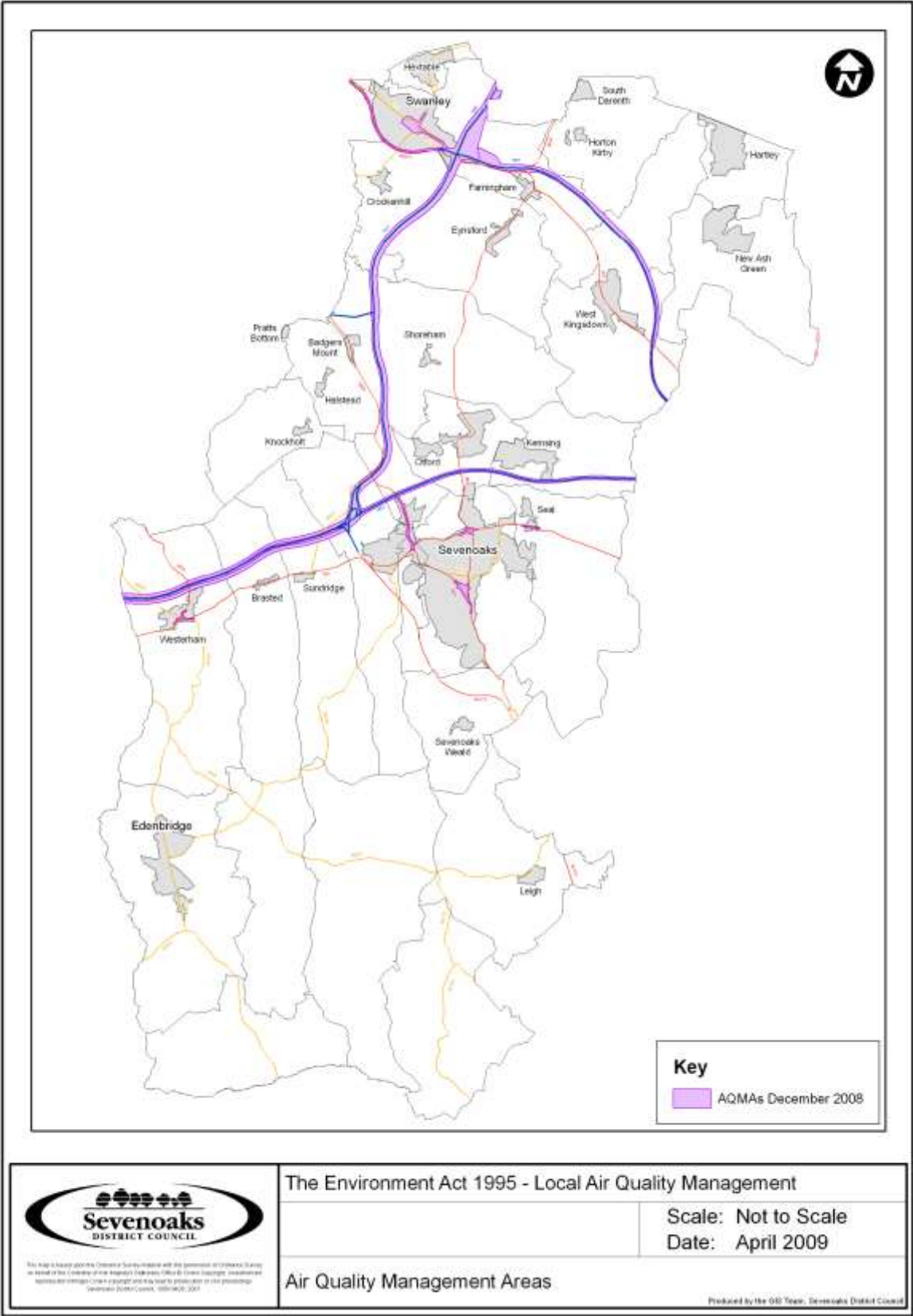
The Council has therefore extended and joined up the existing four AQMAs along this road to form one AQMA corridor and is currently in the process of making the necessary order to declare this new AQMA.

PM₁₀ monitoring was required to be undertaken by the Sevenoaks quarry to inform the Detailed Assessment, but unfortunately there have been significant delays in obtaining permission from Kent County Council to install monitoring equipment on their land.

A new monitoring station has been installed however the unit is still not fully operational due now to power supply difficulties.

See Appendix B: Maps of current and proposed AQMA's

Fig 1 Map of Sevenoaks District showing Air Quality Management Areas



See Appendix B: Maps of current and proposed AQMA's for more detailed Maps of individual AQMA's

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken in 2013

2.1.1 Automatic Monitoring Sites

The Council has two continuous automatic monitoring sites (CMS) both in the Sevenoaks town urban area. Greatness background site has monitored 3 pollutants (NO_x, PM₁₀, O₃) since 1997 and Bat & Ball roadside monitors NO_x and PM₁₀ since 2006. Table 2.1 shows details of the two sites.

Table 2.1 Details of Automatic Monitoring Sites

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 ?
Greatness	Urban background	TQ 536 567	NO _x , NO, NO ₂ , PM ₁₀ , O ₃	N	40m	75m	N
Bat & Ball	Roadside	TQ 530 566	NO _x , NO, NO ₂ , PM ₁₀	Y	30m	10m	N

See Figure 2 for a map showing the location of these sites.

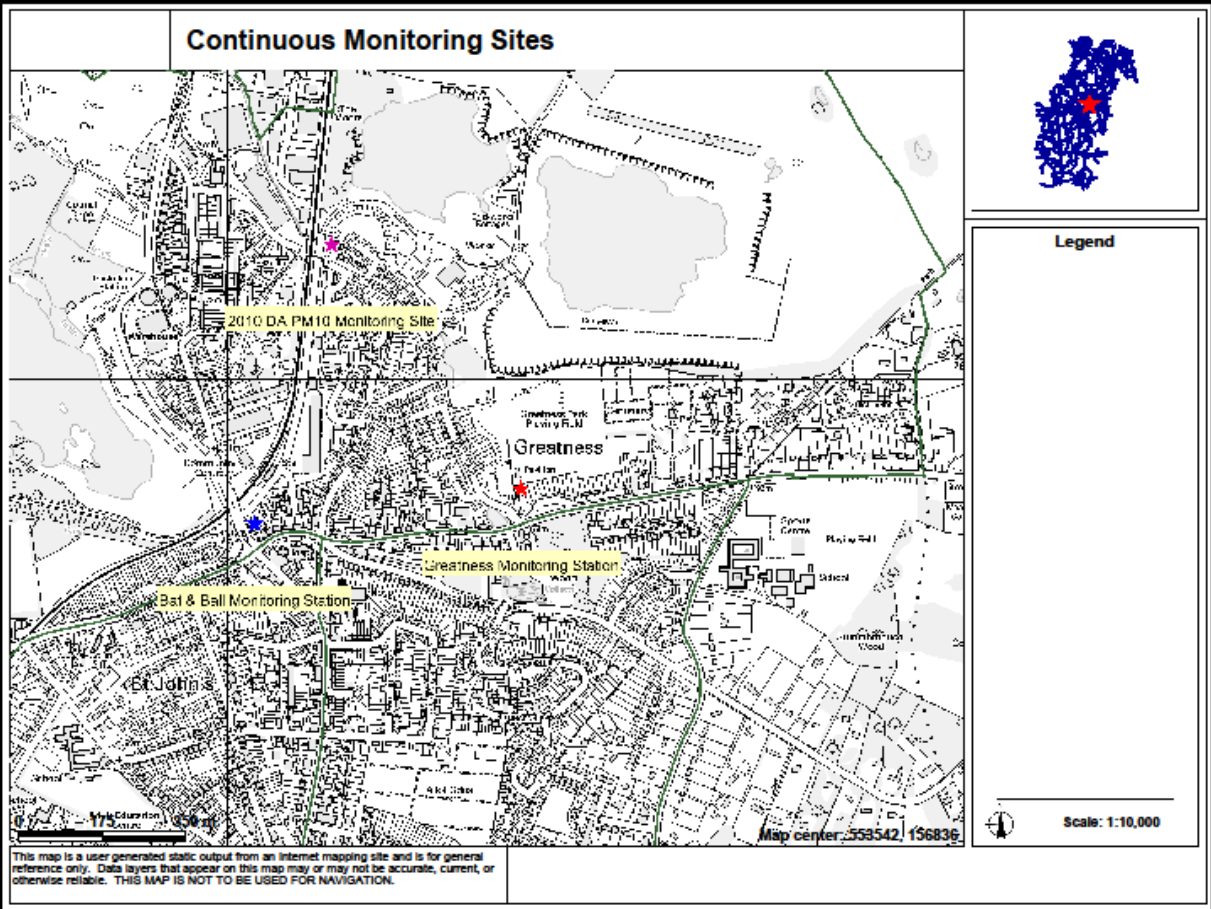
Local site operations and routine calibration/maintenance are carried out under contract by ERG Kings College London with service contract work by Supporting U. The sites are audited twice a year by NPL and the data collected, validated and ratified by ERG.

Annual reports are published and all data including current concentrations are available via the London Air Quality Network web site. The site is operated to the same standards as the rest of the London Air Quality Network.

2008 and earlier PM₁₀ Data measured by TEOM has been corrected by applying a 1.3 factor.

From 2009 data has been corrected by ERG using their volatile correction model.

Figure 2 Map(s) of Automatic Monitoring Sites



2.1.2 Non-Automatic Monitoring Sites

There are currently 55 diffusion tube sites. Table 2.2 gives details of these sites

NO₂ diffusion tubes are supplied and analysed by ESG Scientifics (formerly Harwell Scientifics at Didcot). This laboratory is UKAS accredited.

The tubes were prepared by spiking acetone:triethanolamine (50:50) on to grids prior to the tubes being assembled.

The laboratory confirms it follows the procedures set out in the Harmonisation Practical Guidance and that it is ranked 'Good' in the WASP inter-comparison scheme.

The tubes have been compared with the reference method by a triplicate co-location study with the chemiluminescent NO_x analysers at Greatness Park, Sevenoaks.

The nationally derived Bias Factor for 2012 is 0.79

The locally derived Bias Factor from the above co-location study for 2012 was 0.91

The National Bias Factor for 2012 was 0.79

The Local Bias factor has been used.

Please see Appendix A: Quality Assurance / Quality Control (QA/QC) for details of data used to calculate bias

Table 2.2 Details of Non- Automatic Monitoring Sites

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 ?
Garvock Drive Sevenoaks	Urban Background	552467 154167	NO2	N	Y 17m	0m	N
High Street South 1 Sevenoaks	Roadside	553141 154263	NO2	Y	Y.. 0m	1m	Y
High Street South 2 Sevenoaks	Roadside	553139 154259	NO2	Y	Y 1m	3m	Y
High Street North 2 Sevenoaks	Kerbside	552045 154883	NO2	Y	Y 2m	0.5m	Y
High Street North 3 Sevenoaks	Roadside	553073 155026	NO2	Y	Y 3m	2 m	N
73 London Road Sevenoaks	Roadside	552867 154863	NO2	Y	Y 0m	1.5m	Y
20 London Road Sevenoaks	Roadside	553018 154654	NO2	Y	Y 0m	2m	N
130 London Road Sevenoaks	Kerbside	552662 155153	NO2	Y	Y 3m	0.5m	Y
133 London Road Sevenoaks	Kerbside	552677 155117	NO2	Y	Y 3m	0.5	N
142 London Road Sevenoaks	Roadside	552506 155272	NO2	Y	Y 6m	2m	N
Montreal Road/ Amherst Hill Sevenoaks	Roadside	551529 155967	NO2	N	Y 4m	2m	Y
Bradbourne Vale Road South	Roadside	551640 156335	NO2	N	N 10m	2.5m	N
Bradbourne Vale Road North	Roadside	552963 156583	NO2	N	N 20m	1.5m	N
4a St Johns Hill Sevenoaks	Roadside	553140 155898	NO2	N	Y 8M	1.5m	N
Egden Walk St Johns Sevenoaks	Roadside	553123 155709	NO2	N	N	1.5m	N
Bat & Ball 1 Sevenoaks	Roadside	553059 156624	NO2	Y	N	4m	N
Bat & Ball 2 Sevenoaks	Roadside	553019 155692	NO2	Y	Y 7m	3m	N
Bat & Ball 3 Sevenoaks	Roadside	553154 156685	NO2	Y	Y 1.5m	1.5m	Y
Bat & Ball 4 Sevenoaks	Roadside	553151 156558	NO2	Y	Y 0m	1.5m	Y

Riverhead 2	Kerbside	551414 156197	NO2	Y	Y...1m	0.5m	Y
Riverhead 3	Roadside	551440 156165	NO2	Y	Y 6m	3m	Y
62 London Road Riverhead	Roadside	551318 156373	NO2	Y	Y 2m	2m	N
Worships Hill / Witches Lane Riverhead	Roadside	551026 155710	NO2	N	Y 36m School	2m	N
High Street East 1 Seal	Roadside	555092 156694	NO2	Y	Y 0m	1m	Y
High Street East 2 Seal	Roadside	555068 156711	NO2	Y	Y 0m	1.5m	Y
High Street West 1 Seal	Roadside	554991 156726	NO2	Y	Y 3m	3m	N
High Street West 2 Seal	Roadside	554637 156780	NO2	Y	Y 7m	2m	N
Seal Hollow Road / A25	Roadside	554093 156798	NO2	N	Y 18m	2.5m	N
Miners Arms London Road Dunton Green	Roadside	551281 156860	NO2	Y	Y 2.5m	2m	N
57 London Road Dunton Green	Roadside	551216 157007	NO2	Y	Y 8m	2m	N
193 London Road Dunton Green	Roadside	551007 157545	NO2	Y	Y 1.5m	2m	N
Westerham Road Bessels Green	Roadside	550782 155585	NO2	N	Y 8m	2m	N
8 Chevening Road Sundridge	Roadside	548474 155424	NO2	N	Y 7m	1.5m	N

High Street Westerham	Roadside	544415 153914	NO2	Y	Y 3m	1m	N
Vicarage Hill Westerham	Roadside	544770 154000	NO2	Y	Y 3m	1M	N
Market Square Westerham	Kerbside	544594 154025	NO2	Y	Y 2m	0.5m	Y
London Rd 2 Westerham	Roadside	544600 154139	NO2	Y	Y 5m	1m	N
Bartholomew Way Swanley	Roadside	551492 168695	NO2	Y	Y 13m	2m	N
London Road 1 Swanley	Kerbside	551592 168499	NO2	Y	Y 2m	0.5m	Y
London Rd 2 Swanley	Roadside	552174 168162	NO2	Y	Y 6m	1.5m	Y
Wested Lane Swanley	Roadside	552610 167700	NO2	Y	Y 14m	5m	Y
Wadard Terrace Swanley	Roadside	553109 167880	NO2	Y	Y 15m	115m to M25	N
Farningham Hill Road Swanley	Urban	553416 167615	NO2	Y	Y 17m	27m to M20	Y
Birchwood Rd Swanley Jessamine	Roadside	550298 169582	NO2	N	Y 0.5m	1m	Y
Birchwood Road Pucknells	Roadside	550283 169743	NO2	N	Y 10m	2m	N
Birchwood Road Malvern	Roadside	550377 169479	NO2	N	N 20m	2m	N
Birchwood Road Junction London Road	Roadside	550258 169575	NO2	N	Y 10m	2m	N
Farningham Hill A20 Farningham	Roadside	554217 167252	NO2	Y	Y 12m	5m to A20 90 m to M20	N
High Street Eynsford	Road side	554007 165477	NO2	N			
Brands Hatch/Ash Road	Roadside	558033 164933	NO2	N			
204 Main Road, Sundridge	Roadside	548251 155354	NO2	N			
59 Westerham Road, Bessels Green	Roadside	550872 155585	NO2	N			
West End Brasted	Roadside		NO2	N			
Station Road Brasted	Roadside		NO2	Y			
Chart Lane Brasted			NO2	N			

2.2 Comparison of Monitoring Results with Air Quality Objectives

Automatic Monitoring Data

Greatness CMS is a suburban background monitoring site in a park and is over 100m away from any busy road. Greatness shows a relatively steady background level of NO₂

Bat & Ball CMS is alongside a busy and congested junction which is within an AQMA and is approximately 10m from the roadside due to location difficulties. Since some housing in parts of the AQMA is only 1 m from the kerb, the site does not represent the worst case exposure.

There have been some very slight changes in some levels at Bat & Ball, which is probably due to metrological factors and/or economic recession.

Due to issues with the CMS at Bat and Ball, data capture is below 50% for the year..

Nitrogen Dioxide (NO₂)

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

Site Location	Within AQMA ?	Valid Data Capture for Monitoring Period % ^a	Annual Mean Concentration (µg/m ³)				
			2008	2009	2010	2011	2012
Bat & Ball	Y	48	33	31	30	29	31*
Greatness	N	96	21	21	21	19	19

*Data capture for the year for Bat & Ball has been severely affected by due to technical difficulties which left the monitoring station non-operational between the following dates:

29th April – 30th May 2012

3rd July – 26th November 2012

12th December – 19th December 2012

Diffusion tubes at the fixed monitor have recorded an annual mean of 39ug/m-3

Figure 2.3 Trends in Annual Mean NO₂ Concentrations Measured at Automatic Monitoring Sites

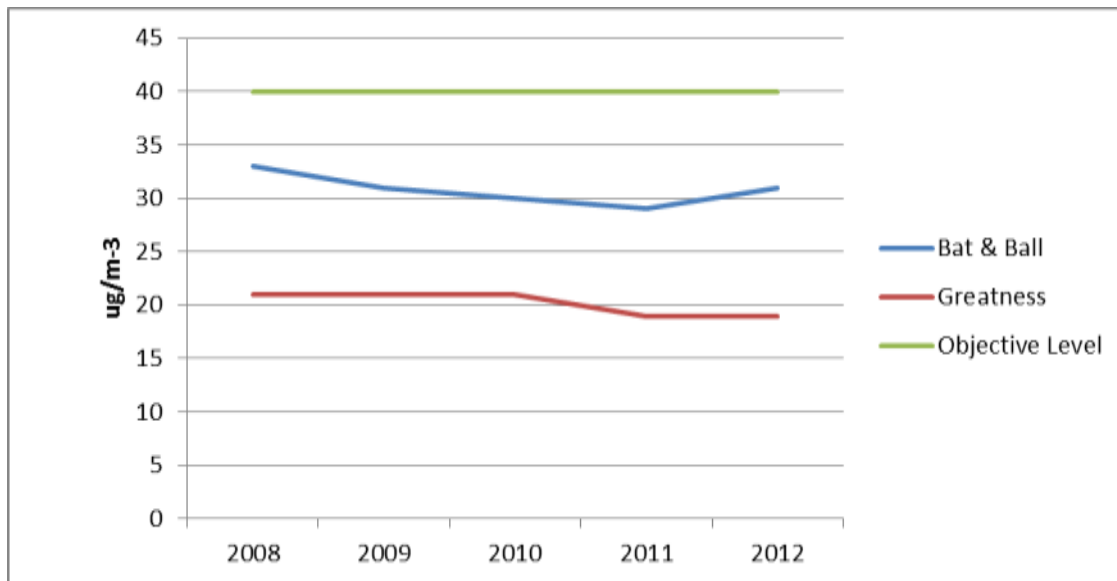


Table 2.4 Results of Automatic Monitoring for NO₂: Comparison with 1-hour Mean Objective

Site Location	Within AQMA?	Valid Data Capture 2012 % ^b	Number of Hourly Means > 200µg/m ³				
			2008	2009	2010	2011	2012
Bat & Ball	Y	48	0	0	0	0	0*
Greatness	N	96	0	0	0	0	0

*Data capture for the year for Bat & Ball has been severely affected by due to technical difficulties which left the monitor non-operational between the following dates:

- 29th April – 30th May 2012
- 3rd July – 26th November 2012
- 12th December – 19th December 2012

Diffusion Tube Data

Table 2.5 Results of NO₂ Diffusion Tubes 2012

Location	Within AQMA?	Full Calendar Year Data Capture 2012 (Number of Months)	Annual Mean Concentration (µg/m ³)		
			2010	2011	2012*
Sevenoaks					
Garvock Drive.	N	12	15.8	13.7	14.9
High Street. South 1	Y	12	<u>63.7</u>	<u>64.1</u>	<u>64.6</u>
High Street. South 2	Y	12	46.7	46.2	45
High Street North 2	Y	12	50.4	48.2	51.8
High Street North 3	Y	12	31.6	31.2	33.6
London Road 73	Y	10	35.5	37.6	35.8
London Road 20	Y	12	36.5	36.4	33.3
London Road 130	Y	12	43.9	42.8	43.3
London Road 133	Y	11	35.8	36.9	36.2
London Road 142	Y	12	41.3	42.2	41.4
London Road / Montreal Rd	N	12	47.3	48.1	44.8

Location	Within AQMA?	Full Calendar Year Data Capture 2012 (Number of Months)	Annual Mean Concentration ($\mu\text{g}/\text{m}^3$)		
			2010	2011	2012*
Bradbourne Vale Road South	N	12	53.7	58	56.7
Bradbourne Vale Road North	N	12	41.5	40.1	39.8
4A St Johns Hill	N	12	40.8	41.4	41
St Johns Egdean Walk	N	12	22.2	23.6	22.9
Bat & Ball					
Bat & Ball. 1	Y		40.7	43.4	43.1
Bat & Ball 2 Otford Rd	Y	11	38.6	39.1	42.5
Bat & Ball 3 Seal Rd	Y	12	55.8	57.5	<u>60.2</u>
Bat & Ball 4 St Johns	Y	12	<u>61.9</u>	59.3	<u>60.8</u>
Riverhead					
Riverhead 2.	Y	11	50.6	54.7	53.5
Riverhead 3.	Y	12	53.2	51	51.5
London Road R	Y	12	44.4	46	47.1
Worships Hill	N	12	38	39.5	45.3

Location	Within AQMA?	Full Calendar Year Data Capture 2012 (Number of Months)	Annual Mean Concentration ($\mu\text{g}/\text{m}^3$)		
			2010	2011	2012*
Seal					
High Street. East 1 Seal.	Y	11	51	53.3	56.5
High Street. East 2	Y	12	51.9	50.2	53.8
High Street. West 1	Y	11	38.6	36.2	38.2
High Street. West 2	Y	12	38.8	37.4	39.7
Seal Hollow Rd Jcn with A25	N	12	41.1	41.7	44
Dunton Green					
London Rd DG Miners Arms	Y	12	38.7	36.1	36.2
London Rd DG 57	Y	11	40.7	39	43
London Rd DG 193	Y	12	33.7	38.3	32.8

Location	Within AQMA?	Full Calendar Year Data Capture 2012 (Number of Months)	Annual Mean Concentration ($\mu\text{g}/\text{m}^3$)		
			2010	2011	2012*
Bessels Green					
Westerham Road	N	12	40.3	47	48
59 Westerham Rd	N	12	45.1	49.7	46.5
Eynsford					
High Street	N	12	29.8	30.4	31.2
Sundridge					
A25 204 Main Rd	N	12	36.3	40.4	38.8
8 Chevening Rd	N	12	33.9	32.6	33.7
Brasted					
Station Rd.	Y	12	50.1	50.5	53.7
Chart Ln Brasted	N	12	52.2	56.7	56.2
West End Brasted	N	12	35.7	35.3	38.7

Location	Within AQMA?	Full Calendar Year Data Capture 2012 (Number of Months)	Annual Mean Concentration ($\mu\text{g}/\text{m}^3$)		
			2010	2011	2012*
Westerham					
High Street	Y	12	46	46.5	39.2
Vicarage Hill	Y	12	34.8	33.9	36.3
Market Square	Y	12	51.8	55.2	55.3
London Road 2 Westerham	Y	12	33.5	34	33.9
Swanley					
Batholomew Way 2	Y	12	44	45.8	42.3
London Road 1 Swanley	Y	12	55.7	52.1	54.8
London Road 2	Y	12	48.1	46.4	45.7
London Road/Wested Ln Swanley	Y	12	48	42.4	40.1
Wadard Terrace Button St. Swanley	Y	12	38.8	43.3	41.9
Farningham Hill Rd	Y	12	34.8	40.9	40.5
Birchwood Rd - Jessamine	N	12	56.9	59.7	<u>62.1</u>

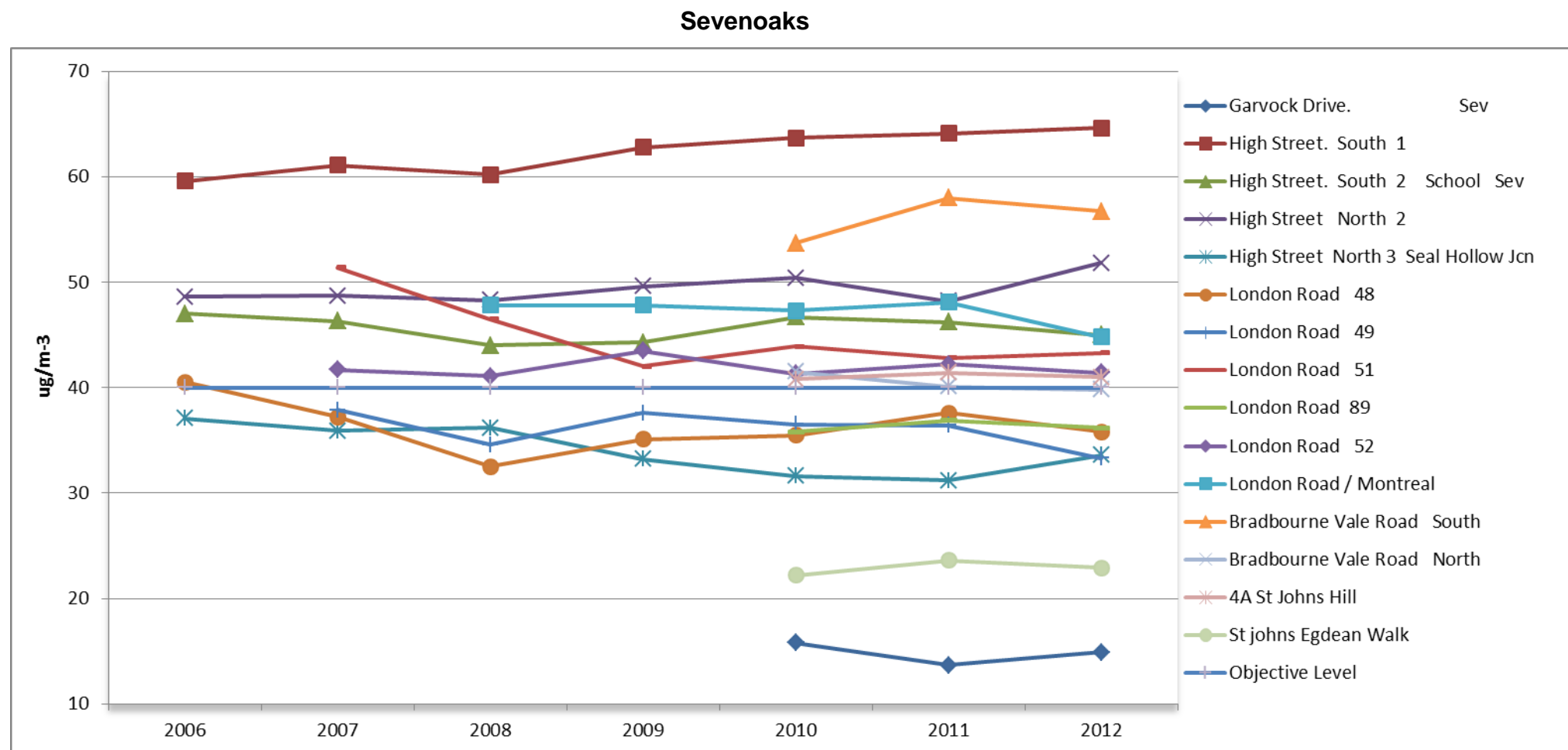
Location	Within AQMA?	Full Calendar Year Data Capture 2012 (Number of Months)	Annual Mean Concentration ($\mu\text{g}/\text{m}^3$)		
			2010	2011	2012*
Birchwood - Pucknells	N	12	32.8	32.5	32.8
Birchwood Rd - Malvern	N	12	39.6	40.2	39.6
Birchwood Junction London Rd	N	12	39	41.9	37.6
Farningham					
Farningham Hill (A20)	Y	12	49.4	44.5	48
West Kingsdown					
Brands Hatch Road/Ash Road	N	12	32.3	36.5	33.7

In bold, exceedence of the NO₂ annual mean AQS objective of 40 $\mu\text{g}/\text{m}^3$

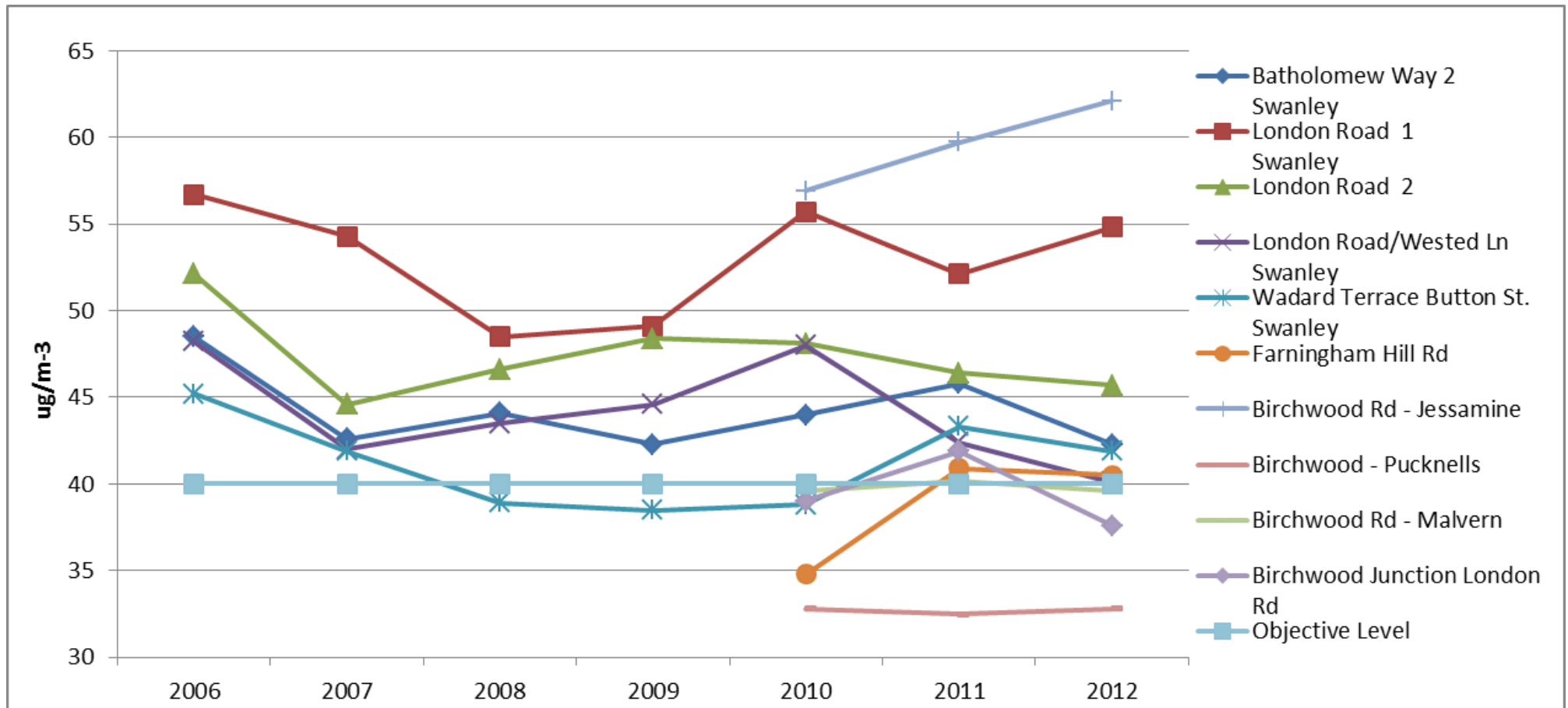
Underlined, annual mean > 60 $\mu\text{g}/\text{m}^3$, indicating a potential exceedence of the NO₂ hourly mean AQS objective

*Bias Adjustment factor (2012 Data) = 0.91

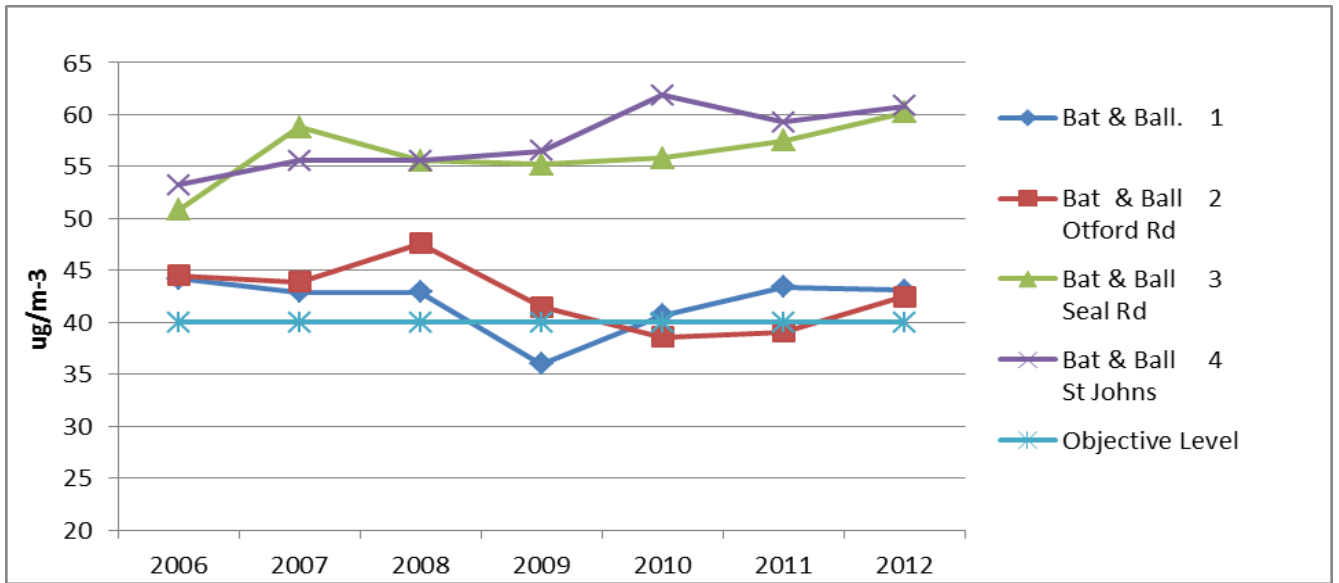
Figure 2.4 Selected Trends in Annual Mean Nitrogen Dioxide Concentrations Measured at Diffusion Tube Monitoring Sites



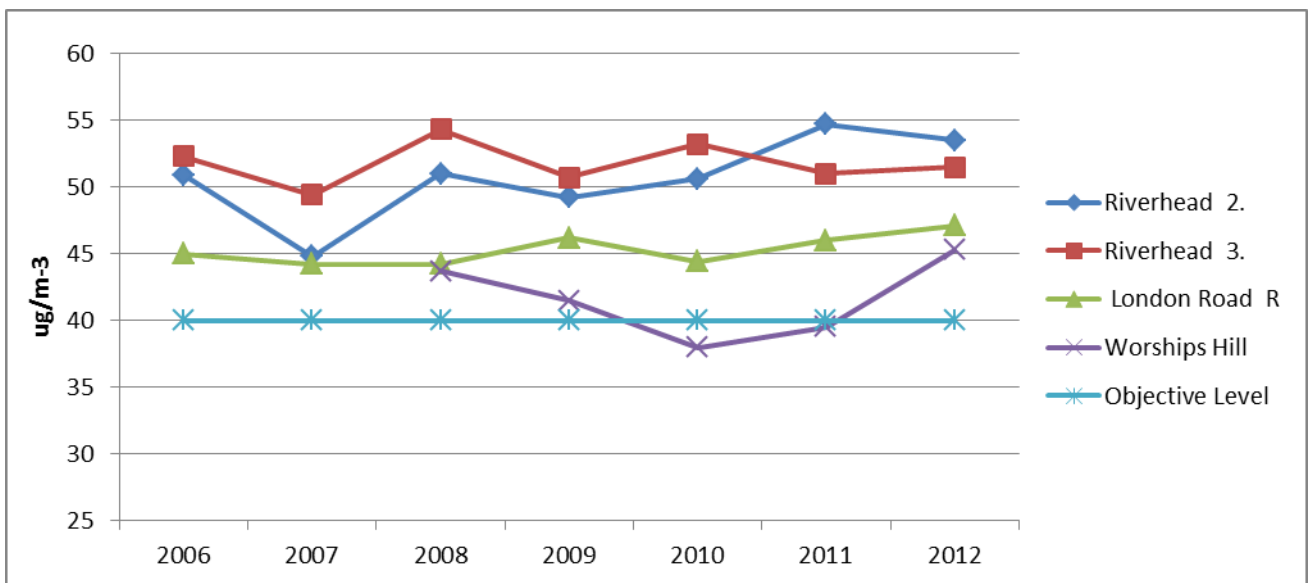
Swanley



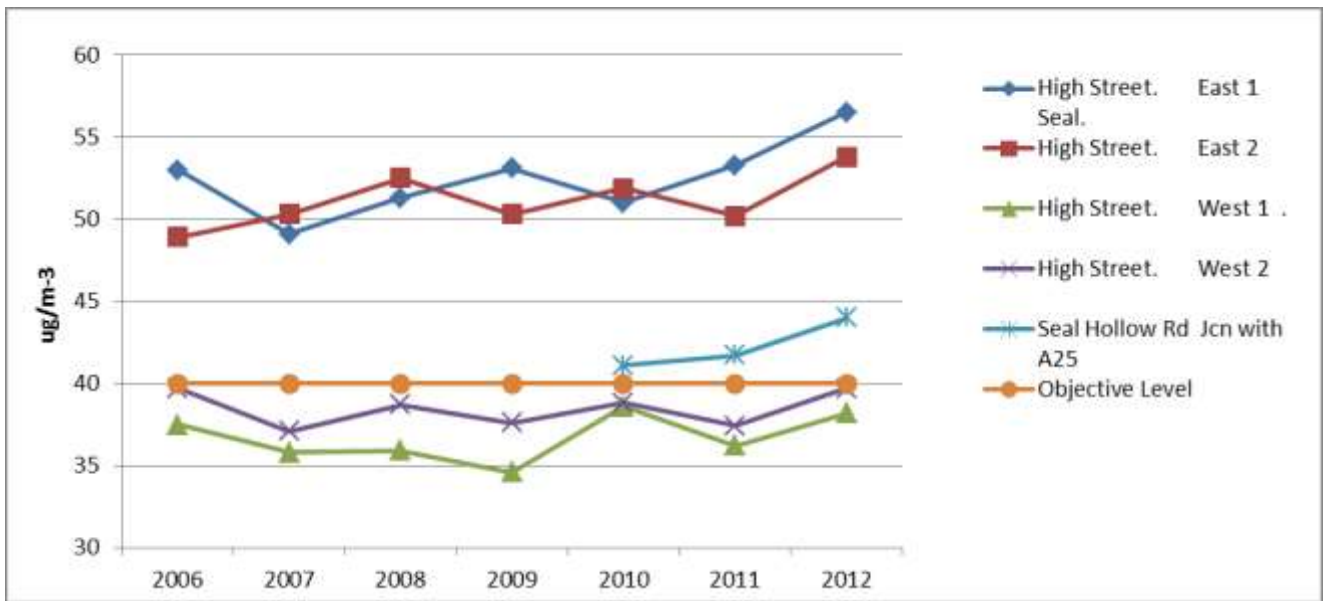
Bat & Ball



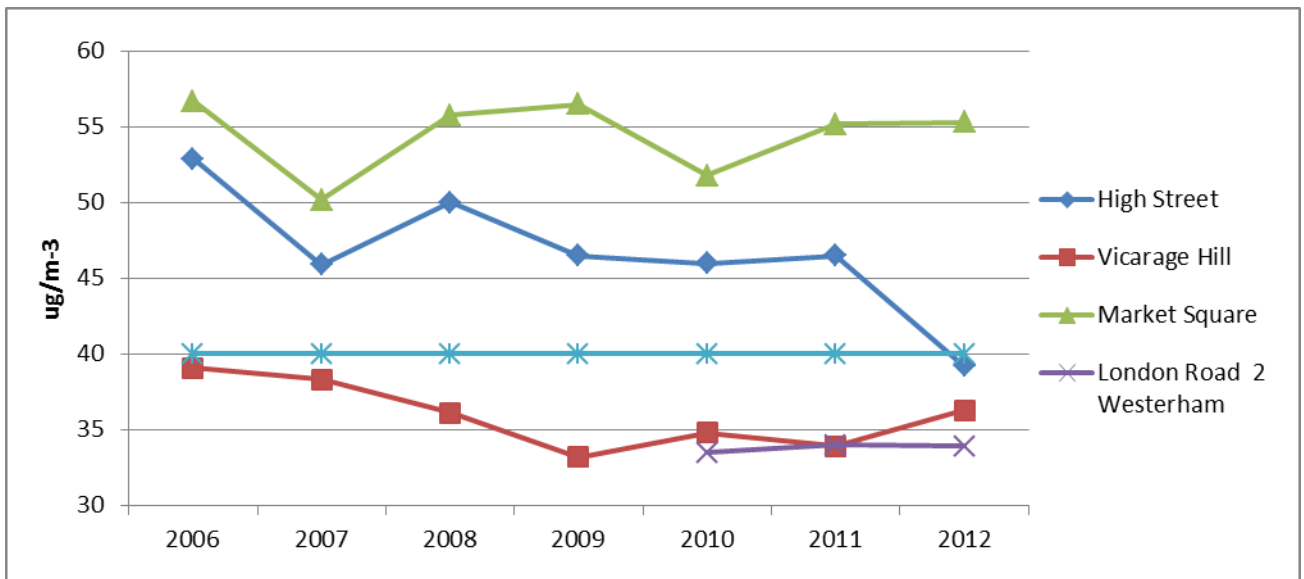
Riverhead



Seal



Westerham



2.2.2 Particulate Matter: PM₁₀

Table 2.6 Results of Automatic Monitoring for PM₁₀: Comparison with Annual Mean Objective

Site Location	Within AQMA?	Valid Data Capture 2012 % ^b	Confirm Gravimetric Equivalent (Y or N/A)	Annual Mean Concentration (µg/m ³)				
				2008	2009	2010	2011	2012 ^c
Bat & Ball	Y	72		23	23	23	25	24
Greatness	N	97		17	20	20	23	19

*Data capture for the year for Bat & Ball has been severely affected by due to technical difficulties which left the monitor non-operational between the following dates:

29th April – 30th May 2012

3rd July – 26th November 2012

12th December – 19th December 2012

Figure 2.5 Trends in Annual Mean PM₁₀ Concentrations

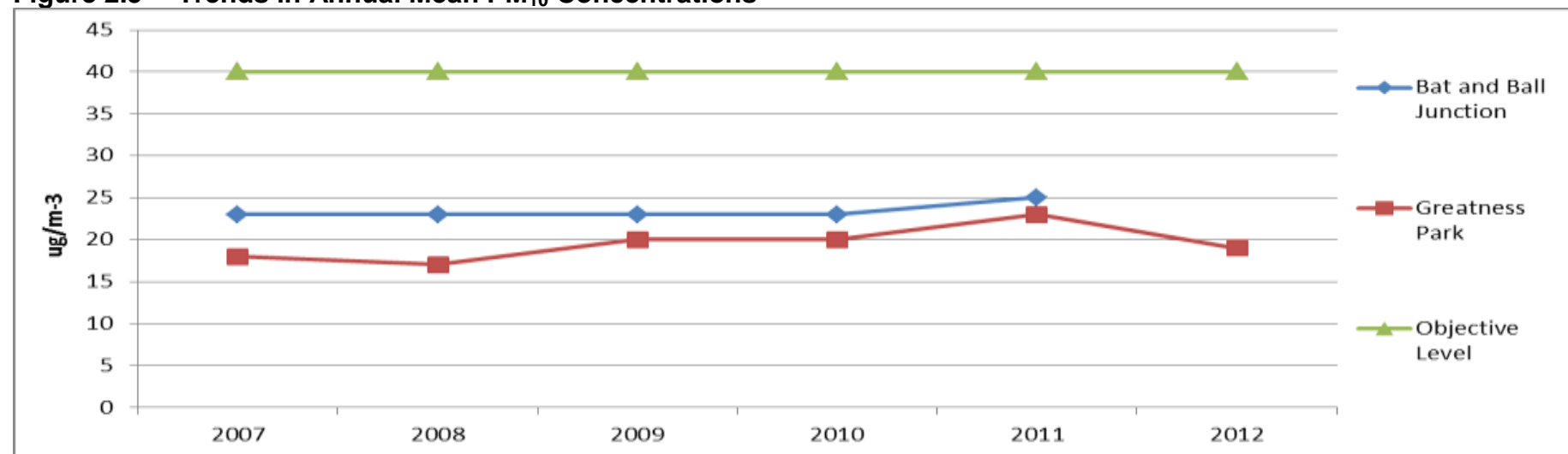


Table 2.7 Results of Automatic Monitoring for PM₁₀: Comparison with 24-hour Mean Objective

Site Location	Within AQMA?	Valid Data Capture 2012 % ^b	Confirm Gravimetric Equivalent (Y or N/A)	Number of Daily Means > 50µg/m ³				
				2008	2009	2010	2011	2012 ^c
Bat & Ball	Y	72		8	4	2	21	14 ^c
Greatness	N	97		3	5	1	15	12

^c if data capture for full calendar year is less than 90%, include the 90.4th percentile of 24-hour means in bracket

2.3 Other pollutants Monitored

Ozone: This is monitored at Greatness Background Site.

In 2012, there were 22 days when the rolling 8 hour mean exceeded 100 ug/m-3, thus breaching the air quality strategy objective of no more than ten days per year.

Summary of Compliance with AQS Objectives

The District Council has amalgamated four existing AQMAs to cover NO₂ exceedances along the A25 between existing AQMAs and has also extended the Riverhead AQMA.

A new AQMA has been declared to cover NO₂ exceedances at the Birchwood Road junction, Swanley.

Exceedances from fugitive particulate emissions from Sevenoaks Quarry are already subject to a Detailed Assessment.

There is a likely exceedance of the NO₂ hourly mean objective at sites in both the Sevenoaks High Street and Bat and Ball AQMAs. The AQMA orders are in the process of being amended to include the hourly objective.

The District Council has measured concentrations of Nitrogen dioxide above the Annual Mean Objective at locations previously not covered by an AQMA. These locations which are listed below, are now within the newly amended AQMA's so no further action is required

Bradbourne Vale North & South

London Road/Montreal

St Johns Egdean Walk
Worships Hill
Seal Hollow Road

Chart Lane Brasted
Birchwood road

The diffusion tube at 4A St John's Hill Sevenoaks recorded 41µg/m³. This is however a kerb side monitoring location and is not representative of relevant exposure. Using the NO₂ concentration and distance from roads calculator the projected levels at the nearest relevant exposure is calculated as 34 µg/m³, so no further action is required.

3 New Local Developments

3.1 Road Traffic Sources

The District Council confirms that there are no new or newly identified

- Narrow congested streets with residential properties close to the kerb.
- Busy streets where people may spend one hour or more close to traffic.
- Roads with a high flow of buses and/or HGVs.
- Junctions.
- New roads constructed or proposed since the last Updating and Screening Assessment.
- Roads with significantly changed traffic flows.
- Bus or coach stations.

which may have an impact on air quality within the Local Authority area.

3.2 Other Transport Sources

The District Council confirms that there are no new or newly identified

- Airports.
- Locations where diesel or steam trains are regularly stationary for periods of 15 minutes or more, with potential for relevant exposure within 15m.
- Locations with a large number of movements of diesel locomotives, and potential long-term relevant exposure within 30m.
- Ports for shipping.

which may have an impact on air quality within the Local Authority area.

3.3 Industrial Sources

The District Council confirms that there are no new or newly identified

- Industrial installations: new or proposed installations for which an air quality assessment has been carried out.
- Industrial installations: existing installations where emissions have increased substantially or new relevant exposure has been introduced.
- Industrial installations: new or significantly changed installations with no previous air quality assessment.
- Major fuel storage depots storing petrol.
- Petrol stations.
- Poultry farms.

which may have an impact on air quality within the Local Authority area.

3.4 Commercial and Domestic Sources

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

3.5 New Developments with Fugitive or Uncontrolled Sources

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

4 Local / Regional Air Quality Strategy

The District Council does not have a local Air Quality Strategy. We have declared 11 Air Quality Management Areas within the District, which are currently in the process of being amended to 9 and have developed an Air Quality Action Plan for which a progress report is provided within Chapter 9 of this document.

5 Planning Applications

The majority of major planning applications are subject to a section 106 agreement; this agreement includes compliance with the GLA code of practice for the control of dust and emissions from construction and demolition, best practice guidance.

This allows officers to request air quality from construction activity be monitored and ensure that best practice measures, such as damping down and wheel washing, are in place.

Planning applications that have been approved or are already under construction within the District include the following:

West Kent Cold Storage Rye Lane Dunton Green Sevenoaks Kent TN14 5HD

- A redevelopment comprising residential (up to 500 dwellings), a medical facility (500m²) together with associated access roads, car parking, footpaths and cycleways, landscaping and open space. Includes Section 6 funding of £32,000 towards implementing the objectives of Air Quality Action Plan within 2 mile radius of site (includes Riverhead area).

66 London Road Sevenoaks KENT TN13 1AT

- Demolition of existing commercial building and the construction of a new two storey retail unit with undercroft parking and the construction of a separate four storey apartment block consisting of 22 one and two bedroom apartments, together with associated car parking, bin stores and cycle areas.

Former Caffyns Site 80 London Road Sevenoaks KENT TN13 2JD

- Demolition of existing buildings and erection of a Lidl food store with 70 car parking spaces, 12 covered secure bicycle spaces & 4 short term bicycle spaces and associated landscaping. Includes Section 6 funding of £5000 towards general air quality in locality.

St. Bartholomews Hospital Laundry Bonney Way Swanley Kent BR8 7BL

- Demolition of existing laundry buildings. Erection of 65 dwellings (12 x 1 bed, 31 x 2 bed and 22 x 3 bed) together with associated car parking, landscaping and infrastructure works. Includes Section 6 funding of £5000 towards general air quality in locality.

6 Air Quality Planning Policies

The District Council is in the process of developing its Local Development Framework (LDF). The Core Strategy of the LDF was adopted in February 2011.

The LDF Core Strategy seeks to direct development towards settlements and locations with the greatest range of jobs, shops and services and which provide the most viable opportunities for travel by modes other than the car. This provides an opportunity to reduce the need to travel by car and, therefore, cut congestion and air quality problems linked to vehicle emissions. The Allocations and Development Management Plan: Draft for Submission proposes sites for new development in accordance with these policies of the Core Strategy

Core Strategy Policy SP2 proposes that the design and location of new development will take account of the need to improve air quality in accordance with the Air Quality Action Plan 2009. Planning permission will be refused where unacceptable impacts on air quality cannot be overcome by mitigation.

Policy SP2 of the Core Strategy also sets out the District Council's support for measures to enhance the safety and convenience of public and community transport and improve facilities for cyclists and pedestrians.

The Government published the National Planning Policy Framework in March 2012. It states that 'planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan'.

7 Local Transport Plans and Strategies

A Sevenoaks District Strategy for Transport has been prepared by Kent County Council (KCC) with support from the District Council. It sets out a vision for the District's transport network for the period 2010 – 2026.

The Transport Strategy sets out a target to work towards achieving the national air quality objectives for nitrogen dioxides and particulates by implementing the actions and measures contained within the Air Quality Action Plan 2009. The Strategy seeks to prioritise investment in the local road network at existing or potential congestion hotspots, including Air Quality Management Areas. It also sets out a commitment to lobby the Highways Agency to consider air quality issues in decisions on the development of the motorway and trunk road network.

The Transport Strategy sets out Kent County Council's intention to resolve congestion primarily through development of other transport modes. It, amongst other things, sets out policies and draft proposals to improve railway stations and bus waiting facilities and proposes the development of a Sevenoaks Cycling Strategy.

Kent County Council has also recently prepared its Local Transport Plan (LTP) for the period 2011-2016. This was adopted in April 2011. The LTP proposes that one of the objectives for investment in transport during the period will be achieving 'a healthier and safer county', though, amongst other things, tackling poor air quality in Air Quality Management Areas. The LTP proposes that approximately £250,000 will be available for schemes specifically relates to air quality over the period.

It is not known if any funds for projects which would improve air quality in the Sevenoaks District will be available.

8 Climate Change Strategies

Climate Local Kent has now been approved by all local authorities in the county and we are currently developing Climate Local Sevenoaks, which will reflect wider Kent targets and commitments.

We are already working towards strategy outcomes, though this document will formalise our position. This is all being led by the Locality Board's Climate Change Working Group, which has superseded the previous LSP group.

Climate Local Sevenoaks will, in effect, become the District Council's new climate change strategy and set the way forward. A completion time is expected for early 2014.

9 Implementation of Action Plans

9.1 Introduction

The first Air Quality Action Plan 2006, covering AQMAs 1-6 was superseded by the 2009 Air Quality Action Plan, which incorporated the first 6 AQMAs and a further 5 AQMAs. Ten AQMAs have been declared for traffic related exceedance of Nitrogen Dioxide (NO₂) national objective levels and one for similar traffic related exceedance of the Fine Particles (PM₁₀) national objective.

The Air Quality Action Plan 2009 outlines a number of measures and actions which are aimed at reducing levels of air pollution within AQMAs and generally across the District. The Plan is measured via an annual air quality progress report which is submitted to Defra.

The District Council is committed to working towards improving the air quality in order to improve the quality of life of its residents.

Please see Appendix C: Table 9.1 Air Quality Action Plan Progress which summarises the results of the progress of the above action plan so far.

Additional Supporting Information regarding the progress of specific measures in the last 12 months.

Measures (Actions) 1, 8 & 10 – Major/quick Wins within AQMAs

The Joint Transport Board considered reports on:

- The implementation of a pedestrian crossing phase at the Pembroke Road/High Street/Suffolk Way traffic signal junction (Sevenoaks)
- Bat and Ball – Further options to help improve traffic and air quality of the junction with the use of s106 funding

Measure (Action) 5 – Quick Wins Within AQMA's (Riverhead & Dunton Green)

The District Council have discussed with KCC Highways a number of highway improvements which may aid with traffic flows through Riverhead and Dunton Green. These include:

- Minor kerb alteration on west side of Amherst Hill just south of The Harvester restaurant exit to allow 2 lanes to form earlier.
- Alteration to parking bays and bus stop on the east side of London Road (southwards to A25 Maidstone Road) to allow 2 lanes to form earlier
- Minor changes to centre line on London Road between A25 Maidstone Road and Bullfinch Lane.

Measure (Action) 6 – Quick Wins Within AQMA's (Swanley)

The District Council have discussed with KCC Highways a number of highway improvements which may aid with traffic flows through Swanley. These include:

- Minor adjustment of timing of pelican crossing on High Street – being looked at by KCC signals.
- Relocation of bus stop on the High Street (opposite Bevan Place) closer to Goldsel Road roundabout.
- Alteration of Give Way line on Swanley Lane entry to roundabout – to be implemented by KCC with re-surfacing.

Measure (Action) 7 – Quick Wins Within AQMA's (Seal High Street)

The District Council have discussed with KCC Highways the possible cutting back of vegetation on south side of the High Street opposite School Lane to allow traffic to ease past turning vehicles.

Measure (Action) 12 - Concessionary travel schemes

The concessionary travel pass scheme is now provided by KCC. As of the 31st march 2013, there are currently 19800 concessionary travel passes holders in the District. The scheme continues to operate in line with national guidance.

Measure (Action) 13 - Review parking restrictions in AQMA's

An informal review of parking issues in Riverhead has been undertaken but no firm outcome as yet. A review of the Dunton Green area is underway with a view to implementing parking restrictions to improve traffic flow at junctions and on main roads. Comments to KCC in respect to the Bat and Ball junction have been taken on board in their latest proposals to improve the junction and spend Section 106 monies. Waiting for further action by KCC in respect to Swanley and Seal areas

The District Council have also introduced a number of parking schemes that formalise parking and have helped maintain traffic flow and reduced congestion at the following sites;

- Sycamore Drive & Northview (Swanley)
- Knockholt Station (Halstead)
- Chapel Wood Road (New Ash Green)
- High Street parking bays (outside WH Smith) (Sevenoaks)
- Bayham Road (Sevenoaks)

Measure (Action) 14 - Carbon Reductions Management Plan

The District Council has adopted Kent Climate Local and is working to deliver each commitment. We are also in the process of developing Climate Local Sevenoaks, which will provide more detail down to District-level.

The LB Climate Change Working Group continues to develop and oversee related strategy across sectors. Our performance on carbon-emissions (industry, domestic and transport) as at 2010 was 8.8t per capita CO₂, which shows a 1.1% reduction on 2005 baseline-data.

Measure (Action) 14 - Energy efficiency schemes.

The District Council has been seeking to maximise the remaining government grant through schemes such as Warm Front as Green Deal takes over. We have also continued to work with Heatseekers and this has resulted in 950 low-carbon retrofit measures. Our partner housing associations have a good track record in their work to retrofit social housing and SAP ratings reflect as such.

Measure (Action) 14 - Promotion of Fuel Poverty initiative

The Sevenoaks District Private Sector Stock Condition Survey (February 2011) model estimate for fuel poverty in the private sector was 11%, which was 1% lower than the national average of 12%. Fuel poverty is identified and addressed through multi-agency assessments including the District Council's own HERO scheme which includes energy related assessment as part of a wider enhanced housing options service. The District Council's retrofit programmes continue to lower household bills and take residents out of fuel poverty. In-Touch, The District Council's home improvement agency, continues to work with older and vulnerable residents, both in identifying and reducing fuel poverty.

Measure (Action) 14 - Eco Schools Programme

In Sevenoaks, 9 schools have achieved bronze awards, 15 silver and 5 have obtained the highest Green Flag award. 8 other schools are registered in the District. Hever CEP School and Leigh Primary School have installed Solar PV Panels, Furness School has improved its insulation and Swanley Technology College has an energy generating turbine.

Measure (Action) 14 – Recycling

Following a review of the existing recycled waste streams and the potential for Council investment in a separately collected waste stream dry recycled and garden waste streams have been consolidated at an annual performance target of 32%. The business paper and card collection initiative continues to develop with a corresponding reduction in secondary handling and transport of general commercial waste hauled to landfill.

Measure (Action) 15 – Inspection and Enforcement

The District Council continue to enforce industrial control and nuisance legislation to minimise pollution within the District. In 2012 The Environmental Health section dealt with 156 service requests relating to pollution. The majority of these service requests related to bonfires, but also included complaints of dust from domestic and commercial sources and domestic properties compliance with the Clean Air Act 1993 (Smoke Control Orders).

The District Council completed inspections of all 31 industrial processes regulated under The Environmental Permitting (England and Wales) Regulations 2010. No formal action has been required concerning any breaches of this legislation.

Measure (Action) 15 – Promotion of Composting Schemes

The District Council are working Straight plc. to offer local residents a composting bin and other products at a discounted price until the 14th March 2014.

The benefits of composting and advice are included on standard letters sent to occupiers of domestic properties following bonfire complaints.

Measure (Action) 16 - Promote efficient use of vehicles

The District Council are working with KCC to consider a network of charging points across the county. We have also established a working group to look at the potential for charging points ahead of this county-wide approach. We have arranged the testing of an electric vehicle for both officers and members and we are looking to test other models to compare efficiencies and practicalities. We continue to signpost to agencies such as the Energy Saving Trust. The LB Climate Change Working Group continues to lead on this initiative and reports are taken to Management Team to consider related strategy.

9.2 Achievement of Air Quality Objectives

It is the aim of the Action Plan to reduce NO₂ and PM₁₀ levels where possible to help achieve the national objectives.

9.3 Main Outcomes

The Air Quality Action Plan 2009 contains 17 actions and 71 individual measures within the actions. In year 2, of the 5 year plan, an extensive variety of measures continue to be progressed.

9.4 Future Progress

To continue to work towards achieving the actions and the individual measures contained within them.

10 Conclusions and Proposed Actions

10.1 Conclusions from New Monitoring Data

Various sites continue to show likely exceedance of the NO₂ annual mean objective. Levels in Sevenoaks High Street South can exceed 60ugm-s NO₂ annual mean indicating a possible exceedance of the 200ug/m-3 1 hour mean during peak traffic hours (this is a congested canyon site). Similar exceedances have occurred in a narrow congested part of St Johns and Seal Road at Bat & Ball junction and Birchwood Road Swanley.

It has been formally agreed to revoke AQM's 5, 9 ,11 and 12 and declare a new AQMA, running the length of the A25 from the boundary with Tonbridge and Malling Council to the boundary with Tandridge District Council..

10.2 Proposed Actions

- To commence monitoring at the Sevenoaks Quarry as soon as possible
- To continue to implement the measures contained within the Air Quality Action Plan 2009

11 References

- 11.1. LAQM. PRG (03). Part IV of the Environment Act 1995. Local Air Quality Management Progress Report Guidance. December 2003.
- 11.2. LAQM.TG (03) Part IV of the Environment Act 1995. Local Air Quality Management Technical Guidance. January 2003.
- 11.3. Sevenoaks District Council Air Quality Action Plan 2009
- 11.4. Sevenoaks District Council Updating and Screening Assessment 2009
- 11.5. Sevenoaks District Council Detailed Assessment of Nitrogen Dioxide at the Birchwood Road junction, Swanley

Appendices

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

Appendix B: Maps of current and proposed AQMA's

Appendix C: Table 9.1 Air Quality Action Plan Progress

Appendix A:

Quality Assurance / Quality Control (QA/QC) Data

Diffusion Tube Bias Adjustment Factors

Nitrogen dioxide diffusion tubes are supplied and analysed by ESG Scientifics (formerly Harwell Scientifics at Didcot). This laboratory is UKAS accredited.

The tubes were prepared by spiking acetone:triethanolamine (50:50) onto grids prior to the tubes being assembled.

The lab confirms it follows the procedures set out in the Harmonisation Practical Guidance and that it is ranked 'Good' in the WASP intercomparison scheme.

The tubes have been compared with the reference method by a triplicate co-location study with the chemiluminescent NOX analysers at Greatness Park Sevenoaks.

The nationally derived Bias Factor for 2012 is 0.79

National Diffusion Tube Bias Adjustment Factor Spreadsheet							Spreadsheet Version Number: 06/13				
Follow the steps below in the correct order to show the results of relevant co-location studies							This spreadsheet will be updated at the end of September 2013				
Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods							Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet				
This spreadsheet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.							LAQM Helpdesk website				
The LAQM Helpdesk is operated on behalf of Defra and the Devolved Administrations by Bureau Veritas, in conjunction with contract partners AECOM and the National Physical Laboratory.							Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.				
Step 1:		Step 2:	Step 3:	Step 4:							
Select the Laboratory that Analyses Your Tubes from the Drop-Down List		PREPARE A PREPARATION METHOD from the Drop-Down List	SELECT A YEAR from the Drop-Down List	Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor ² shown in blue at the foot of the final column.							
If a laboratory is not shown, we have no data for this laboratory.		If a preparation method is not shown, we have no data for this method at this laboratory.	If a year is not shown, we have no data ²	If you have your own co-location study then see footnote ⁴ . If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@uk.bureauveritas.com or 0800 0327953							
Analysed By ¹	Method ² <small>To add your entries, please add from the pop-up list</small>	Year ³ <small>To add your entries, please add from the pop-up list</small>	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) [$\mu\text{g}/\text{m}^3$]	Automatic Monitor Mean Conc. (Cm) [$\mu\text{g}/\text{m}^3$]	Bias (B)	Tube Precision ⁿ	Bias Adjustment Factor (A) (Cm/Dm)	
ESG Didcot	50% TEA in acetone	2012	SU	Thanet District Council	12	21	18	16.6%	G	0.86	
ESG Didcot	50% TEA in acetone	2012	UB	CITY OF YORK COUNCIL	12	28	24	15.3%	P	0.87	
ESG Didcot	50% TEA in acetone	2012	R	CITY OF YORK COUNCIL	12	41	32	30.5%	P	0.77	
ESG Didcot	50% TEA in acetone	2012	R	CITY OF YORK COUNCIL	12	37	28	31.4%	G	0.76	
ESG Didcot	50% TEA in acetone	2012	R	CITY OF YORK COUNCIL	12	41	30	34.4%	G	0.74	
ESG Didcot	50% TEA in Acetone	2012	KS	Suffolk Coastal District Council	12	50	44	13.8%	G	0.88	
ESG Didcot	50% TEA in Acetone	2012	R	Midstone Borough Council	12	48	44	11.2%	P	0.90	
ESG Didcot	50% TEA in Acetone	2012	B	Midstone Borough Council	12	20	14	45.3%	G	0.69	
ESG Didcot	50% TEA in acetone	2012	R	Armagh City and District Council	12	40	27	45.3%	G	0.69	
ESG Didcot	50% TEA in acetone	2012	R	Dumfries and Galloway Council	12	38	33	14.2%	G	0.88	
ESG Didcot	50% TEA in acetone	2012	R	Cambridge City Council	12	46	35	31.5%	G	0.76	
ESG Didcot	50% TEA in Acetone	2012	R	Swale Borough Council	11	44	32	38.7%	G	0.72	
ESG Didcot	50% TEA in acetone	2012	R	Northumberland County Council	12	36	28	31.1%	S	0.76	
ESG Didcot	50% TEA in acetone	2012	R	North Down Borough Council	12	45	33	36.6%	G	0.73	
ESG Didcot	50% TEA in acetone	2012	R	Medway Council	11	38	32	18.7%	G	0.84	
ESG Didcot	50% TEA in acetone	2012	UB	Medway Council	11	25	24	2.3%	G	0.98	
ESG Didcot	50% TEA in acetone	2012	B	Medway Council	10	29	19	51.3%	P	0.66	
ESG Didcot	50% TEA in acetone	2012	R	Lisburn City Council	3	28	25	13.4%	P	0.88	
ESG Didcot	50% TEA in acetone	2012	R	Down District Council	11	50	38	32.1%	G	0.76	
ESG Didcot	50% TEA in acetone	2012	R	Castlereagh Borough Council	12	48	30	61.3%	G	0.62	
ESG Didcot	50% TEA in acetone	2012	R	Bridgend County Borough Council	12	28	27	4.5%	G	0.96	
ESG Didcot	50% TEA in acetone	2012	R	Tunbridge Wells BC	12	62	49	27.0%	G	0.79	
ESG Didcot	50% TEA in Acetone	2012	R	West Oxfordshire District Council (WODC)	11	48	36	32.3%	G	0.76	
ESG Didcot	50% TEA in acetone	2012		Overall Factor² (38 studies)					Use	0.79	

The locally derived Bias Factor from the above co-location study for 2012 was 0.91

Data used for this calculation is as follows.

Co-location Study, Greatness Park

Period	Tube 1	Tube 2	Tube 3	
JAN	29.5	32	31.2	
FEB	30.9	30.1	31.3	
MAR	29.6	27.1	29.6	
APR	19.5	19.3	20	
MAY	16	14.7	15.3	
JUNE	10.6	12.1	11.4	
JULY	12.9	12.5	12.3	
AUG	11.2	13.1	13.6	
SEPT	17.3	18.8	17.5	
OCT	24	23	23.5	
NOV	25.2	21.3	24	
DEC	25.3	22	20.4	
Tube Average	21	20.5	20.8	Total Average 20.8

Continuous Analyser Annual Mean = 19

$$19 / 20.8 = 0.91$$

Discussion of Choice of Factor to Use

Local bias adjustment factors have been used for consistency with previous years Data and is viewed as being more representative of local conditions. The national factor is made up from a number of different results showing some spread in values.

PM Monitoring Adjustment

All PM10 monitoring is by TEOM. Data is collected and ratified by ERG Kings College London. They have corrected all results using their Volatile Correction Model.

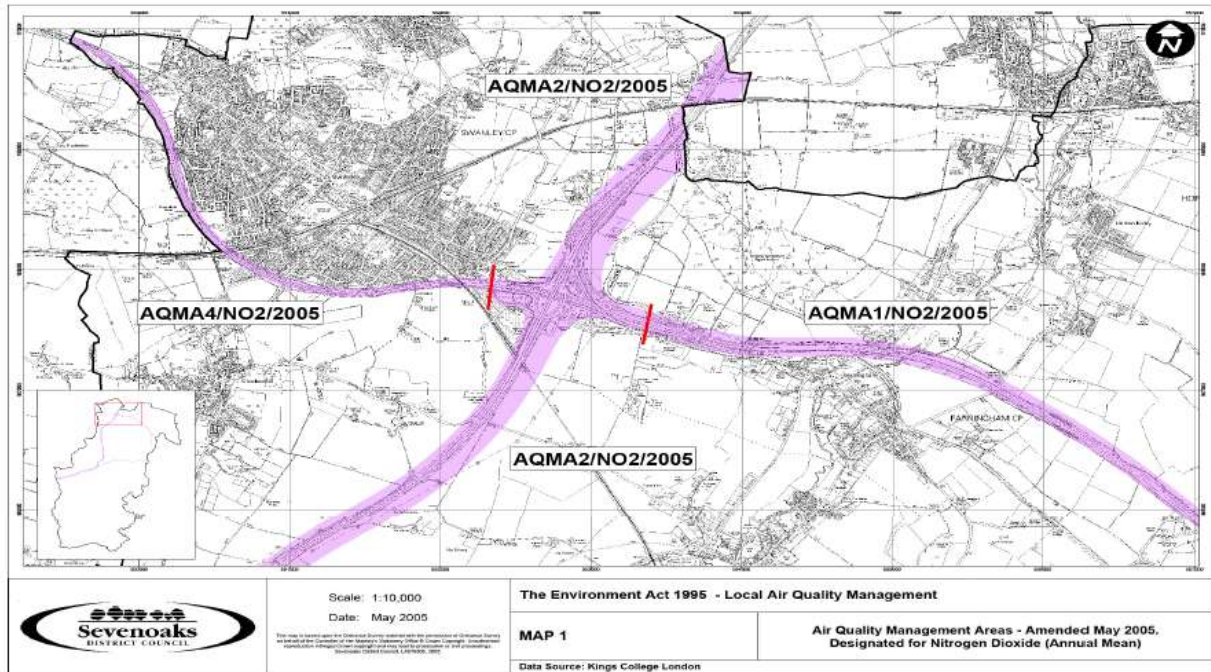
QA/QC of Automatic Monitoring

LSO, routine calibration/span checks, etc are carried out by ERG Kings College London to London Air Quality Network standards and the National Physical Laboratory visit twice a year to undertake full calibration checks.

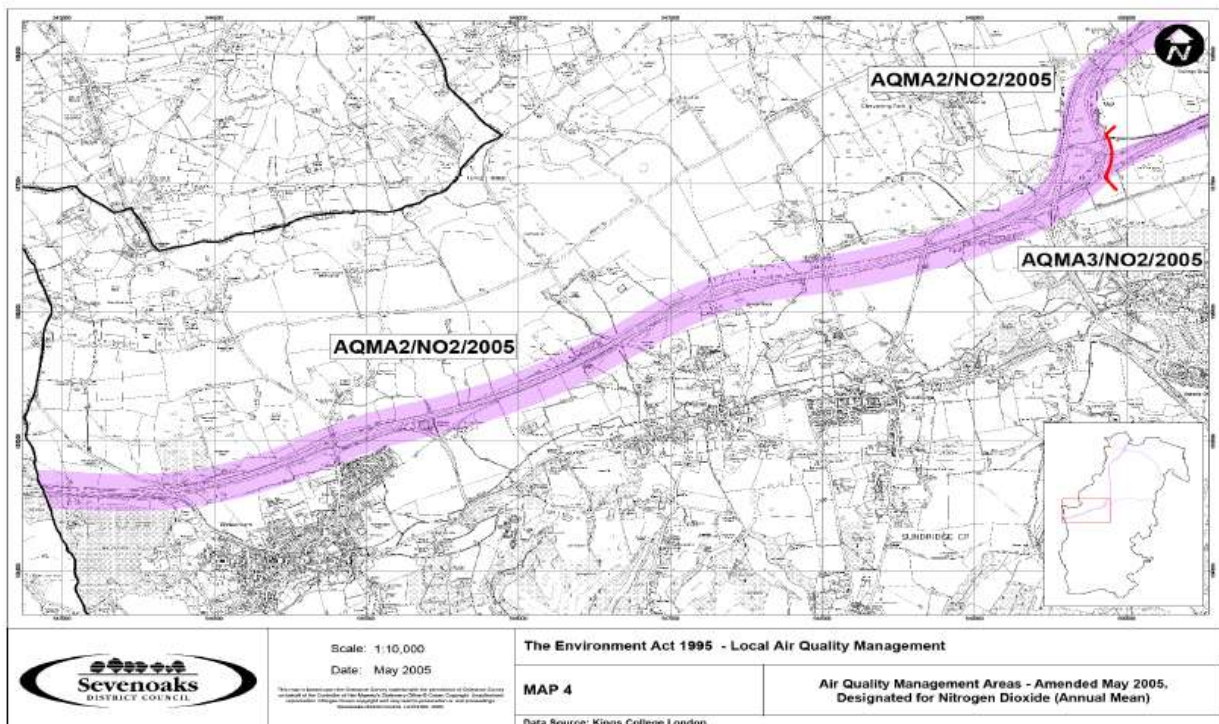
Appendix B:

Maps of current and proposed AQMA's

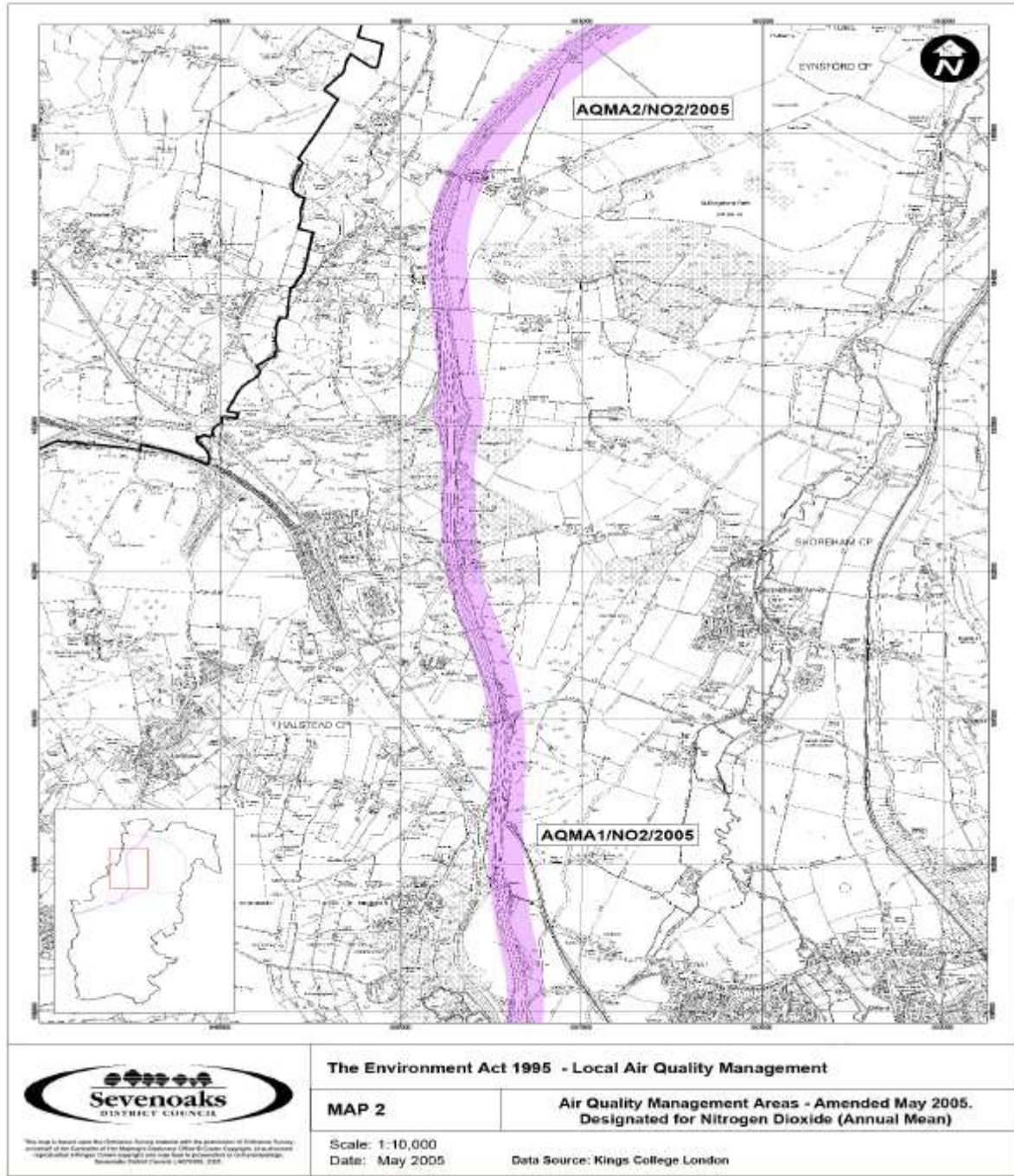
Map 1 – AQMAs 1, 2 & 4 (M20, M25 and A20(T) Swanley By Pass)



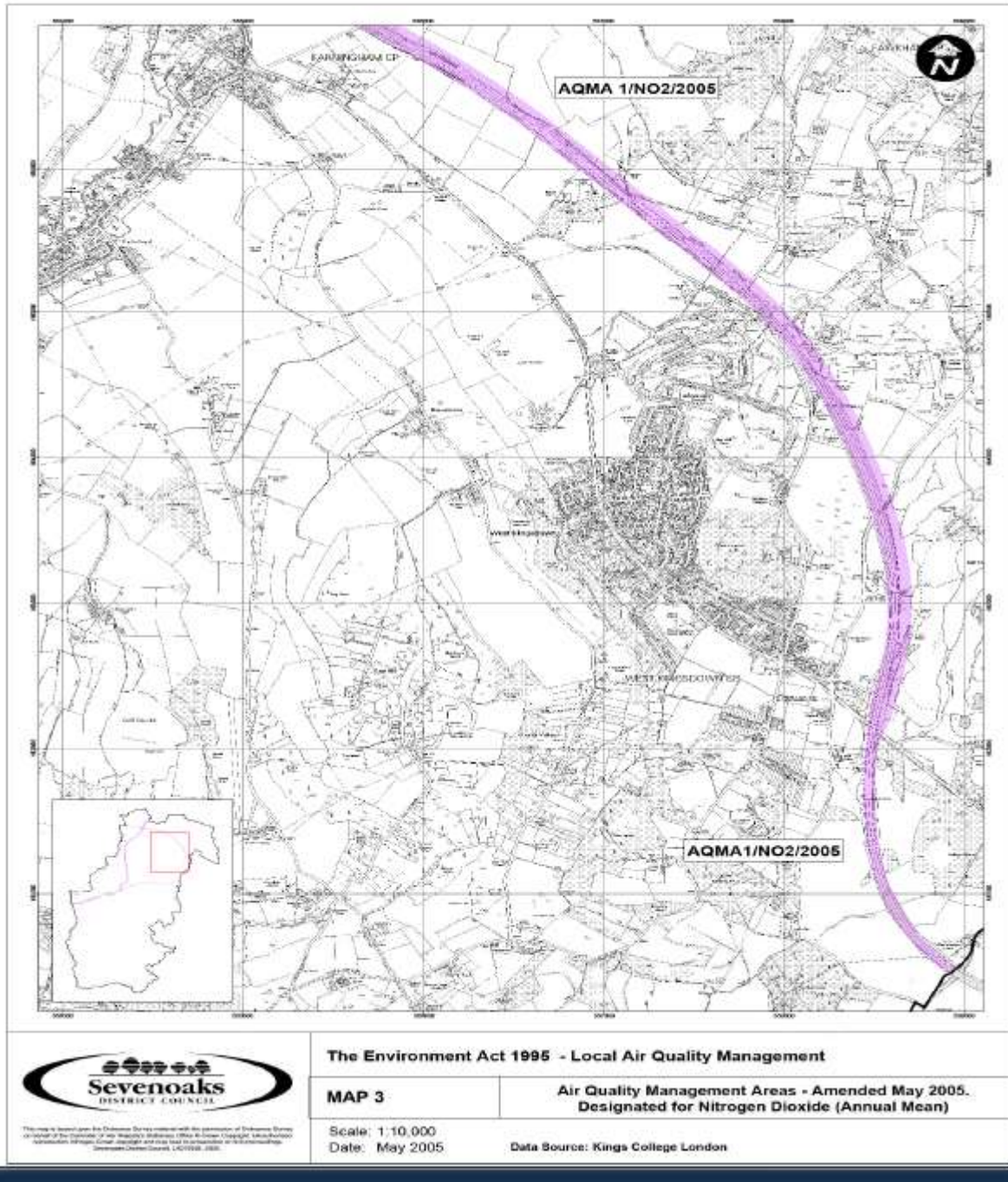
MAP 4 – AQMAs 2 & 3 (M25 & M26)



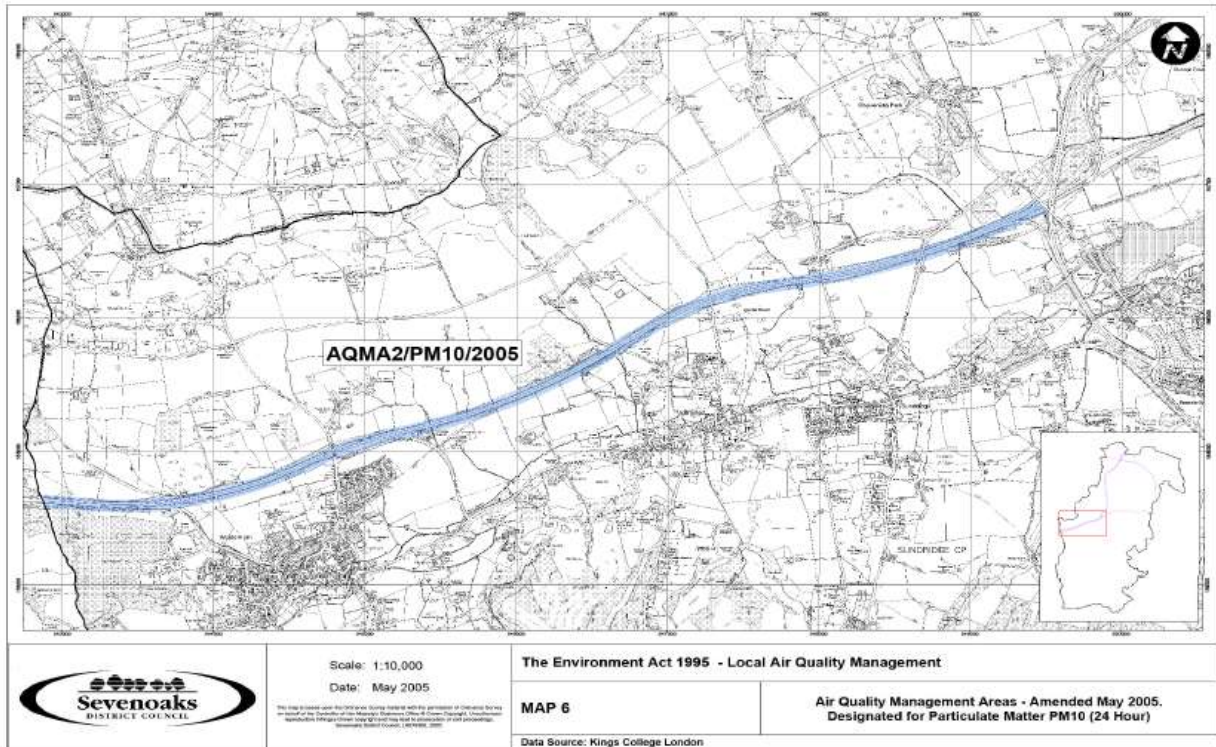
MAP 2 – AQMAs 1 & 2 (M20 & M25)



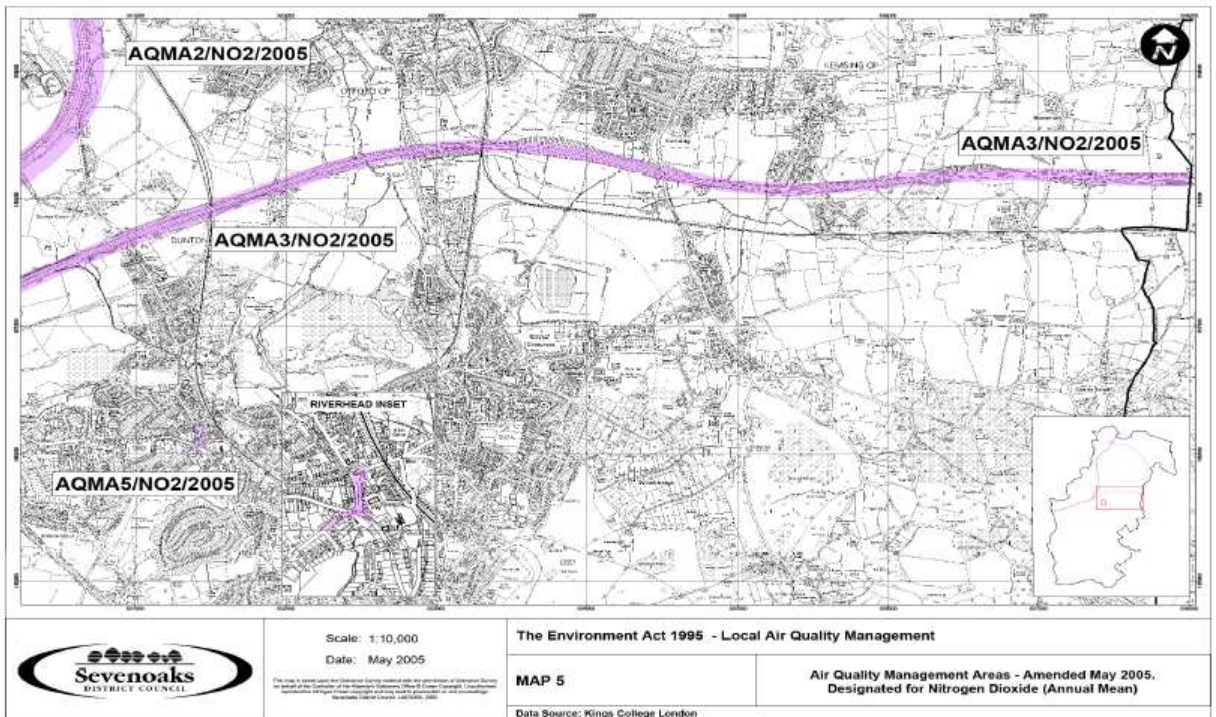
MAP 3 – AQMA 1 (M20)



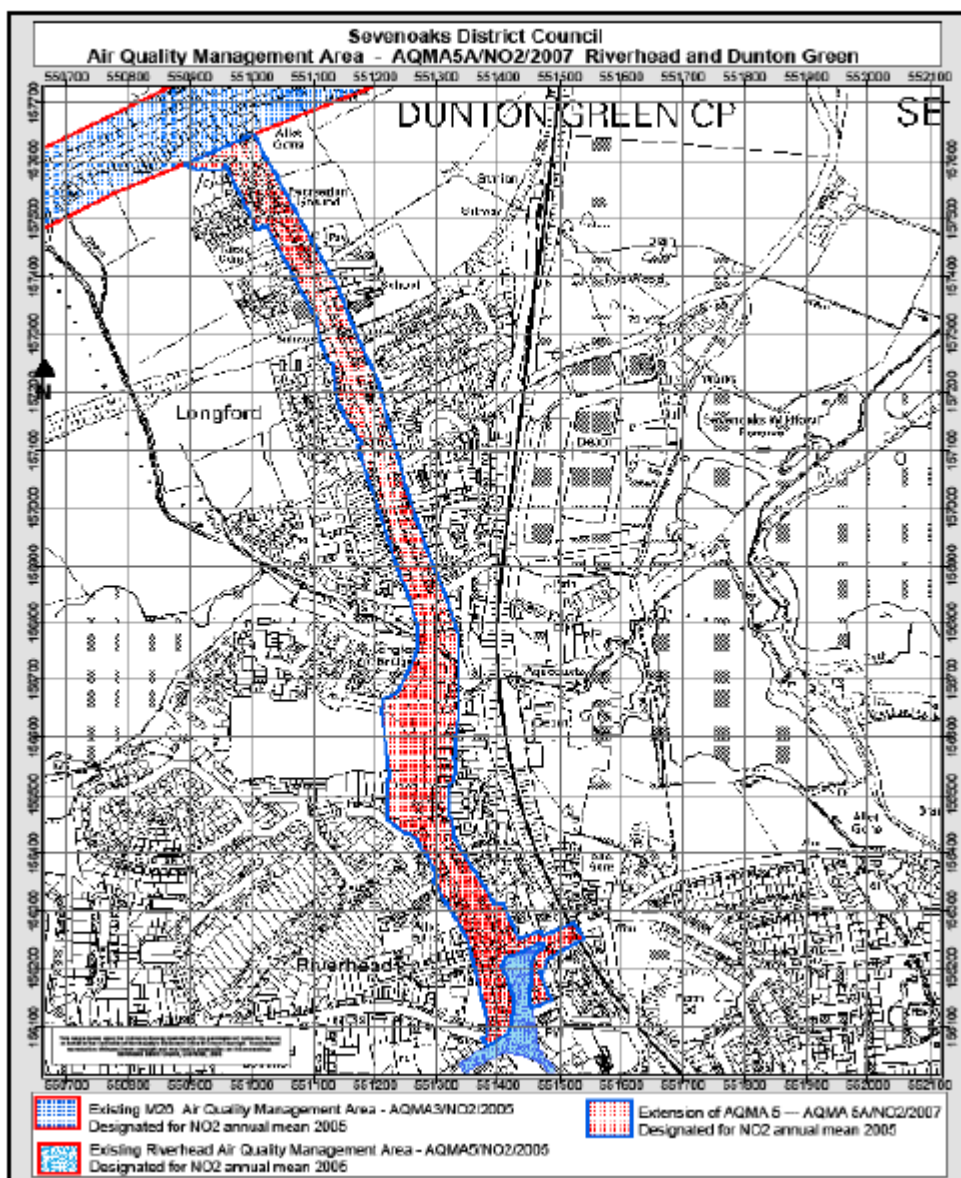
MAP 6 – AQMA 2 (M25) – Section designated for Particulate Matter (PM10) - also referred to as AQMA 6

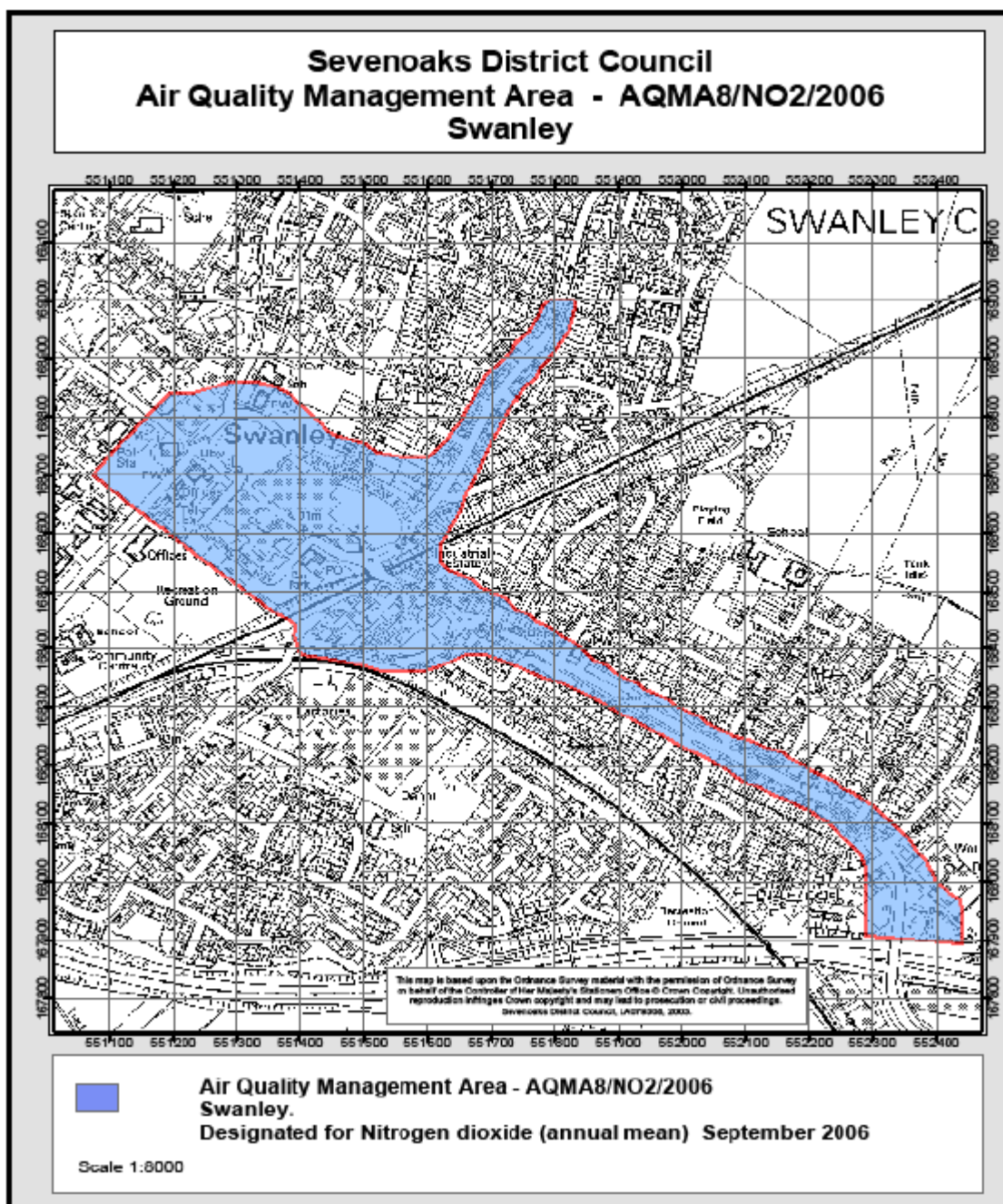


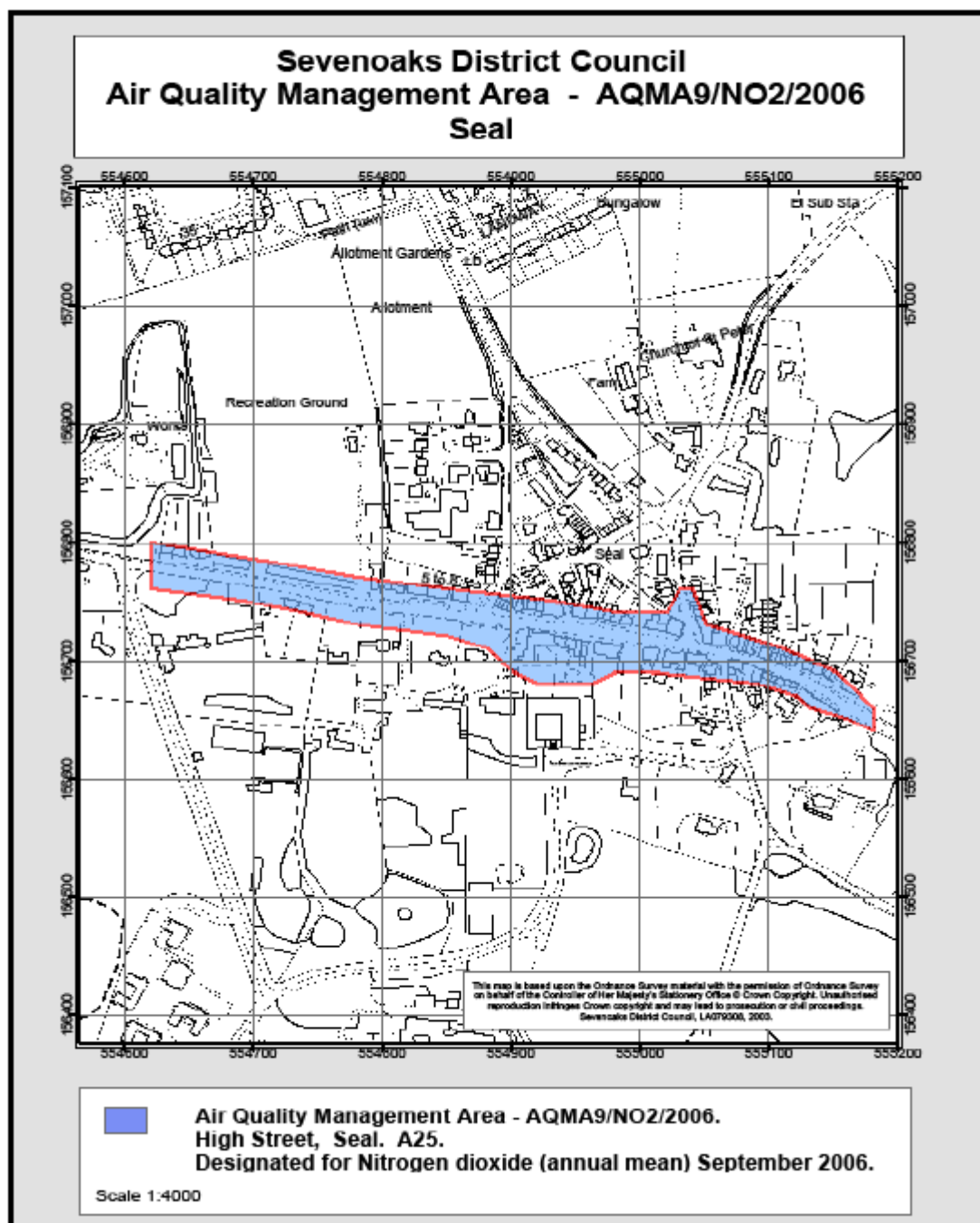
MAP 5 - AQMAs 2 & 3 (M25 & M26)

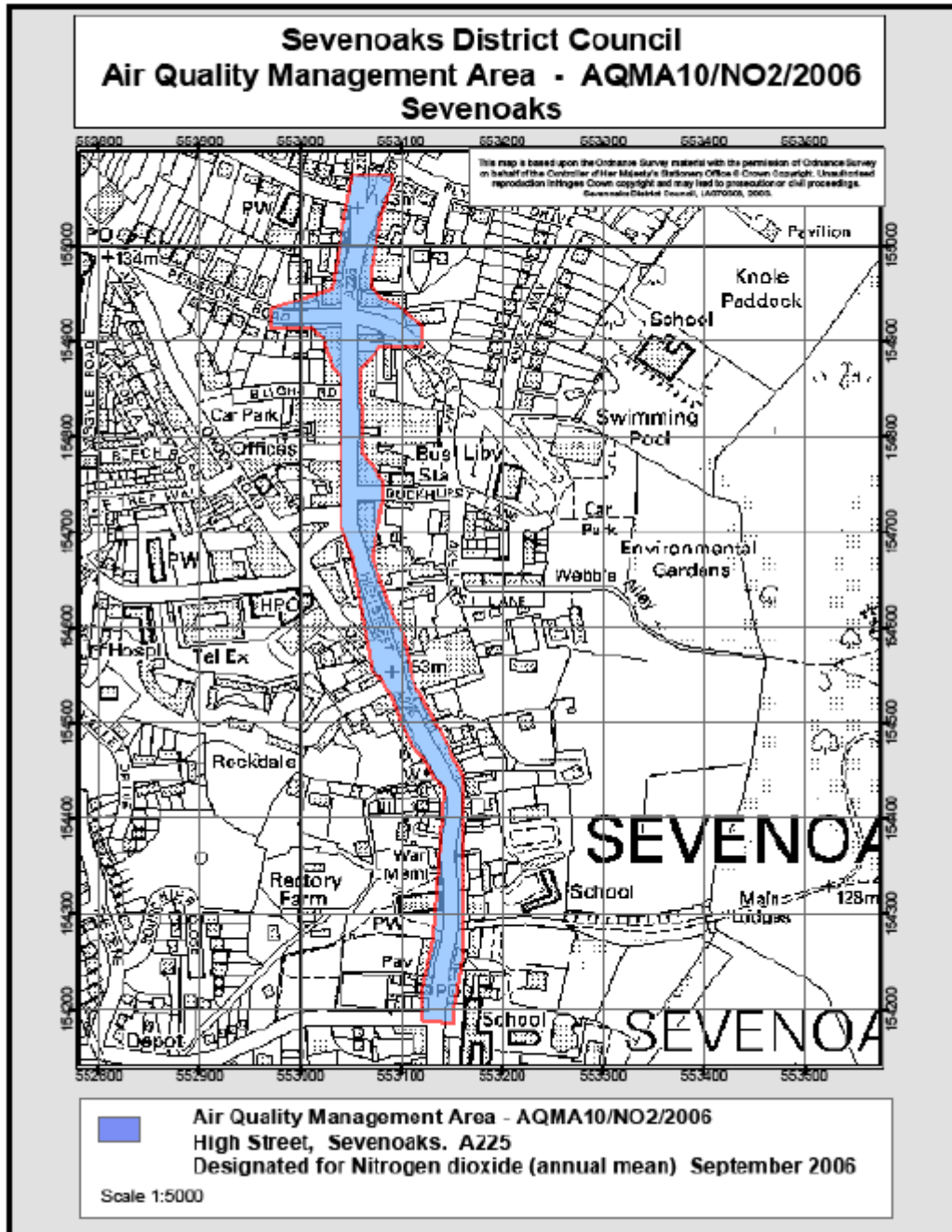


Map 5A – AQMA 5A (Dunton Green) – Extension to AQMA 5 (Riverhead)

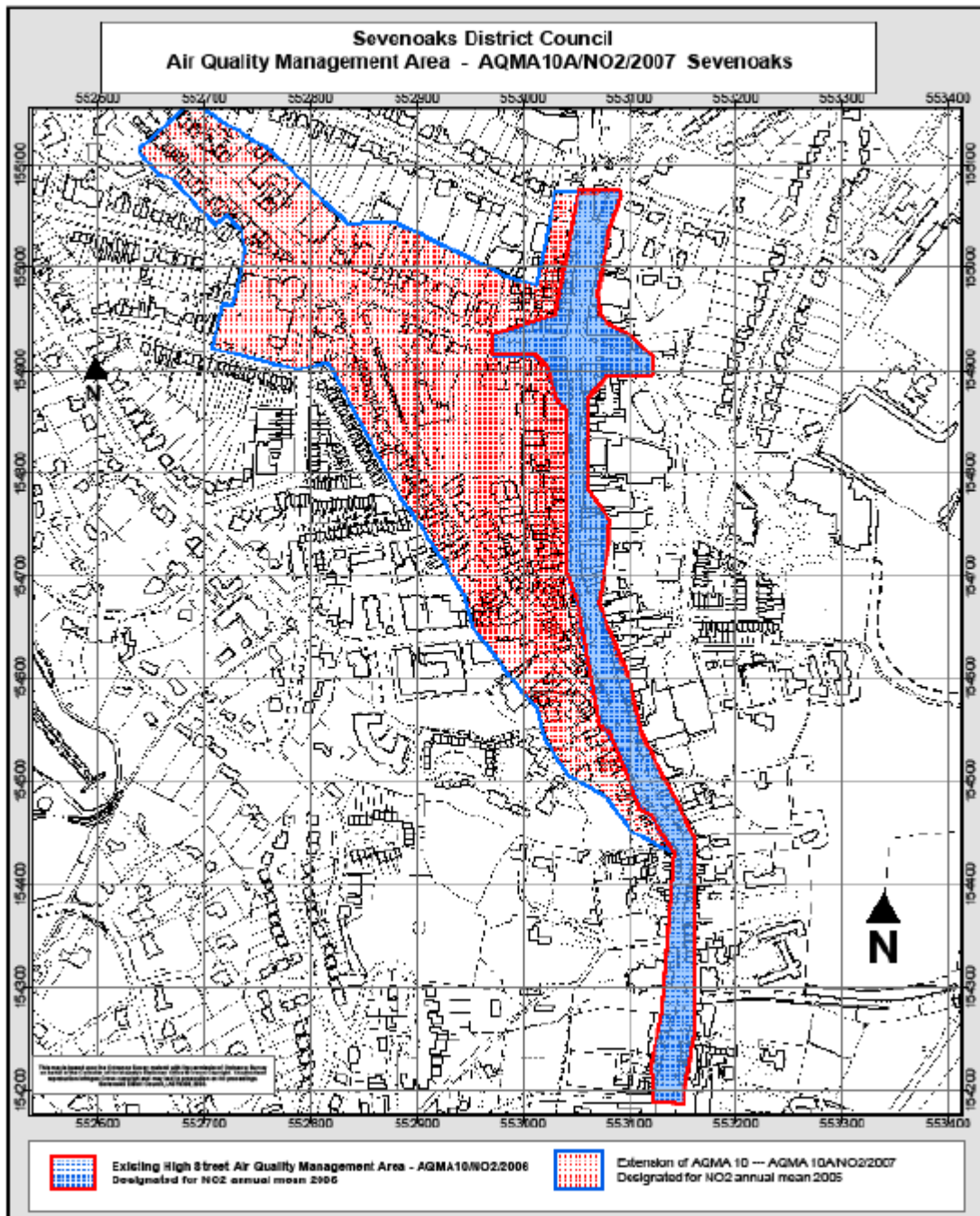


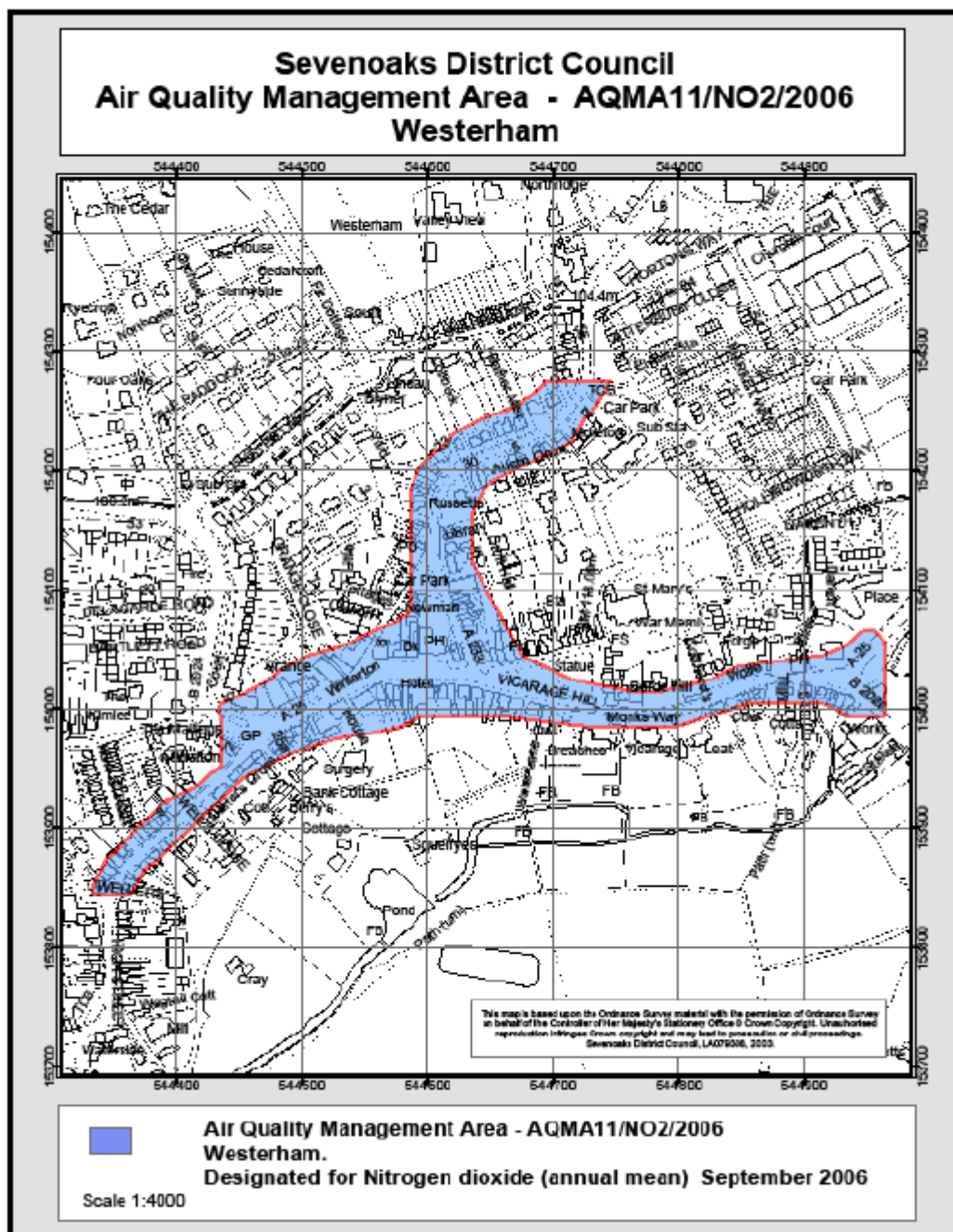


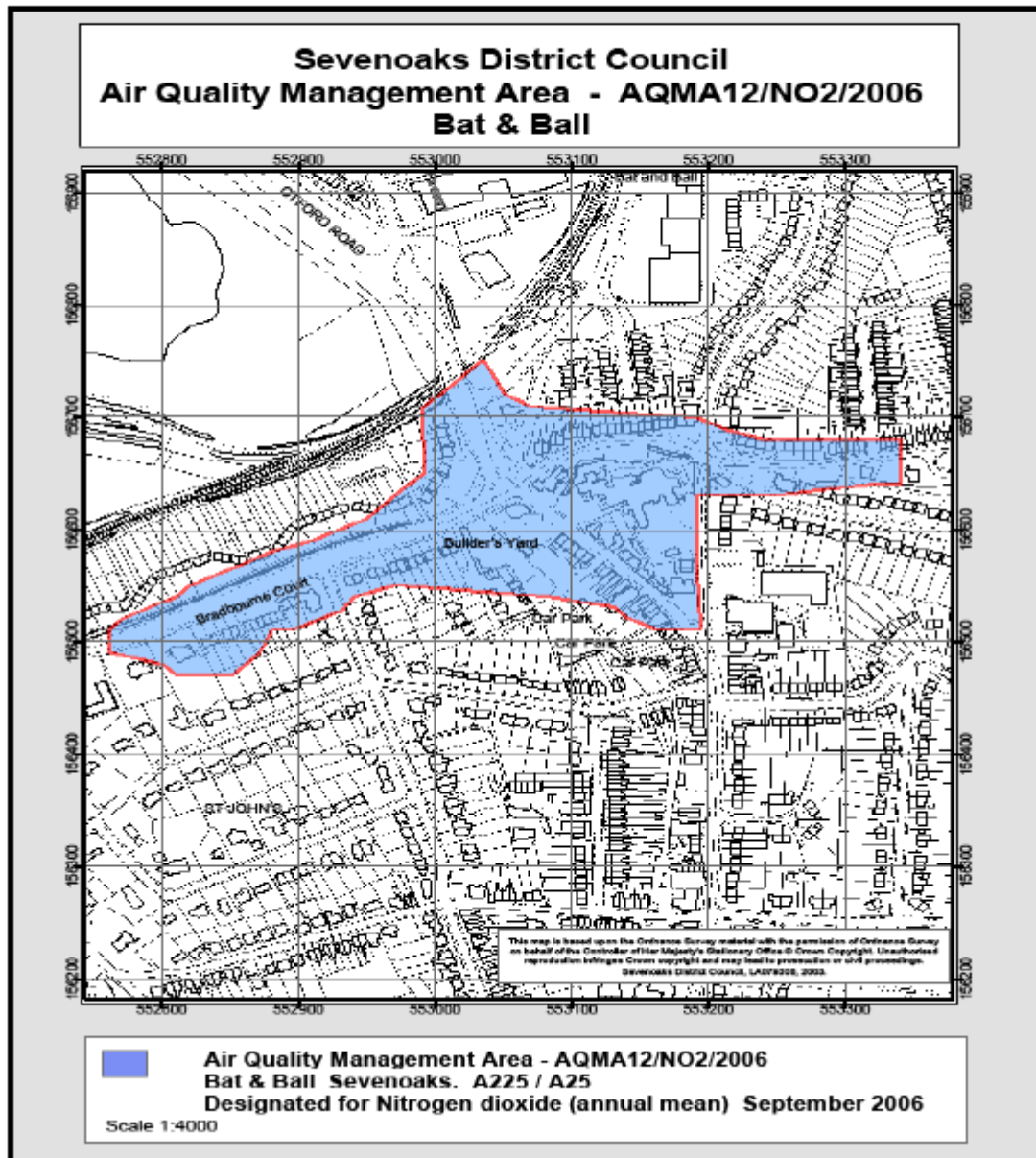




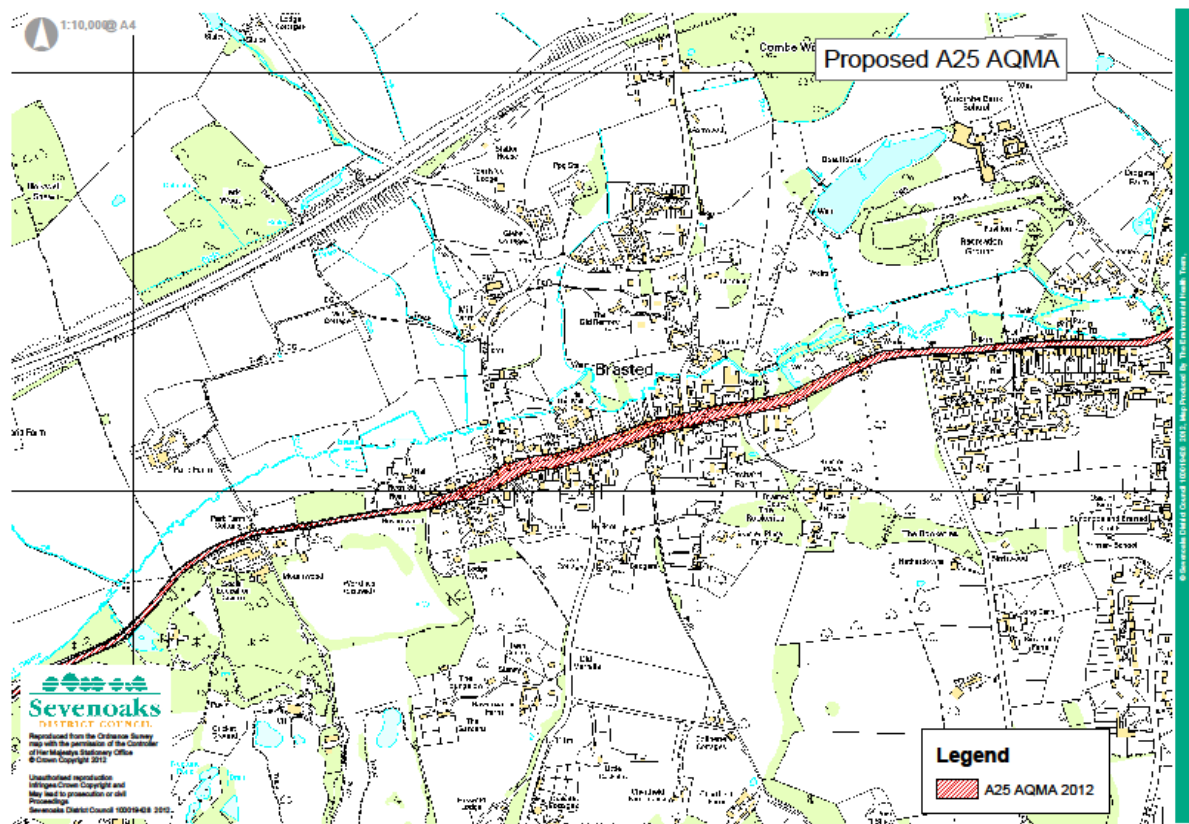
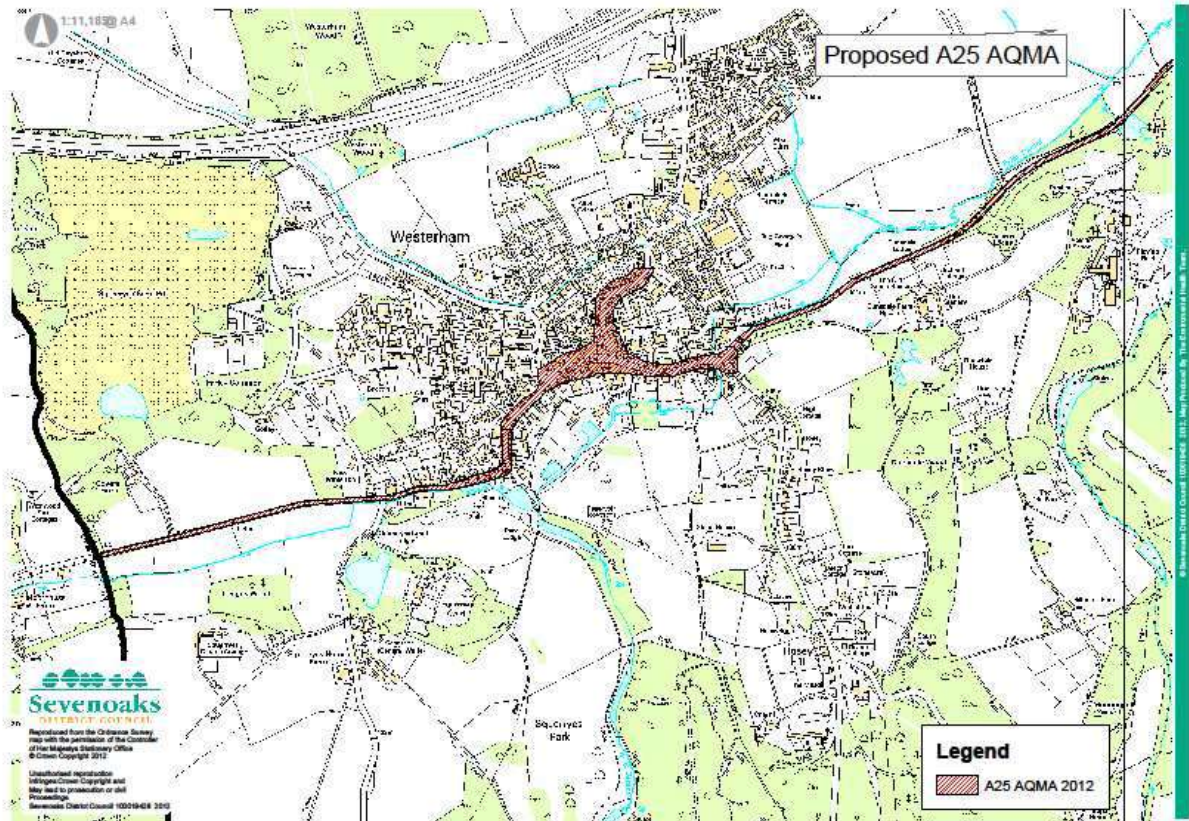
MAP 10A - AQMA 10A (Sevenoaks) – Extension to AQMA 10 (Sevenoaks)

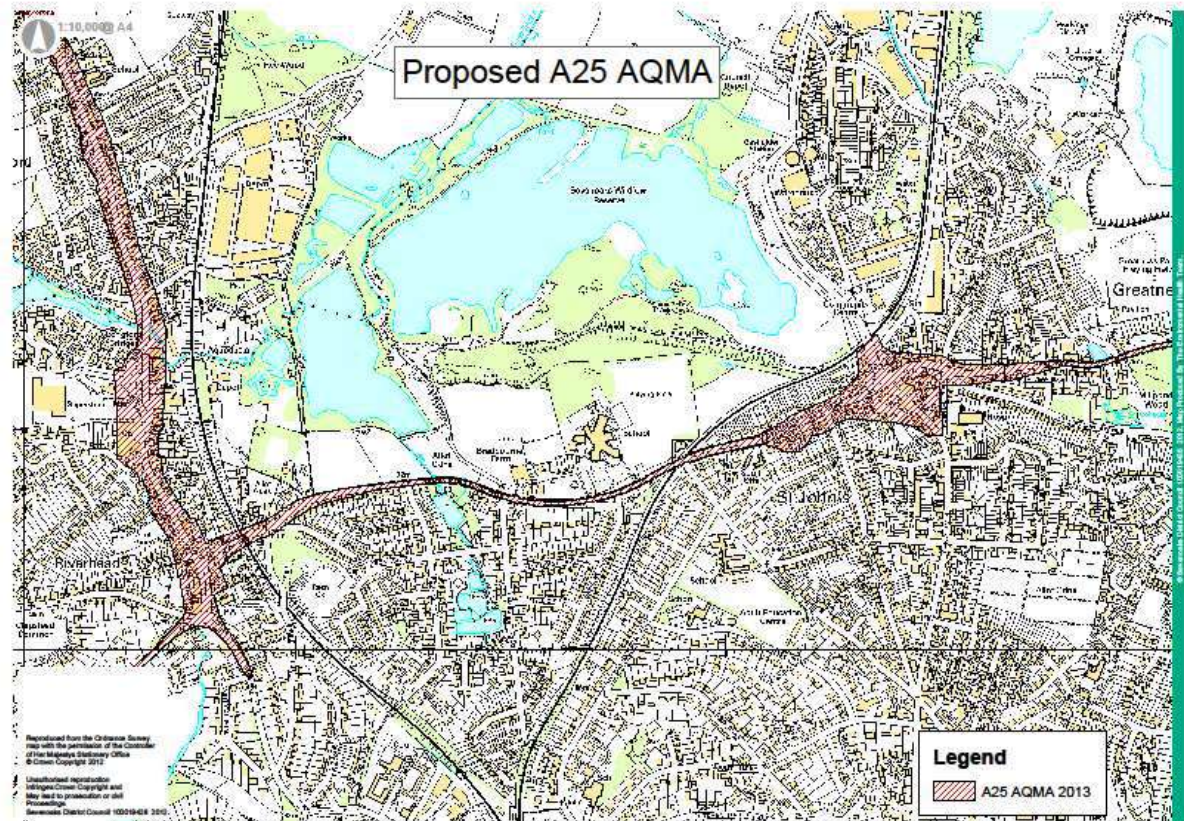
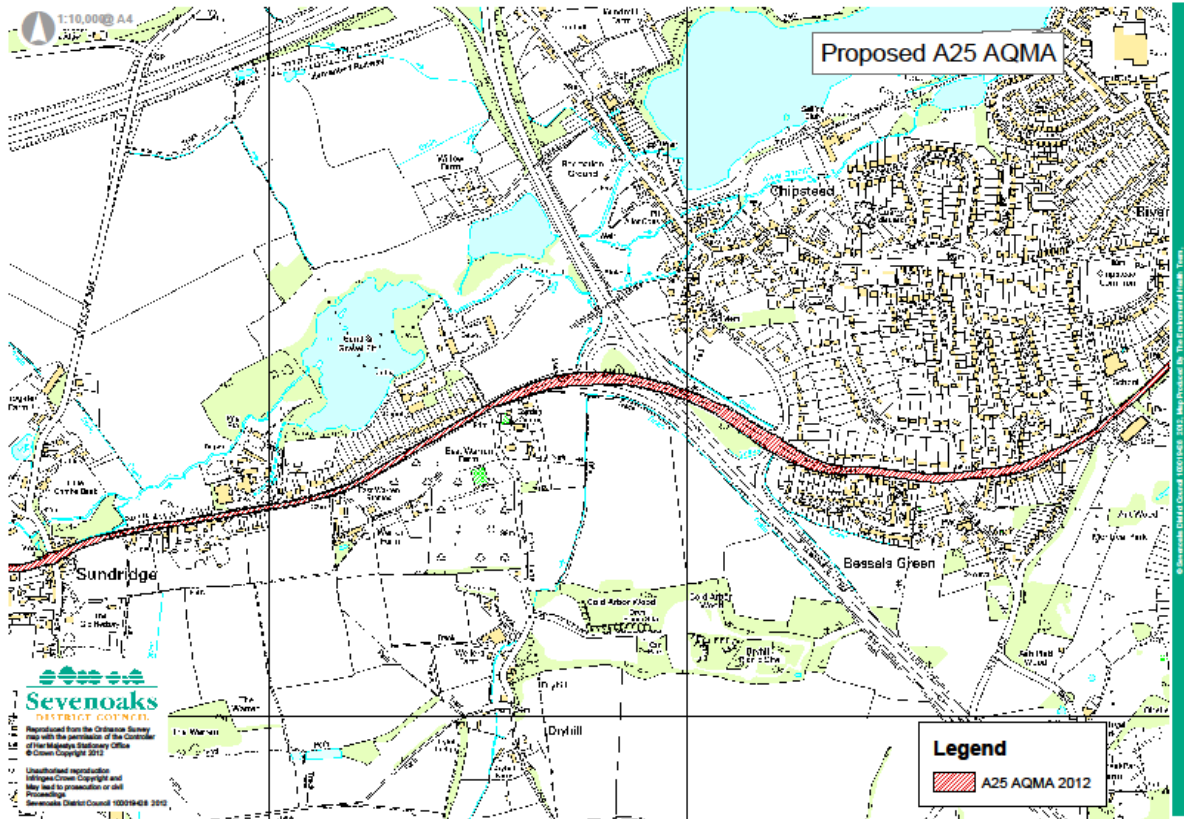




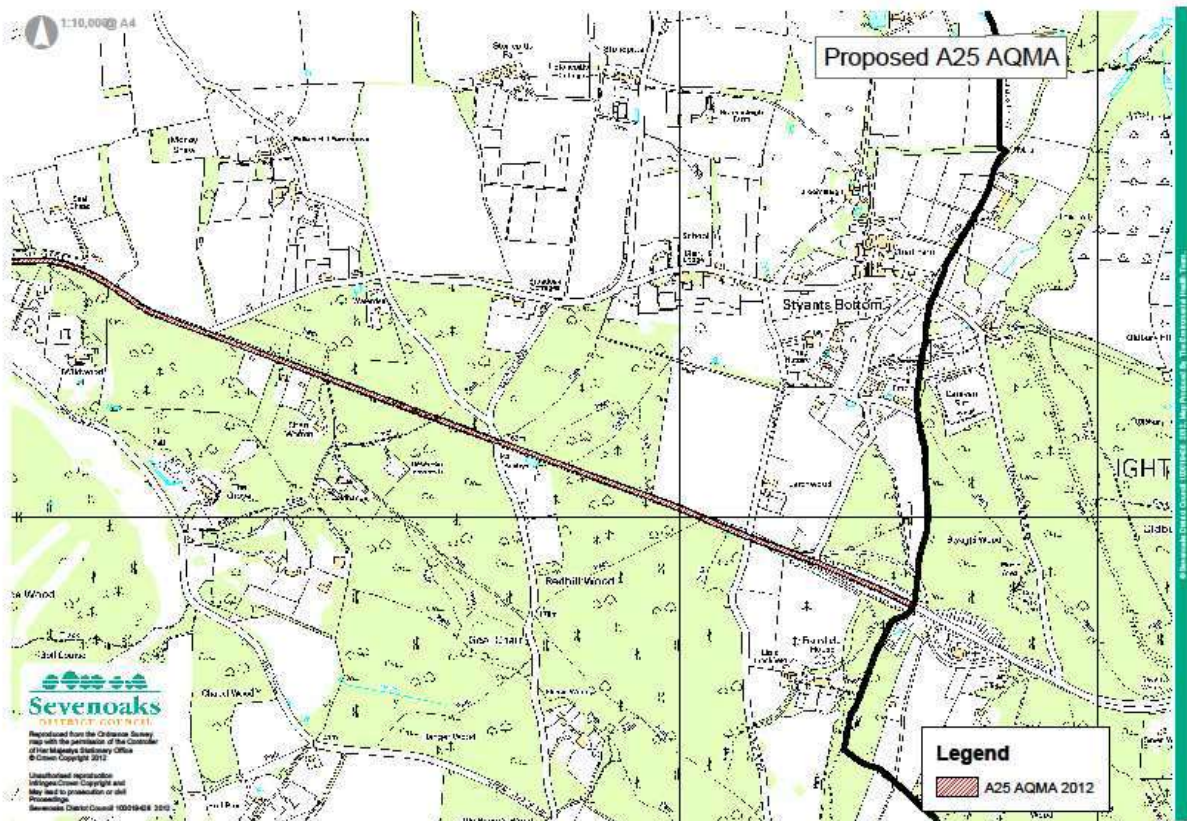
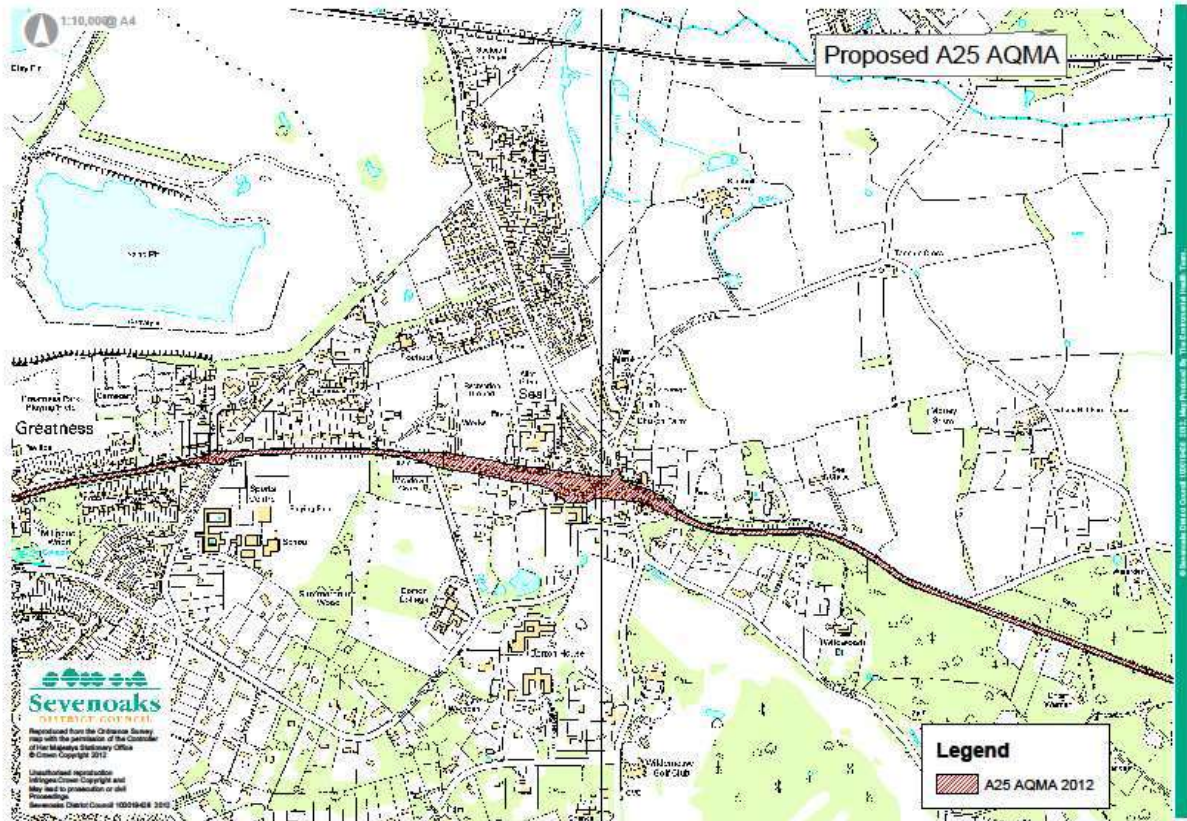


Proposed AQMA's (Confirmed by Cabinet, April 2013)

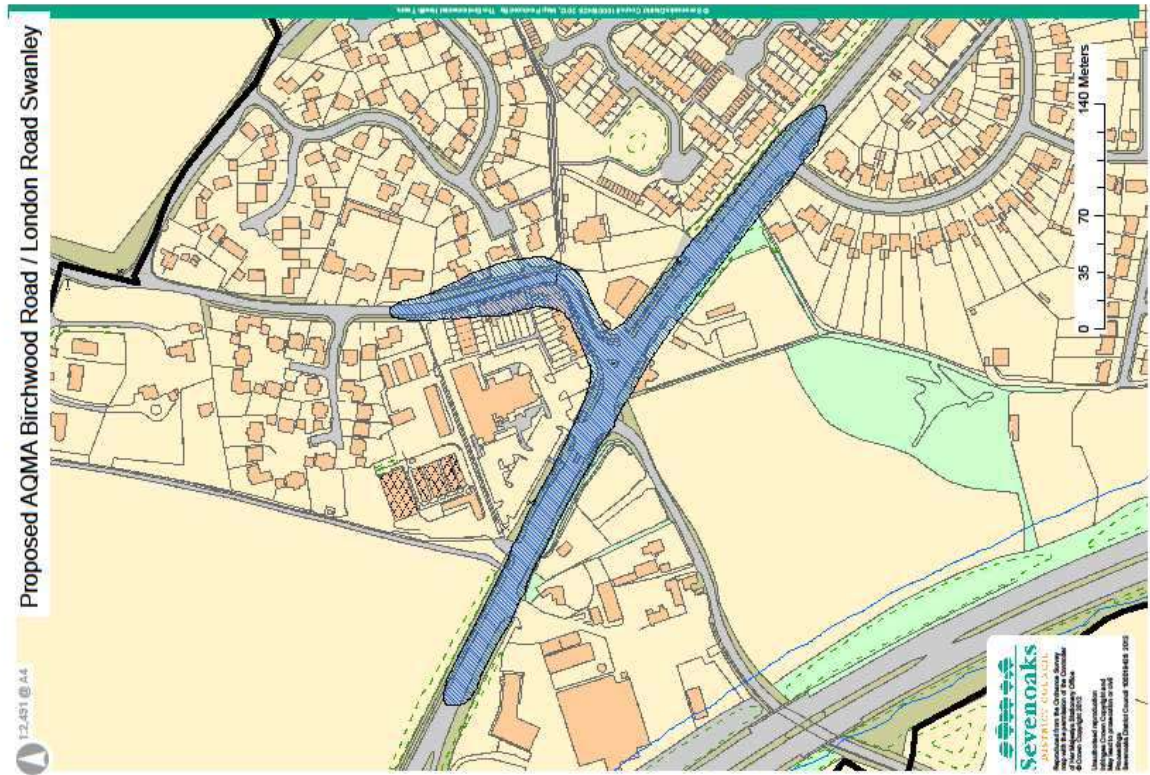




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Proposed Birchwood Road Junction AQMA



**Appendix 3
Table 9.1 - Action Plan Progress**

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
1	The Sevenoaks Joint Transport Board will continue to consider and review options and proposals made under the Traffic Management Act and the LTP as well as via the Member/Officer air quality working group and both liaise and lobby KCC Highways Services to establish scheme acceptance, prioritisation and funding	Consider major/quick win schemes within each AQMA's	The District Council; Head of Environmental and Operational Services; KCC	2009-13	2009-13	Number of schemes identified each year	Combined emission target of <0.4 µg/m ³ for overall measure	The air quality working group is currently progressing on an officer basis until there is further progress to report to members	4 JTB meetings have been held, considering traffic management schemes especially in the Bat & Ball and Sevenoaks High Street AQMAs.	As progress still ongoing, time scales need to be reviewed either in next Action Plan review (Dec 2014) or separately depending on outcome of Defra LAQM review consultation	NO ₂ emissions at Bat & Ball Junction continue to be monitored and evaluated.
		Consultation & prioritisation (KCC)		2009-13	2009-13	As above	As above	See adjacent section - 'progress in last 12 months'	Schemes as per the JTB See 9.1.1- Additional supporting evidence	As above	Affects on emissions to be gauged by existing diffusion tube monitoring where possible
		Funding identification		2009-13	2009-13	As above	As above	As directly above	Measures using Defra agreed air quality grant assistance and possibly S106 funding continue to be investigated.	As above	As directly above

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
2	The District Council will continue to consider the impact new developments have on air quality and take appropriate steps to minimise any increase in air pollution. This includes seeking Section 106 funding where appropriate	Implement policies/legislation which impacts on air quality	The District Council; Head of Development Services and Head of Environmental & Operational Services	2009-13	2009-13	Conditions applied	As above	Ongoing process and function	Continue to determine applications in line with the current Development Plan and any other material considerations	Ongoing	Affects on emissions to be gauged by existing diffusion tube monitoring where possible and any Air Quality assessments undertaken by applicants
		Applying for and receiving Section 106 Funding for air quality measures (See also Action 4)		2009-13	2009-13	Number of relevant Section 106 agreements which come into operation	As above	As above	Continue to receive and consider requests from Environmental Health for contributions from S106 planning obligation. S106 air quality funding received from 2 developments	Ongoing	As above
		Promotion of Green Travel Plans (Also see Action 12)		2009-13	2009-13	Number of Green Travel Plans promoted within applications	As above	Promoted where appropriate	Along with Kent Highway Services, continue to request and consider Travel Plans, where appropriate	Ongoing	As above
		Ongoing planning application consultation process including Environmental Health		2009-13	2009-13	Continuing process	As above	Continual good liaison between officers, other agencies and applicants to ensure best outcomes	All applications in or close to AQMAs are scrutinised by an Air Quality expert	Ongoing	As above
		Pre application discussions for relevant applications with Environmental Health		2009-13	2009-13	Number of large scale developments discussed	As above	As directly above	Meetings held as required	Ongoing	As above

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
3	The District Council will continue to be an active participant in consultation processes and liaise with the Highways Agency to secure those improvements to the M25 considered most likely by the scenario testing to result in a reduction in pollutions levels within the motorway AQMAs	Retain regular contact and liaison with HA prior to and during any relevant works on the M25	Highways Agency; KCC; The District Council; Head of Environmental and Operational Services	2009-13 As necessary		Positive representation the District Council views.	Combined emission target of <math><0.4 \mu\text{g}/\text{m}^3</math> for overall measure	No progress due to factors beyond the control of the District Council and KCC.	Works commenced in May 2013. See 9.1.1- Additional supporting evidence	Spring 2014	No available information
		Consult with HA regarding mitigation works when required		2009-13 As necessary		Mitigation measures agreed	As above	As above	Not applicable at this stage	As above	As above

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
4	Set up an internal working group to identify, implement and monitor air quality mitigation measures secured by Section 106 Agreement with respect to developments affecting the Riverhead and Dunton Green AQMA. The group, to also consider other Air Quality Section 106 agreements within the District	Establish an ongoing general S106 air quality liaison group between Development Control and Environmental Health	The District Council; Head of Development Control and Head of Environmental and Operational Services	2009-10	2011-13	Via submission of Air Quality and Action Plan Progress Report to Defra	Combined emission target of <math><0.4 \mu\text{g}/\text{m}^3</math> for overall measure	Officers agreed to take an informal approach to individual applications rather than proceed on a separate group basis	Combined DC/EH meetings as required. Continue to ensure that requirements within a S106 obligation are precise and necessary to mitigate the impact of a development	Ongoing process	Specific data provided in Air Quality Assessments to be reviewed with relation to target
		Specifically identify measures to be funded (West Kent cold Store Development – WKCS)		Commencement date unknown. Contribution to be paid prior to the occupation of the 250 th dwelling within the development	Measures identified	As above	No progress	No change to position.	WKCS development commenced but being completed in stages. Release of S106 funding still unlikely to be for next 2/3 years	Affects on emissions to be gauged by existing diffusion tube monitoring where possible	
		Establish Vehicle emissions testing policy (Tesco Development)		Commencement date unknown. Contribution to be triggered by occupation of development	Number of vehicles tested and incidence of positive action	As above	No progress	Funds released but insufficient to undertake meaningful action. Funding to be returned or use renegotiated.	Under review	Indirect contribution	

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
5	For the KCC/SDC Member/officer air quality working group to make recommendations to the JTB regarding suitable traffic reducing proposals within the Riverhead and extended Dunton Green/London Road AQMA	Regular review of AQMA. This will include a local AQMA audit based on feedback from the Air Quality Action Plan consultation	The District Council; Head of Environmental and Operational Services; KCC	2009-10	2011-13	Improvement in local air quality	Combined emission target of <math><0.2\mu\text{g}/\text{m}^3</math> for overall measure	Review undertaken and design and funding solutions explored	See 9.1.1- Additional supporting evidence	Part of ongoing programme with KHS	Affects on emissions to be gauged by existing diffusion tube monitoring where possible
		Identification of major/quick win schemes within AQMAs		2009	2010- 13	Numbers of Schemes identified each year	As above	See adjacent section - 'progress in last 12 months'	See 9.1.1- Additional supporting evidence	Part of ongoing programme with KHS	As above
		Scoping of schemes		2009	2010- 13	As above	As above	As above	Quick win discussions with KHS	As above	As above
		Reporting to JTB		2009	2010- 13	As above	As above	As above	To be further considered	As above	As above
		Funding identification		2009	2010- 13	As above	As above	As above	Use of Defra grant, S106 and KHS funding.	As above	As above

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
6	For the KCC/SDC Member/officer air quality working group to make recommendations to the JTB regarding suitable traffic reducing proposals within AQMA 8 Swanley Town Centre	Regular review of AQMA This will include a Local AQMA audit based on feedback from the Air Quality Action Plan consultation	The District Council; Head of Environmental and Operational Services, KCC	2009-10	2011-13	Improvement in local air quality	Combined emission target of <math><0.2\mu\text{g}/\text{m}^3</math> for overall measure	Review undertaken and design and funding solutions explored	See 9.1.1- Additional supporting evidence	Part of ongoing programme with KHS	Affects on emissions to be gauged by existing diffusion tube monitoring where possible
		Identification of quick win schemes within AQMA		2009-10	2011- 13	Scheme implemented and improvements made	As above	See adjacent section - 'progress in last 12 months'	See 9.1.1- Additional supporting evidence	Part of ongoing programme and with KHS	As above
		Scoping of scheme		2009	2011- 13	Feasibility of scheme	As above	As above	Quick win discussions with KHS	As above	As above
		Reporting to JTB (Dependant on feasibility)		2009	2011- 13	As above	As above	As above	To be further considered	As above	As above
		Funding identification (Dependant on feasibility)		2009	2011- 13	Successful funding options identified	As above	As above	Use of Defra grant, S106 and KHS funding.	As above	As above

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
7	For the KCC/SDC Member/officer air quality working group to make recommendations to the JTB regarding suitable traffic reducing proposals within AQMA 9 – Seal High Street	Regular review of AQMA	The District Council; Head of Environmental and Operational Services, KCC	2009	2010-13	Improvement in local air quality	Combined emission target of <math><0.2\mu\text{g}/\text{m}^3</math> for overall measure	Review undertaken and design and funding solutions continue to be explored	See 9.1.1- Additional supporting evidence	Part of ongoing programme and with KHS	Effects on emissions to be gauged by existing diffusion tube monitoring if any changes implemented
		Identification of quick win schemes within AQMA		2009-10	2011- 13	Scheme implemented and improvements made	As above	See adjacent section - 'progress in last 12 months'	See 9.1.1- Additional supporting evidence	Part of ongoing programme and with KHS	As above
		Scoping of scheme		2009	2011- 13	Feasibility of scheme	As above	As above	Quick win discussions with KHS continue	As above	As above
		Reporting to JTB (Dependant on feasibility)		2009	2011- 13	As above	As above	As above	To be further considered if applicable	As above	As above
		Funding identification (Dependant on feasibility)		2009	2011- 13	Successful funding options identified	As above	As above	Use of Defra grant, S106 and KHS funding if applicable	As above	As above

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
8	For the KCC/SDC Member/officer air quality working group to make recommendations to the JTB regarding suitable traffic reducing proposals within AQMA 7 – Sevenoaks High Street	Investigate proposal to create one way traffic system and other traffic management solutions	The District Council; Head of Environmental and Operational Services, KCC	2009- 10	2011- 13	Improvement in local air quality	Combined emission target of up to and >0.4µg/m ³ for overall measure	Review and exploration completed	One way system discounted after consultants showed junction capabilities would be adversely affected	N/A	Diffusion tube monitoring programme in place.
		Scoping of Scheme		2009-10	2011-13	Options considered	As above	See adjacent section - 'progress in last 12 months'	As above	As above	As above
		Reporting to JTB		2009-10	2011-13	As above	As above	As above	As above	As above	As above
		Funding Identification		2009-10	2011-13	Successful funding streams identified and scheme and/or alternative options programmed for implementation	As above	Initial scoping via Defra Air Quality Grants	N/A.	As above	As above
		Undertake an additional Local AQMA audit based on feedback from the Air Quality Action Plan consultation		2009-10	2011-13	Improvement in local air quality	As above	9.1.1- Additional supporting evidence	See 9.1.1 - Measure 1 additional supporting evidence	Under review	As above

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
9	For the KCC/SDC Member/officer air quality working group to make recommendations to the JTB regarding suitable traffic reducing proposals within AQMA – 11 Westerham Town Centre	Regular review of AQMA This will include a Local AQMA audit based on feedback from the Air Quality Action Plan consultation	The District Council; Head of Environmental and Operational Services, KCC	2009-10	2011-13	Improvement in local air quality	Combined emission target of $0.2\mu\text{g}/\text{m}^3$ for overall measure	This action and measures within it are yet to be progressed	None	Action and timescales need to be reviewed either in next Action Plan review (Dec 2014) or separately depending on outcome of Defra LAQM review consultation	Affects on emissions to be gauged by existing diffusion tube monitoring where possible
		Identification of quick win schemes within AQMA		2009-10	2011-13	Scheme implemented and improvements made	As above	As above	As above	As above	As above
		Scoping of scheme		2009	2011-13	As above	As above	As above	As above	As above	As above
		Reporting to JTB (Dependant on feasibility)		2009	2011-13	As above	As above	As above	As above	As above	As above
		Funding identification (Dependant on feasibility)		2009	2011-13	Successful funding options identified	As above	As above	As above	As above	As above

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
10	For the KCC/SDC Member/officer air quality working group to continue to make recommendations to the JTB regarding suitable traffic flow measures on all legs of the Bat and Ball AQMA junction	Continue to investigate a range of traffic management solutions at the junction. This will include a Local AQMA audit based on feedback from the Air Quality Action Plan Consultation.	The District Council; Head of Environmental Services, KCC	2009	2011-13	Improvement in local air quality	Combined emission target of up to and >0.4µg/m ³ for overall measure	Initial scheme completed	Options continue to be explored See 9.1.1 - Measure 1 additional supporting evidence	Junction improvements undertaken	The earlier drop in Nox and PM10 emissions at the junction previously reported has not been sustained this year.
		Scoping of additional schemes		2009-10	2009-13	Feasible scheme or acceptable options	As above	See adjacent section - 'progress in last 12 months'	As above	As above	As above
		Funding Identification		2009-10	2009-13	Successful funding streams identified and scheme and/or alternative options programmed for implementation	As above	As above	Section 106 funding has been received from 2 local developments for local Air Quality Action Plan actions/air quality monitoring.	As above	As above

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
11	The Council will demonstrate best practice in the purchase and operation of its own vehicle fleet in order to cut harmful emissions where possible	Use of cleaner fuels	The District Council; head of Environmental and Operational Services	N/A	Now used in all diesel fuelled vehicles	Reduced emissions	Combined emission target of <math><0.08\mu\text{g}/\text{m}^3</math> for overall measure	See adjacent section - 'progress in last 12 months'	Rolling renewal of the commercial vehicle fleet ensures vehicles take advantage of latest technology to be more efficient using less fuel and producing less harmful emissions	Ongoing process	Indirect contribution
		Fitting particulate traps to larger diesel vehicles where practicable		N/A	When necessary	Number of vehicles with traps fitted	As above	As above	Ever higher Euro emissions standards may see the widespread use of urea pre-combustion treatment supplemented by particulate traps post combustion treatment straight from the production line.	Under review in light of progress update	As above
		Use of alternative fuels where practicable		N/A	Being kept under review	NA	As above	As above	All fleet vehicles continue to operate on zero sulphur diesel fuel. Use of alternative fuels is kept under review but fleet wide implementation is not operationally or financially viable.	As above	As above
		Regular emission testing of vehicles		2009-13	As required	Compliant vehicles	As above	As above	Commercial vehicle emissions testing is undertaken as part of vehicle performance diagnostics and annual test criteria	Ongoing process and function	As above

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
12	The District Council will continue to promote and publicise schemes including working with partners where appropriate to encourage a reduction in car use	Provision and promotion of Mini bus service to meet particular needs. Links to Sustainable Community Action Plan Aim 16.1	The District Council: Head of Community Development, Head of Environmental and Operational Services and Head of Financial Services; KCC, West Kent PCT; Voluntary groups and charities; Housing Associations, town and Parish Councils	2009-10	2011- 13	Use and extent of service provided	Combined emission target of <math><0.08\mu\text{g}/\text{m}^3</math> for overall measure	See adjacent section - 'progress in last 12 months'	Since 1st April 2011 following donation of the Council's mini-bus fleet charitable organisations have been providers of this local accessible transport.	Milestone achieved. Measure will no longer be applicable	Indirect contribution by reducing the amount of car journeys
		Private mini bus hire		2009-13	2009-13	Level of hire	As above	As above	Since the cessation of the Council's mini-bus service from April 2011 this in-house mini-bus hire provision has not been possible. Charitable organisations provide this service where practicable	As above measure will no longer be applicable	As above
		Encouraging taxis to use cleaner vehicles/fuels		2009-10	2011-13	Introduction of viable scheme	As above	Draft policy produced	No progress on this action, however SDC Licensing may report to the Licensing Committee a proposal to make this a formal arrangement as part of the revised fees and charges.	To be determined in light of review	Indirect contribution
		Concessionary travel schemes		2009-13	2009-13	Monitoring number of permits	As above	Passes issued annually	The concessionary travel pass scheme is now provided by	Ongoing process and function	Indirect contribution by reducing

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
						issued per annum			KCC See 9.1.1- Additional supporting evidence		the amount of potential car journeys
		Promotion of walking groups Links to Sustainable Action Plan 16.3a		2009-13	2009-13	Monitoring success by numbers of groups established and maintained	As above	See adjacent section - 'progress in last 12 months'	Currently 8 walks running in the District	Ongoing process and function	Indirect contribution
		Introduction of School Travel Plans. Links to Sustainable Action Plan 16.3a		2009-10	2011- 13	Monitoring number of active STPs in place	As above	See adjacent section - 'progress in last 12 months'	All Schools in the Sevenoaks District, except 2, now have travel plans.	KCC has ended the initiative as the funding has ceased.	Indirect contribution by reducing the amount of potential car journeys
		Walking buses for schools Links to Sustainable Action Plan 16.3a		2009-10	2011- 13	Annually increasing number of schools with walking buses	As above	See adjacent section - 'progress in last 12 months'	No progress to report	Unknown at this stage as KCC has undergone re-organisation and has not responded to requests for information.	As above
		Streets Ahead scheme Links to Sustainable Action Plan 16.3a		2009-13	2009-13	Promotion of scheme	As above	The Streets Ahead scheme ended in 2010	N/A	N/A	
		Development and promotion of workplace travel plans		2009-13	2009-13	Number of workplace travel schemes in place.	As above	See adjacent section - 'progress in last 12 months'	Continue to work with partners to actively support and promote the Kent wide car share scheme to encourage greater uptake. Also to build on number of existing plans in place	Ongoing process	As above
13	Reducing	Encouraging the	The District Council;	2009-13	2009-13	Number of	Combined	No change	During 2012/13 two	On going	Indirect

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
	congestion and improving air quality as a result through parking schemes	use of green vehicles	Head of Environmental and Operational Services			street permits issued	emission target of <math><0.08\mu\text{g}/\text{m}^3</math> for overall measure		eco-friendly vehicles permits have been issued. There has been no increase over the previous year, despite it being advertised on our application forms and website. Free permits offered to electric, hybrid and dual-fuel vehicles to residents and commuters at no charge.	process and function	contribution
		Provision of non residential permits for Sevenoaks Town Centre		2009-13	2009-13	Number of permits issued	As above	Good progress - see adjacent section - 'progress in last 12 months'	Good progress. 260 permits issued in 2012/13 which is an increase of almost 14% on the previous year.	Ongoing process and function	As above. Also assists with reducing pollution from congestion in town centre
		Review parking restrictions in AQMAs		2009-10	2011- 13	Impact of parking and affect on traffic flows	As above	Continued enforcement of local parking restrictions	See 9.1.1- Additional supporting evidence	Informal review completed	As above

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
14	The District Council will promote a number of initiatives to reduce energy consumption, improve energy efficiency and recycling and develop its carbon management role	Carbon Reductions Management Plan Links to Sustainable Community Action Plan Action 10.1d	The District Council; Head of House, Head of Environmental and Operations Services and Head of Community Development: KCC (Eco-schools) and School Governing Bodies and the Energy Saving Trust advice centre.	2009-10	2011-13	Development of local actions plans addressing climate change.	Combined emission target of $0.2\mu\text{g}/\text{m}^3$ for overall measure	see adjacent section - 'progress in last 12 months'	See 9.1.1- Additional supporting evidence	As per implementation timetable	Indirect contribution
		Continued development and progression of corporate working group. Links to Sustainable Community Action Plan Action 10.1		2009-13	2009-13	As above	As above	As above	Good progress Group now meets every 2 months See Climate Change Strategy section of Annual Progress Report.	Ongoing process and function	Indirect contribution
		Energy efficiency schemes. Links to Sustainable Community Action Plan Action 10.1		2009-13	2009-13	Percentage of local population involved in schemes and initiatives	As above	Cost saving through reduced fuel use; reduction in CO2	Good progress See 9.1.1- Additional supporting evidence	Ongoing process and function	Indirect contribution
		Promotion of Fuel Poverty initiative Links to Sustainable Community Action Plan Action 10.1		2009-13	2009-13	As above	As above	Cost saving through reduced fuel use; reduction in CO2	See 9.1.1- Additional supporting evidence	On going process and function	Indirect contribution
		Eco Schools Programme Links to Sustainable		2009-13	2009-13	Number of schools involved in scheme	As above	see adjacent section - 'progress in last 12 months'	See 9.1.1- Additional supporting evidence	On going process and function	Indirect contribution

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
		Community Action Plan Action 10.1c									
		Recycling Links to Sustainable Community Action Plan Action 10.2		2009-13	2009-13	Increase recycling	As above	As above	See 9.1.1- Additional supporting evidence	On going process and function	Indirect contribution
15	The District Council will continue to proactively enforce industrial control and nuisance legislation to minimise pollution emissions from these sources.	Inspection and enforcement	The District Council: Head of Environmental and Operational Services	2009-13	2009-13	Internal Performance Indicators and compliance with statutory functions	Combined emission target of <math><0.08\mu\text{g}/\text{m}^3</math> for overall measure	Visits to all relevant industrial processes are undertaken based on annual risk assessments	Good progress See 9.1.1- Additional supporting evidence	Ongoing process and function	Indirect contribution to reducing overall pollution levels.
		Ongoing promotion of composting schemes		2009-13	2009-13	Uptake of schemes	As above	See adjacent section - 'progress in last 12 months'	See 9.1.1- Additional supporting evidence	Ongoing process and function	Indirect contribution

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
16	Continue to improve and raise the level of knowledge and publicity relating to air pollution	Review and expansion of information on website	The District Council: Head of Environmental and Operational Services and Head of Housing; The Energy Saving Trust advice centre.	2009-10	2011- 13	Completion of measure	Combined emission target of <math><0.08\mu\text{g}/\text{m}^3</math> for overall measure	See adjacent section - 'progress in last 12 months'	Site updated, new information added as required. Air pollution related pages received over 2000 hits 2012/13	Completed	Indirect contribution by changing behaviour
		Promote efficient use of vehicles - Set up working group Explore different campaigns and strategies Draw up plan of action with timescales Continue to promote the Estac advice line and website		2009-10	2011-13	Successful involvement in number of schemes	As above	Ongoing	Council continues to signpost local residents to the Energy saving Trust advice centre. Also see 9.1.1- Additional supporting evidence	Ongoing process and function	Indirect contribution to improving understanding and changing behaviour
		Continue to develop links with local health authority		2009-10	2011- 13	Successful partnership working	As above	See adjacent section - 'progress in last 12 months'	Air quality sub group which includes representatives from the health authorities has continued to meet on a regular basis over the last year.	Ongoing group and process.	Indirect contribution
		Continue to be active participant of Kent and Medway Air Quality Partnership including membership of the health and air quality sub group		2009-13	2009-13	Continuing membership and involvement	As above	The K & M Air Quality Partnership continues to support the member LA's in carrying out their LAQM duties	Good Progress. Ongoing participant in Partnership.	Ongoing process and function	Indirect contribution

No.	Measure	Focus	Lead authority	Planning phase	Implementation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to emission reductions
17	The council will continue to undertake routine monitoring air pollution in existing AQMAs and locations around the District and increase the number of monitoring points as necessary	Continue real time monitoring	The District Council: Head of Environmental and Operational Services	2009-13	2009-13	Continuing submission of data to Defra and for technical analysis as required	N/A	Monitoring for NO2 has been undertaken at various background and roadside sites using diffusion tubes and continuous Monitoring stations. New Monitoring Station to be installed at Sevenoaks Quarry.	Ongoing process	Ongoing process and function	N/A
		Continue diffusion tube monitoring		2009-13	2009-13	As above	As above	As above	Ongoing process. Data also used to provide information for officer/other agencies/reports and for planning applications	Ongoing process	N/A
		Keep numbers and locations of diffusion tubes under regular review		2009-13	2009-13	As above	As above	Annual review	Diffusion tube regime reviewed and the number and location of tubes and sites adjusted accordingly.	Ongoing process	N/A