



# 2011(Draft) Air Quality Progress Report for Waverley Borough Council

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

Date: February 2011

Progress Report-Draft v3

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## **Executive Summary**

This report presents the findings of Waverley Borough Council's Annual Progress Report of Air Quality within the Borough. The Progress Report evaluates new and changed sources to identify those that may require consideration in further reports.

Previous air quality assessments have concluded that concentrations of carbon monoxide, benzene, 1,3-butadiene, lead, sulphur dioxide (SO<sub>2</sub>) and particulates (PM<sub>10</sub>) are compliant with UK air quality objectives. However concentrations of nitrogen dioxide (NO<sub>2</sub>) have been found to exceed the annual mean objective at various locations within the Borough. A Detailed Assessment was carried out in 2004 and three Air Quality Management Areas (AQMAS) for annual mean nitrogen dioxide objectives were declared.

This declaration committed Waverley to taking action towards achieving air quality objectives in AQMAs. In line with statutory requirements Waverley Borough Council put in place its Air Quality Action Plan in 2008. The Action Plan is an evolving document and since its publication in July 2008 changes have occurred. This includes the Air Quality behaviour-changing campaigns that began in March 2009 and were carried out throughout the year, together with other air quality improvements projects, as detailed in the body of the report.

At the outset it should be recognised that the ability for Waverley to directly tackle air quality problems in isolation is limited because the issues are transport related and Waverley is not the Highway Authority.

Since the last report the NO<sub>2</sub> diffusion tube site network increased from 41 to 43 sites. At Defra's request, two new monitoring sites have been installed at streets approaching Farnham Level Crossing. The year's data for this locale is currently the subject of a detailed assessment study as identified by the 2009 Updating and Screening Assessment.

[The air pollution monitoring results for 2010 from the three air quality monitoring stations and the network of diffusion tubes are currently being ratified and will be incorporated into this report when this is completed.]

The current Air Quality Progress Report has not identified any new or significantly altered road traffic, industrial, commercial or domestic sources that need to be the subject of a Detailed Assessment.

In August 2009 the East Street, Farnham, Development was granted planning permission. This is a large scheme to build a mixed-use development in Farnham Town Centre. The proposed site is adjacent to the current Farnham AQMA and although planning permission has been granted, the applicant is required to submit details of a temporary access from the site, subject to planning permission being obtained. This submission is currently under consideration.

The Environmental Health Service is looking to ensure that all potential impacts on air quality are considered including all aspects of road traffic movements associated with construction and the potential impacts of dust emissions generated. At this stage, to offset the potential impacts of the development on air quality, implementation of strict traffic and dust emission mitigation measures have been suggested.

Future 'Air Quality Progress Reports' will be published annually except during the years when Defra require a more detailed 'Updating and Screening Assessment' report to be undertaken.

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## 1 Introduction

## **1.1 Description of Local Authority Area**

Waverley Borough is situated in the southwestern corner of Surrey. The Borough is largely rural with four main population centres: Farnham, Godalming, Haselmere and Cranleigh. Road traffic has been recognised as the major source of pollution in the Borough.

Two main trunk routes cross Waverley: the A31 London to Winchester and the A3 London to Portsmouth dual carriageways. The latter includes the site of the new Hindhead bypass route, currently under construction to relieve a serious bottleneck on the A3 route in the village of Hindhead.

## **1.2 Purpose of Progress Report**

Progress Reports are required in the intervening years between the three-yearly Updating and Screening Assessment (USA) reports. Their purpose is to maintain continuity in the Local Air Quality Management process. The next USA is due during 2011-12.

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 exceedences 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  $\mu g/m^3$  (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).

Pollutant	Concentration	Measured as	Date to be achieved by
Benzene	16.25 μg/m³	Running annual mean	31.12.2003
	5.00 μg/m <sup>3</sup>	Running annual mean	31.12.2010
1,3-Butadiene	2.25 μg/m <sup>3</sup>	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m <sup>3</sup>	Running 8-hour mean	31.12.2003
Lead	0.5 $\mu$ g/m <sup>3</sup>	Annual mean	31.12.2004
	0.25 μg/m <sup>3</sup>	Annual mean	31.12.2008
Nitrogen dioxide	200 $\mu$ g/m <sup>3</sup> not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 μg/m <sup>3</sup>	Annual mean	31.12.2005
Particles (PM <sub>10</sub> ) (gravimetric)	50 $\mu$ g/m <sup>3</sup> , not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 μg/m <sup>3</sup>	Annual mean	31.12.2004
Sulphur dioxide	350 $\mu$ g/m <sup>3</sup> , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu$ g/m <sup>3</sup> , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu$ g/m <sup>3</sup> , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

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

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

In addition to the standard USA and Progress Reports Waverley Borough Council has to date completed a Detailed Assessment (2004) and an associated Further Assessment (2007).

The first round of review and assessment concluded that no exceedences of statutory air quality objectives were occurring in the Borough and in consequence, no Air Quality Management Areas (AQMAs) were required. However, the 2003 USA report determined that exceedences of the objectives were possible for nitrogen dioxide and therefore Detailed Assessment of nitrogen dioxide levels were required for three locations: the centres of Farnham and Godalming and the junction in Hindhead of the A3 and the A287.

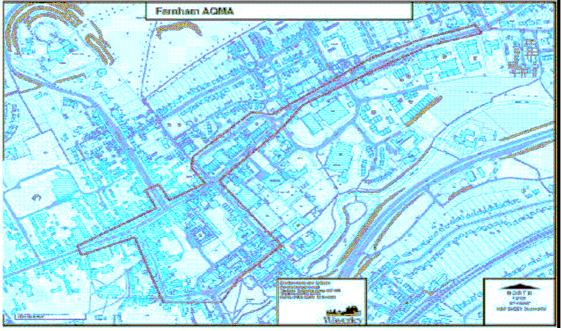
The subsequent Detailed Assessment based on computer dispersion modelling and local monitoring, confirmed that exceedences were likely at these locations so the Council declared three AQMAs in 2005 (see Figures 1.1 to 1.3 below) in central Farnham, central Godalming and in Hindhead.

A Further Assessment was undertaken in 2007, which confirmed the findings of the Detailed Assessment and recommended: that the Farnham AQMA be extended and that the other two AQMAs be left unaltered. An Air Quality Action Plan is now in place for the Farnham and Godalming AQMAs, whereas the opening of the Hindhead Relief Road (Hindhead Tunnel) in 2011 should resolve that air quality problem.

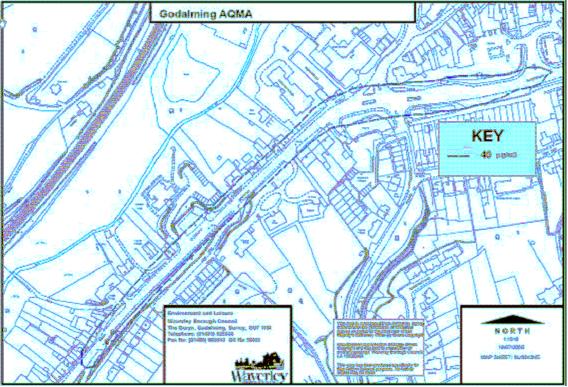
The Council published a detailed Updating and Screening Assessment of local air quality in May 2009. As a result of changes in TG(09) guidance regarding the identification of narrow congested streets, the USA has identified one potential new source, which requires a Detailed Assessment. The location is: the street approaching and surrounding the railway level crossing, on the B3001 Station Hill, including Waverley Lane and Tilford Road, Farnham. Air monitoring was undertaken in this area throughout 2010.

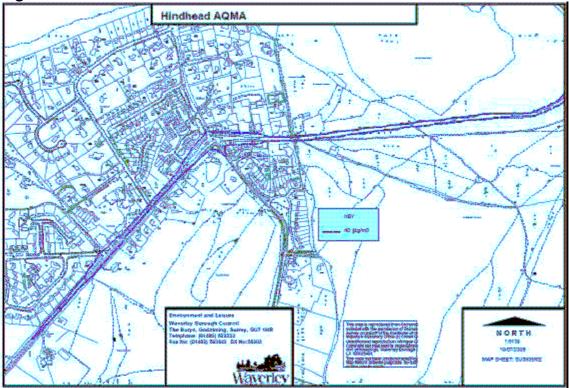
Monitoring results and air dispersion modelling findings will formalise official Detailed Assessment outcomes and reveal any potential requirement for changes to the Farnham AQMA. The Detailed Assessment report is prepared by external consultancy and will be submitted to Defra as required.

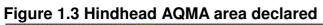
#### Figure 1.1 Farnham AQMA area declared



### Figure 1.2 Godlaming AQMA area declared







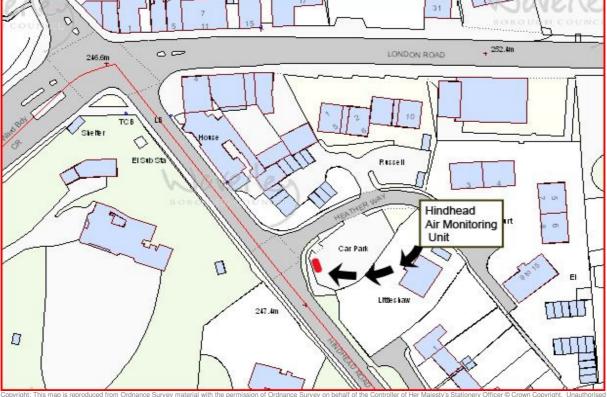
## 2 New Monitoring Data

In Waverley there are three automatic monitoring stations, all monitoring  $NO_2$  and one also monitoring particulates. The Environmental Health Service also operates a comprehensive network of diffusion tubes. There are now 43  $NO_2$  diffusion tubemonitoring locations across the Borough.

## 2.1 Summary of Monitoring Undertaken

#### 2.1.1 Automatic Monitoring Sites

Automatic monitoring is carried out at three locations in the Borough, one each at roadside locations within the Hindhead, Godalming and Farnham AQMAs. All sites measure  $NO_2$  whilst the Farnham site also monitors  $PM_{10}$ . The location of the analysers is shown in figures 2.1 to 2.3 No additional monitoring stations have been established since last year's Updating and Screening Assessment. The equipment was serviced and calibrated by Enviro-Technology. Members of the Environmental Health Service perform monthly span tests using Air Liquide span gas to ensure accurate data is continually produced. The Air Quality Consultancy ratifies data from all three automatic monitoring sites.





Hindhead air monitoring unit is located at the edge of the Hindhead AQMA, at the junction of the A3 Portsmouth Road and the A287 HasImere to Farnham road in Hindhead in south west Waverely.

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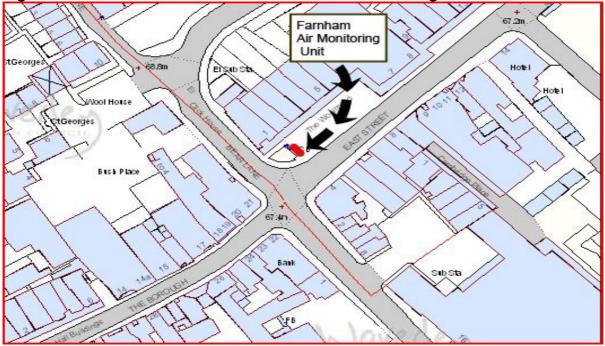


Figure 2.2 Location of the Farnham automatic monitoring station.

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Farnham air monitoring unit is located within the AQMA, on the A325 in Farnham town centre at the junction of East Street and Bear Lane. The EnviroTechnology API analyser continuously monitors concentration of nitrogen dioxide (NO<sub>2</sub>) and the Beta-Attenuated Particle Monitor monitors  $PM_{10}$  levels.

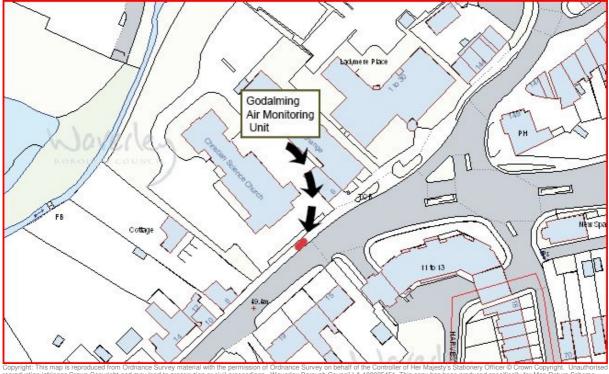


Figure 2.3 Location of the Godalming automatic monitoring station.

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Godalming air monitoring unit is located within the AQMA, along the Ockford Road in Godalming town centre. It continuously monitors concentration of nitrogen dioxide (NO<sub>2</sub>) using EnviroTechnlogy API analyser.

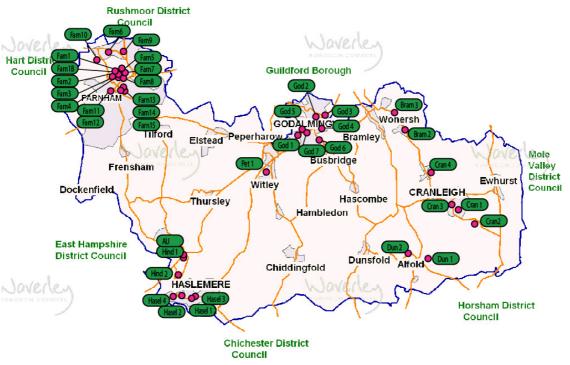
#### March 2011

## Table 2.1 Details of Automatic Monitoring Sites

Site Name	Site Type	OS Grid Ref		OS Grid Ref Pollutants Monitored		In AQM A?	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?
Hindhead	Roadside	X488819	Y135639	NO <sub>2</sub>	Chemiluminescence	N	Y (20m)	7m	N
Farnham	Roadside	X484087	Y146972	NO <sub>2</sub> PM <sub>10</sub>	Chemiluminescence, Beta attenuation	Y	Y(20m)	5m	Y
Godalming	Roadside	X496693	Y143695	NO <sub>2</sub>	Chemiluminescence	Y	Y(25m)	3m	Y

#### 2.1.1 Non-Automatic Monitoring

NO<sub>2</sub> is monitored at 43 sites in Waverley Borough: 19 sites in Farnham including a co-location site with the automatic monitor and duplicate site at Station Hill at Farnham level crossing; 7 sites in Hindhead including a co-location with the automatic monitor; 9 sites in Godalming, and a further 8 sites in locations across Cranleigh, Bramley and Dunsfold (see Figure 2.2). The majority are shown on the map below.



#### Figure 2.4 Map of Non-Automatic Monitoring Sites.

The NO<sub>2</sub> diffusion tubes are prepared and analysed by Lambeth Scientific Services using the 50% TEA in acetone method. Tubes are changed at monitoring locations monthly. See Appendix A for further details of QA/QC of these sites.

In the second half of the 2010-monitoring year, two additional diffusion tubes were installed at Waverly Lane, Farnham, approaching the railway level crossing. Whereas Farn14 located at Station Hill became a duplicate site in November 2010. Monitoring results from new sites will be incorporated into the Detailed Assessment study currently being prepared for this area.

As recommended by results of the 2009 USA the locations of tubes Hasl3 and Farn11 were changed in December 2009. Monitoring carried out during 2010 revealed results from new locations at the nearest relevant receptor; these monitoring results are currently undergoing ratification and are not yet confirmed.

### May 2010

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?
Farn 1	Roadside	X484020	Y146910	NO <sub>2</sub>	Y	Next to café with pavement seating	1.8m	Y
Farn 1B	Roadside	X484064	Y146928	NO <sub>2</sub>	Y	N	0.9m	
Farn 2	Roadside	X483907	Y146831	NO <sub>2</sub>	Y	Y 15m	1.5m	
Farn 3	Urban Background	X483654	Y146600	NO <sub>2</sub>	Ν	Y10m	NA	
Farn 4	Urban Background	X483407	Y146794	NO <sub>2</sub>	Ν	N	NA	
Farn 5	Roadside	X484423	Y147233	NO <sub>2</sub>	Y	Y 10m	2.1m	
Farn 6	Kerbside	X483915	Y149039	NO <sub>2</sub>	Ν	Y 3m	1.0m	
Farn 7	Roadside	X484233	Y146782	NO <sub>2</sub>	Y	N	5m	
Farn 8 *	Roadside	X484087	Y146972	NO <sub>2</sub>	Y	15m from pavement café	3m	
Farn 9	Roadside	X484761	Y149431	NO <sub>2</sub>	N	Y 5m	2m	
Farn 10	Roadside	X483152	Y148703	NO <sub>2</sub>	N	20m	1.7m	
Farn11	Roadside	X482717	Y145183	NO <sub>2</sub>	N	8m	2m	
Farn 12	Roadside	X482766 Y145632		NO <sub>2</sub>	N	2m	2m	
Farn 13	Roadside	X484416	Y146619	NO <sub>2</sub>	Y	2m	1.7m	Y
Farn 14	Roadside	X484446	Y146609	NO <sub>2</sub>	N	10m	1m	
Farn 14A	Roadside	X484446	Y146609	NO <sub>2</sub>	N	10m	1m	
Farn 15	Roadside	X484561	Y146486	NO <sub>2</sub>	Ν	8m	2.00m	

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

### March 2011

Farn16	Roadside	X484616	Y146230	NO <sub>2</sub>	Y	1.1m	1.9m	Y		
Farn17 Roadside		X484645	Y146570	NO <sub>2</sub>	N	1.5m	2m	•		
God 1 Roadside		X496497	Y143508	NO <sub>2</sub>	Y	Y 0m	7m			
God2 Roadside		X497294	Y143981	NO <sub>2</sub>	N	N	2m			
God3	Roadside	X497376	Y144153	NO <sub>2</sub>	N	Y10m	2m			
God4	Roadside	X497320	Y143864	NO <sub>2</sub>	Y	Y10m	1.9m	Y		
God5	Roadside	X	Y143721	NO <sub>2</sub>	Y	Y 30m	1.5m			
God6	Roadside	X497387	Y143437	NO <sub>2</sub>	N	Y6m	2m			
Pet1	Roadside	X494483	Y141316	NO <sub>2</sub>	Ν	Ν	3.5m			
Hind1	Kerbside	X488774	Y135705	NO <sub>2</sub>	Y	Y 20m	0.8m	Y		
Hind 2	Urban Background	X488095	Y134369	NO <sub>2</sub>	Ν	Ν	NA			
Hasl 1	Roadside	X490486	Y132819	NO <sub>2</sub>	N	Ν	2.2m			
Hasl 2	Urban Background	X485928	Y133005	NO <sub>2</sub>	Ν	Ν	NA			
Hasl 3	Roadside	X490636	Y133160	NO <sub>2</sub>	Ν	Y	1.5m	Y		
Hasl 4	Roadside	X489090	Y132842	NO <sub>2</sub>	Ν	Y3m	1.5m			
AU 1/2/3*	Roadside	X488819	Y135639	NO <sub>2</sub>	Ν	Y20m	3.2m			
Highways Agency Tube	Roadside	X488600	Y135600	NO <sub>2</sub>	Y	Y 20m	0.8m			
Cran 1	Roadside	X505808	Y139078	NO <sub>2</sub>	N	Ν	1.3m			
Cran 2	Urban Background	X506883	Y138514	NO <sub>2</sub>	Ν	Y	NA			
Cran 3	Roadside	X505411	Y139242	NO <sub>2</sub>	Ν	Ν	4m			
Cran 4	Roadside	X504760	Y140683	NO <sub>2</sub>	Ν	Y5m	1.7m	Y		
Bram 2	Roadside	X501498	Y144049	NO <sub>2</sub>	N	Y13m	3.7m	Y		
Bram 3	Roadside	X500908	Y144780	NO <sub>2</sub>	N	Ν	3.6m			
Dun 1	Roadside	X504051	Y135373	NO <sub>2</sub>	N	Ν	5m	Y		
Dun 2	Roadside	X502765	Y137319	NO <sub>2</sub>	Ν	Y30m	NA			
*Collocated with automatic monitor NA – not applicable										

# 2.2 Comparison of Monitoring Results with Air Quality Objectives.

This section will be completed when ratification of air monitoring received

## 3 New Local Developments

The following development has been granted approval.

#### East Street Development, Farnham

The planning permission for a mixed-use development of 239 residential units, a new multi-screen cinema, shops, cafes and restaurants in Farnham Town Centre was issued on 6 August 2009. The proposed site is adjacent to the current Farnham AQMA. An air Quality Impact Assessment has been submitted with the application to assess the effect of development.

Modifications with respect to the construction phase have resulted in the Environmental Health Service looking at the air quality implications of the provision of temporary access from the A31, comprising a bridge across the River Wey, pedestrian underpass, other supporting infrastructure and re-instatement works including re-siting of the proposed footbridge across the River Wey. This should ensure that the assessed impact on air quality considers all aspects of road traffic movements associated with construction of the temporary access as well as the potential impacts of dust emissions generated during the construction and reinstatement phases.

## 3.1 Road Traffic Sources

Road traffic sources were considered in previous the Updating and Screening Assessment.

Waverley 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

#### 3.2.1 Airports

The nearest airfield to Waverley Borough is Farnborough airport, which is located 1 km from the Borough and has annual throughput well below 10 million passengers per year.

Waverley confi	rms that there are no new or newly identified - airports
	<ul> <li>railways locations where diesel or steam trains are regularly stationary for periods of 15 minutes or more, with potential for relevant exposure within 15m</li> </ul>
	<ul> <li>locations with a large number of movements of diesel locomotives, and potential long-term relevant exposure within 30m</li> </ul>
	- ports for shipping
which may hav	e an impact on air quality within the Local Authority area.

### 3.3 Industrial Sources

Industrial sources were considered in previous Updating and Screening Assessment.

Waverley confirms that there are no:

new or proposed installations
existing installations where emissions have increased substantially or new relevant exposure has been introduced
new or significantly changed installations with no previous air quality assessment
major fuel storage depots storing petrol
new or newly identified petrol stations
new newly identified poultry farms

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

## 3.4 Commercial and Domestic Sources

Waverley confirms that there are no new or newly identified: - Areas where the combined impact of several biomass combustion sources may be relevant - Areas where domestic solid fuel burning may be relevant. which may have an impact on air quality within the Local Authority area.

# 3.5 New Developments with Fugitive or Uncontrolled Sources

Waverley confirms that there are no new or newly identified:

- landfill sites
- quarries
- haulage roads on industrial sites
- waste transfer stations etc.
- other potential sources of fugitive particulate emissions

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

## 4 **Planning Applications**

#### 4.1 Land at Bourne Mill, Guildford Road, Farnham, WA/2010/1967

An outline planning application for the erection of 16 dwellings and 70 bed care home with access and communal open space was submitted to Waverley Borough Council in November 2010. An air quality assessment has not yet been submitted as a part of the planning application.

The site is located approxmately 0.5 km from Farnham town centre where the AQMA was decleared in 2005. The Environmnetal Health Service was concerned that although the proposed development might not have an immediate impact on local air quality, the proposed site introduces a new exposure into an adjacent area. This area has not been identified and declared an Air Quality Management Area (AQMA), as previously there was no relevant exposure. Roads that carry significant traffic flow surround the development, therefore the introduction of residential properties may expose the future occupants to air pollution associated with road traffic. As no information has been provided to address these concerns the air quality impact assessment has been requested.

The application was considered and refused planning on (tbc)

4.2 Application under Regulation 3 for the erection of a replacement Leisure Centre with subsequent demolition of existing centre; alterations to elevations of cricket pavilion and relocation of multi use games area together with associated works, WA/2011/008

In December 2009, the Waverley Council agreed to build a new leisure centre in Godalming. In January 2011 planning application WA/2011/0008 was submitted.

The Godalming leisure centre site -

The development consists of main pool, reception/café area, wet and dry change (including village and group change), fitness area and a dance studio. The energy efficiency measures incorporated into the Godalming LC will exceed the requirements of the Building Regulations. Some of the proposed measures are:

- High performance thermal envelope.
- Insulation of pool tank 0.25 W/m2K
- Use of natural light
- Digital central and automatic light switching for all areas
- Movement sensors to all areas of intermittent use
- Heating controls to optimize boiler efficiency
- Natural ventilation where possible
- Heat recovery on ventilation plant (>60%)
- Grey water harvesting from pool water sampling to flush toilets
- Water saving devices to be included in taps, toilets and showers.
- Physical pool cover to be deployed daily when the pool is not in use

- The building is to achieve an EPC of B or better
  Building orientation and solar shading design

The project will incorporate an 85kw Biomass Boiler and 11340kWh/annum of electricity generated from a 63 panel solar PV array. This combination is likely to achieve a 21% CO2 reduction from a typical building of this size and category.

## 5 Local Transport Plans and Strategies

Surrey's third local transport plan (LTP3) is to be called the Surrey Transport Plan. The new plan will commence from April 2011 and will look ahead to 2016. The Surrey Transport Plan will replace the current local transport plan, namely the Surrey Local Transport Plan Second Edition: 2006/07-2010/11, published in March 2006, known as LTP2.

The LTP3 Air Quality Strategy has emerged as one of the core strategies of the Surrey Travel Plan. In November 2010 Waverley Borough Council was consulted on a draft of this strategy.

The proposed aim of the LTP3 Air Quality Strategy is:

- To improve air quality in AQMAs on the county roads network such that Surrey's boroughs and districts are able to revoke these areas as soon as possible to help meet the national air quality objectives in declared AQMAs.

The proposed objectives are:

- To incorporate transport measures and interventions in the appropriate infrastructure schedules, for future implementation as and when funding become available, in order to reduce air pollution from road traffic sources in designated AQMAs, and with regard to other strategies; and
- To consider air quality impacts when identifying and assessing transport interventions and measures in Surrey.

All three Waverley's AQMAs were declared in relation to excessive nitrogen dioxide (NO<sub>2</sub>) concentrations. The main source of this pollution is road traffic.

Waverley is not mentioned directly in Surrey Travel Plan, however some specific transport measures and interventions are used to deliver key elements of the strategy constitute measures included in Waverley's Air Quality Action Plan:

- Developing Urban Traffic Control and traffic signal strategies.
- Providing infrastructure to support use of hybrid/electric vehicles.
   Advisory signage to inform drivers of air quality issues and
- solutions (e.g. driving less, turn off engine at level crossings).
- Enhanced enforcement of parking and loading restriction.
- Roadside emission testing
- School and work place travel plan
- Developing Freight Quality Partnership
- Promote eco-driving

Implementation of physical measures in the infrastructure schedules is strongly dependent on funding availability.

Air Quality improvement can also be achieved by successive implementation of the aims and objectives other Surrey Travel Plan strategies: - Congestions Strategy

- Parking Strategy
  Freight Strategy
  Transport and Climate Change Strategy.

## 6 Climate Change Strategies

This first Climate Change Strategy for Surrey has been developed by the Surrey Climate Change Partnership (SCCP) as a focal point for the County's future action on climate change. The strategy seeks to provide a framework to effectively address climate change across Surrey up 2020. It will be delivered through the Partnership approach that has been successfully established between the Surrey Climate Change Partnership (SCCP) members. Following the findings of the Surrey carbon emissions analysis report produced by Carbon Descent, SCCP is working on a Sustainable Energy Plan for Surrey that will be presented to Climate Change portfolio holders in each authority in Surrey in April 2011. Once endorsed, Waverley will produce its own action plan before the end of 2011.

The strategy shares the vision for Surrey and the principles of improving quality of life for people living and working there by addressing social, economic and environmental well-being. To achieve this, the Strategy establishes a comprehensive framework for consistently addressing climate change across Surrey, with central objectives of:

- Progressive and permanent reductions in carbon dioxide (CO<sub>2</sub>) and other climate changing emissions;
- Effective adaptation to the impacts of climate change; and
- Raising awareness of climate change impacts and solutions.

Under each of these objectives the strategy identifies clear policy aims and necessary actions structured as a range of common workstreams. Workstreams will be developed under these aims that allow members to reflect their own priorities, whilst working collectively to maximum effect. For each of these workstreams the strategy illustrates opportunities to develop good practice through examples of current activity in both Surrey and the UK.

In 2010 the SCCP commissioned Carbon Descent to conduct carbon scenario modelling to identify optimum routes, in terms of energy generation and efficiency measures, to achieve two scenarios; firstly to meet national carbon reduction targets and secondly going further to make Surrey one of the lowest carbon areas. The results of study recommends that Surrey should make far greater use of its locally available biomass resource for power generation and at commercial scales, along with significant installation of household energy efficiency measures and micro-generation of domestic renewable energy, including heat pumps.

#### Comments:

Although the potential role of biomass combustion in achieving national carbon reduction targets across Surrey has been recognised, there are concerns, that a large increase in biomass combustion, particularly in Air Quality Management Areas and urban areas with great density, could have a detrimental effect of pollution concentration in particular PM and NO<sub>2</sub>, unless they are of modern design incorporating appropriate arrestment equipment. These concerns should be considered by SCCP when working towards the Climate Change Strategy targets.

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## 7 Implementation of Action Plans

Waverley's Air Quality Action Plan (AQAP) published in 2008 was followed by publication of the first AQAP Annual Progress Report in April 2009 and the further Air Quality Progress Report in 2010. The AQAP included the various projects identified as contributing to improvements in air quality. Table 7.1 below summarises those projects and is updated to include changes since April 2010.

The 2010 air quality awareness camping also engaged the youngest members of society. Waverley Borough Council developed a tool kit for a primary school teachers with a series of three lessons, introducing children to air quality and climate change issues. Fifteen local primary schools agreed to implement the tool kit into annual lesson plans. In January 2011 Waverley Borough Council held an Air Quality Awareness Week, during which behaviour–changing advisory leaflets and posters were distributed across local schools and businesses.

In January 2010 an inter-agency Air Quality Workshop, focussing on Farnham took place. The participants made invaluable contributions in helping both Surrey and Waverley Councils develop a range of positive actions. Since the workshop, officers from Waverley and Surrey have been meeting to analyse the results and conclusions. However, since the event there has been the departure of some key SCC personnel and it would seem that many of the proposed actions have been put on hold. Nevertheless joint efforts of SCC and WBC led to implementation of more rigid loading time restriction in Farnham town centre. Further monitoring should determine potential improvements in air quality resulting from this restriction.

#### March 2011

Table 7.1Action Plan Progress

N o.	Measure	Focus	Lead authority	Planning phase	Implemen- tation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estim ated compl etion date	Comments relating to emission reductions
1	Farnham Review Study option 2b	An holistic set of traffic interventions for Farnham Town Centre e.g. road space reallocation, construction of new cycle routes and cycle facilities, part-time closure of The Borough	Surrey County Council			Adoption of package 2b outlined in Farnham Review Study	To be quantified when it appears likely that the recommendations of the Farnham Review study get the go ahead. However package 2b has the potential to remove air quality exceedences from the Farnham AQMA.	Although the option is likely to have wide reaching effects, implementation is only possible through major strategic funding which is unlikely in the short- to medium-term. Some elements will be in place through the redevelopment of East Street .	The planning process for the redevelop- ment in East Street continues to progress	Not know yet.	
2	Hindhead Tunnel and bypass	A 1.1 mile tunnel and bypass to relieve the A3 bottleneck at Hindhead	Highways Agency	Work on the scheme began in 2007	Ongoing.	Completion and opening of bypass, closure of existing road to traffic	This measure will remove all AQ exceedences in AQMA	The project is underway and on time. Opening mid 2011.	During 2010 further construction works have been completed. New dual carriage way from the Spaniard to Hazel Grove junction has been open, but subject to	Tunnel to be operati onal mid 2011.	Scheme currently on target. Subsequent AQ data will reveal effects on Hindhead AQMA - expected to show marked improvement

## May 2010

## Waverley Borough Council

N o.	Measure	Focus	Lead authority	Planning phase	Implemen- tation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estim ated compl etion date	Comments relating to emission reductions
									intermittent lane restrictions.		
3	Review of urban traffic control systems (UTC) on Flambard Way, Godalming	Review of traffic-light managemen t through AQMA with aim of minimising idling traffic and congestion	Surrey County Council		To be completed between 2008 and 2011.	Calculated reduction of NO2 emissions based on calculations of reduced queue length and waiting times plus ambient monitoring.	To establish annual emission reduction target, detailed information needed with regards to waiting times and reductions in queue length. Information has been requested from Surrey County Council, however currently not available.	Installation of a new comm's system (between the UTC and the computer at Surrey's Network Management Information Centre in Leatherhead) has been completed. Currently system operating in minimised congestion mode.	The system now operating in minimised congestion mode.	To be compl eted by SCC when resour ces found availa ble.	Waverley to seek SCC commitment to re-validate and operate the system in future to minimise idling traffic within AQMA.
4	Waverley Corporate Travel Plan	A suite of actions aimed at reducing the impact of staff commuting to work and driving to work	Waverley Borough Council	2008 – travel plan measures were tested during a Green Travel Week and subsequent travel	March 2009 – launch and continued marketing of Waverley Car Share	An annual travel survey will outline changes in travel behaviour including any increases in	Less than 1% - likely to impact Godalming AQMA as this route is used by a number of staff working in the Waverley office in Godalming	Two low emission staff pool cars now available & in use.	Two low emission staff pool cars now available & in use. Currently, there are approx. 80 members on	Ongoi ng	

### March 2011

N 0.	Measure	Focus	Lead authority	Planning phase	Implemen- tation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estim ated compl etion date	Comments relating to emission reductions
		meetings		survey		car sharing etc			the database.		
6	Work with schools	Community monitoring scheme. The launch of the community monitoring scheme is part of a pilot project involving a partner school in awareness rising of air quality issues.	Waverley Borough Council	December 2008	Launch of community monitoring scheme in Farnham primary school	Continued partnership – monitoring data obtained, publicity in local press	N/a	The partnership has been maintained throughout 2009 and 2010	Throughout 2010 the Air Quality Officer regularly delivered diffusion tube to the school. Tube has been changed in accordance with national diffusion tube calendar.	Ongoi ng project	
7		Installation and use of air quality software in schools	WBC, SCC, Surrey University	Ongoing	September 2009 to December 2009	Number of schools where software is installed and used	N/a	TBC once more detail is available from Surrey University	No significant progress		Unlikely to progress behavioural change project in current climate
8		School Travel plans (STP)	Surrey County Council	2008-11	Ongoing	A number of Schools that completed STP	Not available	Surrey County Council is continuing its programme of developing school travel plans through 2008 -2011	Scheme completed in March 2010.	Compl eted	

## May 2010

## Waverley Borough Council

N o.	Measure	Focus	Lead authority	Planning phase	Implemen- tation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estim ated compl etion date	Comments relating to emission reductions
9	Travel plans for major employers	Requirement and monitoring of travel plans as part of planning consents	Surrey County Council	Ongoing	See Appendix 1	The number of sites approved or submitted TP.	N/a	Travel plans for several sites in Farnham and Godalming have been approved or submitted.	TBC 2010 Update requested from SCC	On going	
10	Freight Quality Partnership (FQP)	A partnership to reduce the impact of van and lorry traffic delivering to and passing through the centre of Farnham	Surrey Council and Waverley Borough Council	Planning from May 2009 in liaison with Surrey County Council	2010	An appropriate indicator will be developed in partnership with SCC.	To be quantified when more details available.	Surrey CC is developing a lorry routing strategy for the county, supported by lorry route signing on preferred routes. Subject to funding being maintained Surrey intends to extend the lorry route signing into the West Surrey area (Guildford and Waverley) focussed on an established and extended Guildford FQP. TBC when up to date information	In 2010 SCC with support of Waverley BC conduced freight survey in Farnham Town centre among local businesses. The results of the survey confirmed that, on street deliveries cause significant the congestion and delays. In response to that SCC now propose to tighten the on-street loading time	On- going	

### March 2011

N 0.	Measure	Focus	Lead authority	Planning phase	Implemen- tation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estim ated compl etion date	Comments relating to emission reductions
								available.	restrictions to no loading between 08:00am and 6pm. The new information signs will be installed in town centre shortly.		
11	Joint agency exercises stopping and checking vehicles	These can be used to check air quality emissions	WBC, SCC, the Vehicle and Operator Services Agency (VOSA), Surrey Police	Not yet specified	Currently there is no planned joint agency exercise to include air quality emissions testing	Not available	N/a	No significant progress – VOSA no longer support this	There were no vehicles emission checks through out 2010.		
12	A Surrey Air Alert Scheme	A phone / text service to alert people with minor respiratory ailments of imminent air pollution episodes	All Surrey local authorities involved in air quality monitoring	Costing and project plan completed in 2008 by Reigate and Banstead	Not currently being progressed due to lack of agreed funding.			At present a viable air alert service can only be run in Mole Valley, Reigate and Banstead, and Tandridge, as these are the only areas with sufficient monitoring both north and south	DEFRA grant was obtained in mid 2010 to set up a pilot project in East Surrey. If successful project would be rolled out to the rest of Surrey. However	Not availa ble	

## May 2010

## Waverley Borough Council

N o.	Measure	Focus	Lead authority	Planning phase	Implemen- tation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estim ated compl etion date	Comments relating to emission reductions
								of and / or within their Boroughs.	further development depends on funds availability		
13	Decriminali sed parking enforceme nt	Parking enforcement now undertaken by Waverley,	Waverley Borough Council,	Launched April 2007	On-going	Not available	N/a	SCC Parking Strategy that will form a part of Surrey LTP3 has been reviewed and will be published in April 2011. The next parking review in Waverley area is scheduled for April/May if funded by Local Committee then implemented in early2012.	During 2010 SCC carried out a study to identify locations where additional on street charges could be introduced across the County. The majority of locations identified are existing short term parking spaces near shopping areas and other busy locations. The	2011-2012	

### March 2011

N o.	Measure	Focus	Lead authority	Planning phase	Implemen- tation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estim ated compl etion date	Comments relating to emission reductions
									proposal will be advertised in Waverley in August/Sep temebr 2011. and possibly implemente d in November 2011		
14	Electric car charging point	This facility would encourage people to perhaps consider purchasing electric cars.	Waverley Borough Council	Feb 2010	2010	The popularity of electric charging point.	Not available yet	Current economic climate does not support this in the short- term	Env Health will encourage uptake of emission reduction measures across borough through planning process.	N/A	
15	Cycling promotion	Implementati on of cycle parking and cycle paths	Surrey County Council	Proposed cycle improveme nts for Farnham outlined in	Not currently being progressed	N/a	N/A	Proposed cycling improvements in Farnham are dependent on funds	In 2010 cycling was promoted during Air Quality Awareness	On going	

## May 2010

## Waverley Borough Council

N o.	Measure	Focus	Lead authority	Planning phase	Implemen- tation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estim ated compl etion date	Comments relating to emission reductions
				Farnham Review study				availability from planning agreements. East Street Development Farnham Section 106 agreed and signed. Funds for proposed cycling improvement possibly available.	week		
16	Air Quality Information	New Waverley website launched January 2011.	Waverley Borough Council	New information to support the air quality awareness week added in January 2011	Website content regularly reviewed	Number of people visiting website. In between Jan 2010 and December 2010 air quality website was visited by 801 times.	N/a	Waverley's air quality website www.waverley. gov.uk/airqualit y contains information about Waverley's air quality work and information on how to get involved in tackling local air quality.	New advisory information about biomass boilers was add to the air quality and planning pages. Also in January 2011 AQ pages were updated with information supporting Air Quality Awareness week.	On going	

### March 2011

N 0.	Measure	Focus	Lead authority	Planning phase	Implemen- tation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estim ated compl etion date	Comments relating to emission reductions
17	Air Quality and planning policies	Potential supplementa ry guidance to support air quality	Waverley Borough Council	No date given	No work on this is currently scheduled	Production of supplement ary planning guidance	N/A	Environmental Health staff examine weekly planning list for developments that have potential to impact on air quality. Consultation on planning policies continues, however there is no capacity to develop supplementary planning guidance	No significant progress.	On going	
18	Variable vehicle messaging sign system (VMS) car park signs	Managing movement into car parks and out of town variable traffic signs. The provision of real time information at the gateways to the town	Waverly Borough Council	2009	No date yet	Traffic reduction in town centre.	N/A		Project is not possible in short to medium term unless significant funding becomes available	N/A	

## May 2010

## Waverley Borough Council

N o.	Measure	Focus	Lead authority	Planning phase	Implemen- tation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estim ated compl etion date	Comments relating to emission reductions
		about which car parks have vacant space is intended to inform drivers and assist.									
19	Real time sign	A real time sign at the level crossing in Farnham will give people a variable message to switch their engines off. The sign will operate when the level crossing is active.	Waverly Borough Council	January 2010	2010	Reduction in motor idling time at level crossing	Effectiveness can be measured by the survey that will indicate how many drivers regularly pay attention to signs	Sign design completed in February 2010. Project reviewed by SCC.	Awaiting final decision from SCC and DfT & will be subject to funding from outside organisations	N o d a t e y e t	Farnham level crossing is adjacent but not in the AQMA, however is mentioned frequently in the response to the consultation process. DfT approval awaited.
20	Air Quality raising awareness campaign	See individual measures	Waverley	May 2010	See individual measures	See individual measures	N/A	Planning phase			
		The public is a vital partner in	Waverley Borough Council	May –July 2010	Early 2011	Number of information leaflets		Design of advisory leaflet and poster	Approx.2000 leaflets were distributed	J a n	

### March 2011

N o.	Measure	Focus	Lead authority	Planning phase	Implemen- tation phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estim ated compl etion date	Comments relating to emission reductions
		dealing with air pollution problems. The aim of the air quality campaign is to generate public activism by heightened public awareness of air pollution, and its impact on human health.				distributed to general public, schools etc		completed. Design of reception display completed.	across Waverley across local businesses, garages and libraries. The electronic copy of the leaflet has been attached to monthly newsletter forwarded to parents by 5 local secondary schools.	2010Completed	
21	Working with Schools	A campaign to introduce pupils from local schools to air pollution problems and to teach them how small changes can benefit air quality.	Waverley Borough Council	May - July 2010	Early 2011	Number of schools take part in Air Quality awareness campaign	N/a	Research of local schools willing to participate in campaign completed. 15 local primary schools agreed to use tool-kit developed by Waverly for teachers.	The tool kit for teachers underway.	Mar - Apr i I 2011	Such projects unlikely to be supported in the future where resources will focus on physical change measures

May 2010

## 8 Conclusions and Proposed Actions

## 8.1 Conclusions from New Monitoring Data.

TBC when data available.

## 8.2 Conclusions relating to New Local Developments

Waverley Borough Council has identified no relevant new developments requiring assessment at this stage, since the previous Updating and Screening report.

## 8.3 Other Conclusions

The Action Plan has identified the work Waverley Borough Council and a range of partners are carrying out to reduce air quality problems identified in the AQMAs and to meet the Government objective for NO<sub>2</sub>. However many of Action Plan measures are beyond the direct control of the Borough Council. Therefore success of the Action Plan depends on the input of others, particularly the local transportation authority. This is especially the case where Air Quality Management Areas are declared as a result of traffic-related emissions, such as in Godalming and Farnham.

The construction of the tunnel/bypass for Hindhead is expected to resolve the air quality problems at the Hindhead AQMA.

## **8.4 Proposed Actions**

Currently no changes are proposed for the boundaries of the three AQMAs. However, ongoing air monitoring at Farnham Level Crossing may reveal potential NO<sub>2</sub> exceedences of air quality objectives. The Detailed Assessment with a summary of the findings is underway and will be published in mid 2011.

The Action Plan is an evolving document and since the Action Plan Progress Report published in April 2009 changes have occurred. Small-scale measures aimed to generate public engagement by heightened awareness of air pollution, and its impact on human health, were developed and successfully applied. However, future implementation of many of the air quality improvements actions, especially in relation to transport infrastructure, will depend on the availability of funding by others.

Waverley will continue to monitor air quality in line with the Environment Act 1995.

## 9 References

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## **Appendices to follow (data, etc.)**

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