Runnymede Borough Council - England

2012 Air Quality Updating and Screening Assessment with 2011 Progress Report

for

Runnymede Borough Council

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

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Executive Summary

A system of Local Air Quality Management (LAQM) was introduced in the UK in 1997 under the requirements of the Environment Act 1995. There are seven pollutants to be considered and local authorities are required to periodically review and assess air quality across their areas to determine whether or not the air quality objectives for the specified pollutants are likely to be achieved.

This combined report consists of Updating and Screening Assessment (2012) and Progress Report (2011), providing monitoring data for the years 2010 and 2011 along with a review of potential sources of air pollution for the above period.

Monitoring results from 2010/2011 confirmed that exceedences of the annual mean nitrogen dioxide objective continue to occur in the AQMAs.

Outside the AQMAs, monitoring data collected during 2010 and 2011 confirmed the need to proceed to a Detailed Assessment of nitrogen dioxide in the areas of Vicarage Road, Vicarage Crescent and Pooley Green Road. In the future, it may be necessary to amend the existing M25 AQMA to include those properties.

It may also be necessary to proceed to a Detailed Assessment for the area of the Bridge Road/Weir Road junction where nitrogen dioxide concentrations at residential receptors may have exceeded the annual mean objective in 2010/2011.

The results from diffusion tube RY13 showed that Addlestone AQMA may have to be extended at its northern boundary. Further monitoring should continue further north along Chertsey Road, and up to the Chertsey Road A318/St Peter's Way A317 roundabout.

Particulate matter (PM_{10}) concentrations are considered to meet the objectives at all sites across the Borough, therefore, it is proposed to proceed to a Detailed Assessment for the areas of the existing AQMA along the M25 to investigate the potential revocation of the existing M25 AQMA for PM_{10}.

Benzene monitoring results from a background site in Ottershaw have been much below the annual mean objective for a number of years, therefore it was decided to move the monitoring tube to a site considered to be a 'worst-case' location in terms of benzene exposure at a petrol station in Bridge Road.

The assessment of road traffic emission sources in Chapter 3 identified a number of roads likely to experience significant increases in traffic flow between the years 2009 (base year) and 2026 as a result of the new development proposed in the emerging Local Plan. It is recommended to start diffusion tube monitoring in those of the identified areas that are currently not included in the monitoring programme to be aware of any potential future changes in nitrogen dioxide concentrations.

No industrial installations were found likely to give rise to significant pollutant emissions. The Council has assessed emissions from a recently installed biomass boiler installation at a Sainsbury's store at The Causeway, Staines, and has concluded that it will not be necessary to proceed to Detailed Assessment.

Further chapters of the report provide details of new development proposed by the emerging Local Plan and report on the progress in the implementation of the Air Quality Action Plan (AQAP). It is considered that combined impacts of the new development proposed in the Local Plan may be the source of significant emissions, leading to exceedences of air quality objectives in the areas near to the most congested traffic routes. The Council currently does not have policies specifically addressing air pollution or greenhouse gas emissions, which issue needs to be discussed with the Planning Department.

The next course of action is to produce a feasibility study of AQAP measures to identify the most cost effective projects and to submit a 2013 Progress Report by end of April 2013.

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LIST OF ABBREVIATIONS

AQAP	**Air Quality Management Plan**
AQMA	**Air Quality Management Area**
BTEX	**Benzene, Toluene, Ethylbenzene, Xylene**
CIL	**Community Infrastructure Levy**
HA	**Highways Agency**
LAQM	**Local Air Quality Management**
LAQN	**Local Air Quality Network**
LDF	**Local Development Framework**
LTP	**Local Transport Plan**
NETCEN	**National Environmental Technology Centre**
NNR	**Natural Nature Reserve**
R&A	**Review and Assessment**
RBC	**Runnymede Borough Council**
SCC	**Surrey County Council**
SAC	**Special Area of Conservation**
SPA	**Special Protection Area**
SPD	**Supplementary Planning Document**
SSCI	**Site of Special Scientific Interest**
TEA	**Triethylamine**
VOC	**Volatile Organic Compounds**
WASP	**Workplace Analysis Scheme for Proficiency**

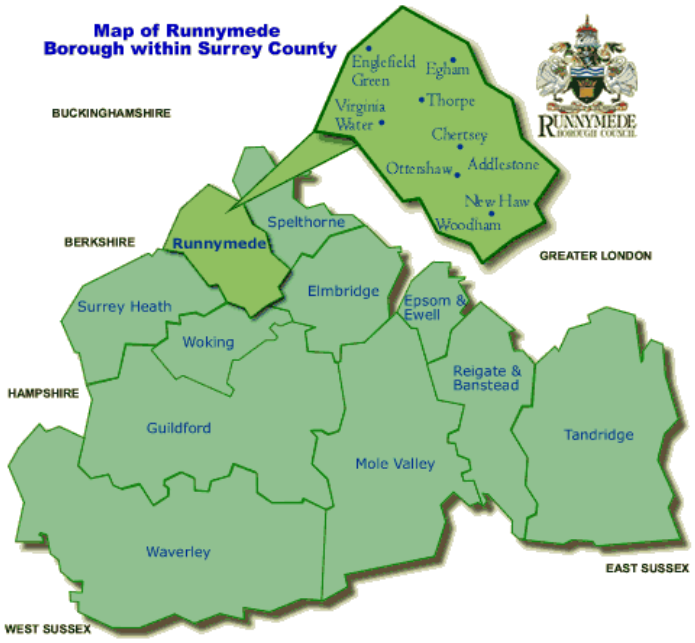
1 Introduction

1.1 Description of Local Authority Area

Main Characteristics

Runnymede lies approximately 30km in straight line southwest from central London. It is located in northwest Surrey. Its northern and eastern edges are formed by the rivers Thames and Wey respectively, its western boundary crosses Windsor Great Park and reaches the edge of Chobham Common (outside Borough Boundary), while to the south, the area extends almost to Woking. Runnymede includes the towns and villages of Addlestone, Chertsey, Egham, Egham Hythe, Englefield Green, Lyne, New Haw, Ottershaw, Row Town, Thorpe, Woodham and Virginia Water (as shown in **Figure 1-1** below).

Figure 1-1 Location of Runnymede in Surrey



Total area of Runnymede amounts to 7,804 hectares[1], of which 6,140 hectares (79%) is designated as the Metropolitan (London) Green Belt.

The population of Runnymede is 80,510[2]. Population density is 10.3 people per hectare, which is over twice the regional and national average. The largest towns are listed below[3]:

Town	Population
▪ Addlestone	17,888
▪ Chertsey	11,766
▪ Egham	11,179
▪ Englefield Green	11,180

Road Traffic

The Borough is intersected by two motorways: the M25, which goes round London and runs north south through the Borough, and the M3 crossing east west, which links South West London to Southampton and the South Coast. Other major roads are the A30, A318, A317, and A320.The three

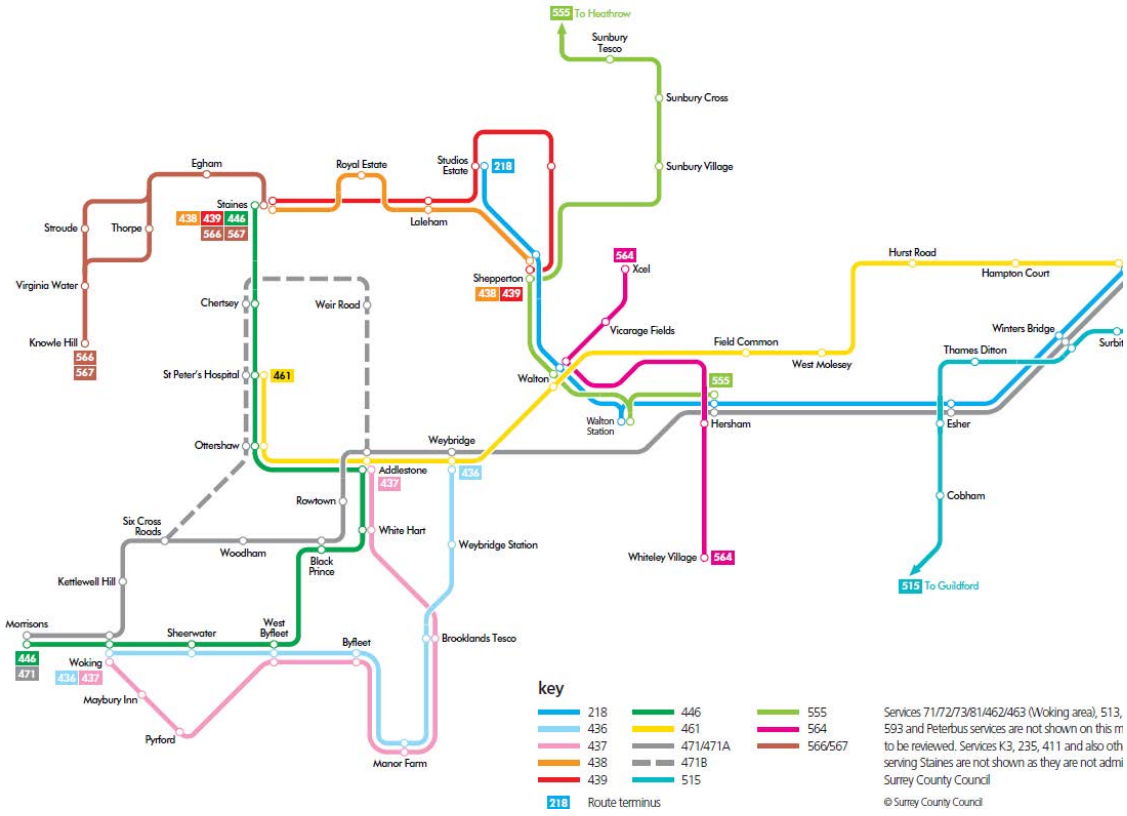
[1] 2011 Census: Quick Statistics - Population Density, 2011 (QS102EW).
[2] As above.
[3] Estimated from Census 2001 and Census 2011 ward population data.

largest towns of Addlestone, Chertsey and Egham are connected by A and B category roads. Main A roads connect the west part of the Borough with Windsor and Bracknell, and the south side of the borough connects well with Woking and Guildford. There is good access by road to the airports of Heathrow and Gatwick.

Road traffic is the main source of air pollution in Runnymede. The number of cars per household in Runnymede amounts to 1.5[4]. Car ownership within the Borough is higher than the average for England, with 85% of households having one or more cars available and 45% having two or more cars[5]. Such high car ownership may account for low usage of public transport.

There are a number of bus routes using the road network, as shown on map in **Figure 1-2**. Bus services in Runnymede were reviewed by Surrey County Council in August 2010. The buses are operated by different operating companies, Abellio Surrey being the most popular provider. A quality Bus Partnership operates in the north of the Borough on the Windsor - Heathrow route.

Figure 1-2 North Surrey bus routes map



[4] 2011 Census: Key Statistics - Car or Van Availability, 2011 (KS404EW).
[5] As above.

Railway

Runnymede has main line rail connections to London (Waterloo) and Reading. Southwest destinations can be reached through links with Weybridge, Woking and Guildford.

Airports

The distance from the Borough's boundary (intersecting M25) to Heathrow Airport (Terminal 5) via M25 is about 6 km.

Industry and infrastructure

Most of the built environment in Runnymede is residential in nature, due to the borough's close proximity and good road/rail access to London. Small pockets of industrial land use are mainly located on designated industrial/trade estates. More recently the area has been targeted for office developments (**Figure 1-3**). Main sources of employment are in the service sector.

Some 572 hectares (9%) of the borough's area is affected by heavy exploitation of its natural gravel and sand deposits, which have occurred for many decades, with another 142 hectares targeted for future extractions. The empty extraction pits have mainly been utilised by landfilling with domestic and inert commercial waste.

The list of industrial installations within the Borough regulated under the Pollution Prevention and Control regime is included in **Appendix B**. Nine industrial installations fall under A1 category and are regulated by the Environmental Agency. There are no type A2 installations. There are 35 Part B installations, comprising:

- 1 Cement Mortar Batching plant
- 4 Vehicle Respraying installations
- 6 Mobile Crushers
- 8 Dry Cleaners
- 13 Petrol stations
- 1 Mobile Roadstone Coating installation
- 2 Mobile Batching Plants

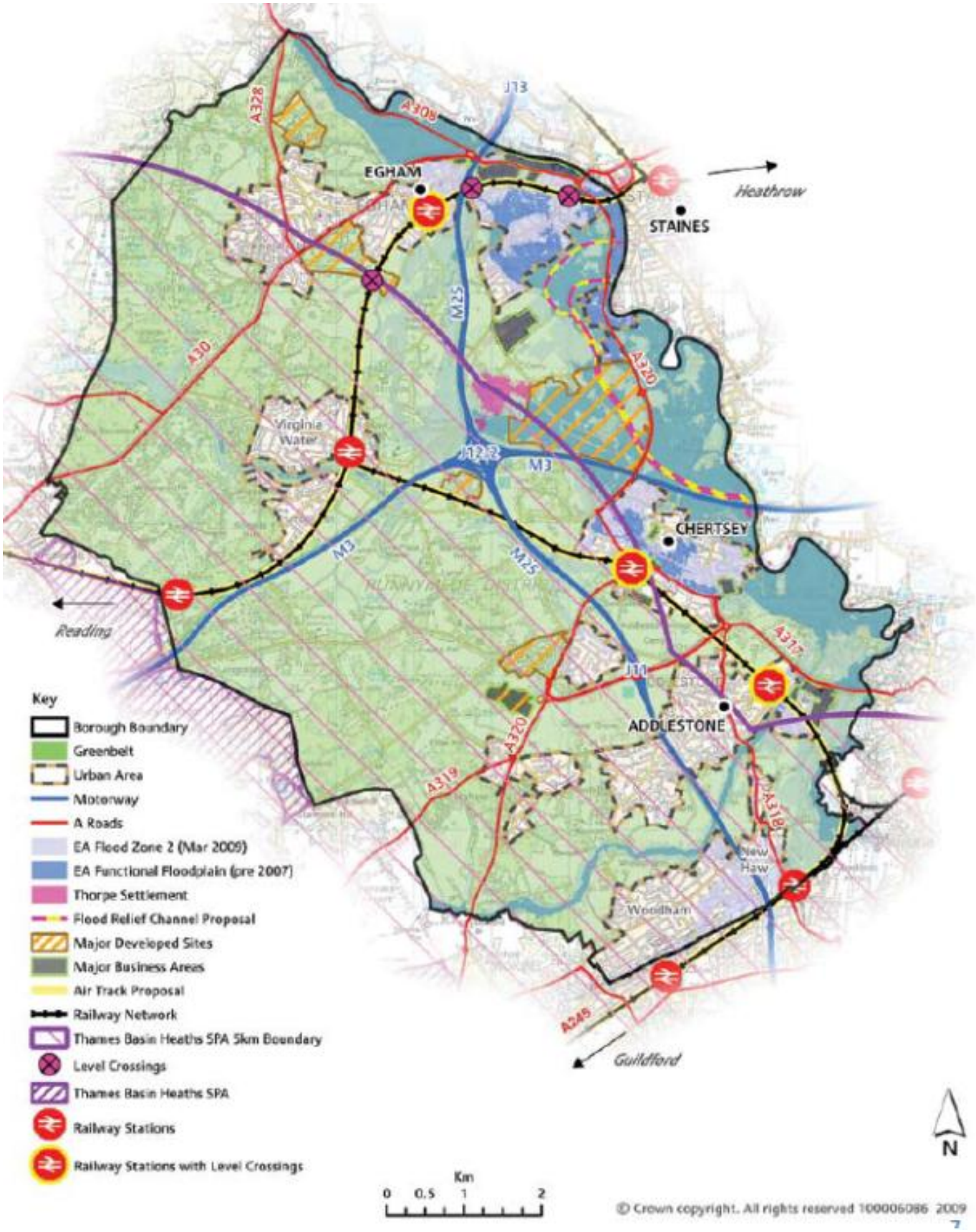
Runnymede Infrastructure Delivery Plan[6] provides an overview of existing infrastructure provision and identify the future infrastructure and service needs for the Borough (for the emerging Local Plan period up to 2026).

It must be noted that 79% of the Runnymede area is comprised of Green Belt where there is a general presumption against major development with the exception of 'very special circumstances' as dictated

[6] RBC (2013) *Infrastructure Delivery Plan*. Available from: http://www.runnymede.gov.uk/portal/binary/com.epicentric.contentmanagement.servlet.ContentDeliveryServlet/RBC%2520Portal/LGCL%2520Categories/Environment/Land_premises/Planning/Planning_policy/LDF/IDP/IDP_2013.pdf

by Planning Policy Guidance Note 2, Green Belts (1995). The restrictions over development extend to housing, where control goes as far as residential extensions and replacement dwellings.

Figure 1-3 Industry and Infrastructure in Runnymede.



1.2 Purpose of Report

This report fulfils the requirements of the Local Air Quality Management process as set out in Part IV of the Environment Act (1995), the Air Quality Strategy for England, Scotland, Wales and Northern Ireland 2007 and the relevant Policy and Technical Guidance documents. The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where 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.

The objective of this Updating and Screening Assessment is to identify any matters that have changed which may lead to risk of an air quality objective being exceeded. A checklist approach and screening tools are used to identify significant new sources or changes and whether there is a need for a Detailed Assessment. The USA report should provide an update of any outstanding information requested previously in Review and Assessment reports.

1.3 Air Quality Objectives

The air quality objectives applicable to LAQM **in England** are set out in the Air Quality (England) Regulations 2000 (SI 928), The Air Quality (England) (Amendment) Regulations 2002 (SI 3043), and are shown in Table 1.1. This table shows the objectives in units of microgrammes per cubic metre $\mu g/m^3$ (milligrammes per cubic metre, mg/m^3 for carbon monoxide) with the number of exceedences in each year that are permitted (where applicable).

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

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 $\mu g/m^3$	Running annual mean	31.12.2003
	5.00 $\mu g/m^3$	Running annual mean	31.12.2010
1,3-Butadiene	2.25 $\mu g/m^3$	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.5 $\mu g/m^3$	Annual mean	31.12.2004
	0.25 $\mu g/m^3$	Annual mean	31.12.2008
Nitrogen dioxide	200 $\mu g/m^3$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu g/m^3$	Annual mean	31.12.2005
Particles (PM_{10}) (gravimetric)	50 $\mu g/m^3$, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 $\mu g/m^3$	Annual mean	31.12.2004

Sulphur dioxide	350 $\mu g/m^3$, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu g/m^3$, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu g/m^3$, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

The air quality critical level for the protection of vegetation for nitrogen oxides, as set out in the Air Quality Standards Regulations 2010, is shown in **Table 1.2**. Although local authorities are not required to work towards the achievement of this objective, it was considered reasonable to include it in the report due to the Borough's proximity to a European habitat conservation site. Runnymede lies within a short distance of Chobham Common, site designated both as a Natural Nature Reserve (NNR) and a Site of Special Scientific Interest (SSSI). Chobham Common is also a component of two International Sites (European or Natura 2000 sites), the Thames Basin Heaths Special Protection Area (SPA) and Thursley, Ash, Pirbright and Chobham Special Area of Conservation (SAC).

Table 1.2 Nitrogen oxides critical level for the protection of vegetation (Schedule 6 of the Air Quality Standards Regulations 2010)

	Critical Level	
Pollutant	**Concentration**	**Measured as**
Oxides of nitrogen	30 $\mu g/m^3$	Annual mean

1.4 Summary of Previous Review and Assessments

1.4.1 First round of review and assessment

Runnymede Borough Council (the Council) undertook its first round of air quality review and assessment between the years 1999 and 2002. The assessment was carried out in four stages as prescribed by the then statutory guidance, and published as four consecutive air quality reports. In light of the more accurate and detailed Stage 3 Review and Assessment (completed in 2000), the Council declared an AQMA for NO_2 and PM_{10} in November 2001 for the areas (**Figures C1** and **C2** in **Appendix C**):

- (Area 1 - north of junction 11) extending 70m east and west of the centre line of the M25 between Junction 11 and the Borough's boundary north of Junction 13;
- (Area 2 - south of junction 11) extending 55m east and west of the centre line of the M25 between Junction 11 and the southern boundary of the borough at New Haw/Byfleet.

1.4.2 Second round of review and assessment

Nitrogen dioxide monitoring data collated for the 2003 Updating and Screening Assessment confirmed that annual mean concentrations of nitrogen dioxide at all the diffusion tube monitoring sites complied with the objective.

However, the assessment of Runnymede road traffic identified roads at risk of NO_2 objectives being exceeded:

- One road with increased traffic flow: Woburn Hill;
- Three junctions: Eastwood Rd/Guildford Street; High Street/Church Rd; Woodham Lane/New Haw Rd.

A Detailed Assessment was undertaken for the above locations in 2004, however, dispersion modelling indicated that the only areas predicted to exceed the 2005 objective for NO_2 were those close to the M25 motorway (already part of the AQMA).

1.4.3 Third round of review and assessment

The 2006 Updating and Screening Assessment recorded elevated levels of NO_2 at roadside monitoring sites - RY1 in Addlestone and RY6 at the Leisure Centre in Egham (already within the M25 AQMA, the area north of junction 11).

No roads were identified as requiring dispersion modelling. Therefore, a Detailed Assessment (2007) was based on the monitoring results and focused on Addlestone town centre. As a result, an AQMA for NO_2 was declared in July 2008 for the junction of High Street, Brighton Road and Church Road in Addlestone. The extent of this AQMA can be seen in **Figures C3** and **C4, Appendix C**.

1.4.1 Fourth round of review and assessment

The 2009 Updating and Screening Assessment concluded that although there were no identified exceedences of the annual mean objective for nitrogen dioxide outside AQMAs in 2008 or the two preceding years, and no roads were considered to be requiring a Detailed Assessment, it was still necessary to undertake further diffusion tube monitoring, mainly in Addlestone, Egham and Chertsey, to monitor the levels of nitrogen dioxide on 'busy' roads.

Monitoring results for nitrogen dioxide as examined in the 2010 Progress Report showed potential exceedences of the annual mean objective at a few residential properties in the area nearest Vicarage Road level crossing in Egham (monitoring site RY26). It was, therefore, recommended to proceed to a Detailed Assessment in this location. The 2010 Report identified one planning application – to redevelop the former DERA site in Longcross - as likely to have a significant adverse impact on air quality in the areas where large increases in traffic flow would be incurred as a result of the proposed development. It was considered that the affected roads would include: C10 Trumpsgreen Road; B389 Sandhills Lane; B388 Mill House Lane; C10 Chobham Lane; C10 Stroude Road; B375 London Street and B388 Vicarage Road.

The Further Assessment for Addlestone AQMA, completed in 2010, confirmed that the highest concentrations of NO_2 occurred at the junction of High Street and Station Road. High NO_2 concentrations were also modelled close to the High Street the road centre (between Simplemarsh Road and Chapel Avenue, where "street canyon" effects can be expected to occur) and Station Road road centre (in the proximity of the railway station where higher emissions come from stationary traffic backing up behind the railway barriers). Heavy Goods Vehicles were found to contribute significantly to emissions.

1.4.2 Air Quality Action Plan

In 2008, a draft action plan was prepared for Runnymede Air Quality Management Areas, which set out measures aimed at improving air quality and achieving the air quality objectives in the Borough. The draft AQAP was last reviewed and updated in 2012.

2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

2.1.1 Automatic Monitoring Sites

Runnymede Council does not operate any long-term automatic monitoring stations for any of the specified pollutants. However, funding from the air quality grant 2010-11 was used to install a short-term monitoring station at the railway level crossing in Vicarage Road in Egham between February and July 2011.

Monitoring Station in Egham

The aim of the project was to establish nitrogen dioxide PM_{10} levels in Vicarage Road in the vicinity of the level crossing and, if possible, determine the impacts of barrier closing times on the pollutant concentrations. The data would also be used to assess the impacts of the Heathrow AirTrack proposal for a rail link from Heathrow's Terminal 5 to south west London (now shelved). In addition, the project aimed to reassess the levels of particulate matter (PM_{10}) within the M25 AQMA and review the validity of the original AQMA designation with respect to particulates.

The specific objectives for the Egham monitoring project are listed below:
NO_2

- To determine the levels of NO_2 at the level crossing as an annual mean and also as 15-minute averages to coincide with the approximate queuing time of vehicles when the barriers are down and to run parallel with any traffic survey work being done.
- Depending on the results, the M25 AQMA can be extended to cover the area in the vicinity of the Vicarage crossing.

PM_{10}

- To determine the levels of PM_{10} at the level crossing as an annual mean and also as 15-minute averages to coincide with the approximate queuing time of vehicles when the barriers are down and to run parallel with any traffic survey work being done.
- To use the above data to investigate the potential revocation of the M25 AQMA for PM_{10}.

The monitoring station was located a meter away from diffusion site RY26 and contained two analysers, measuring nitrogen oxides (NO_x) and particulate matter (PM_{10}). The monitoring technique and location details are provided in **Table 2.1**. A map showing the location of the site can be found in **Figure 2-1,** with site photos **in Figure 2-2**. The site represented worst-case exposure to both pollutants.

Full details of the quality assurance and quality control (QA/QC) are provided in **Appendix A**.

Table 2.1 Details of Automatic Monitoring Sites

Site Name	Site Type	OS Grid Ref	Pollutants Monitored	Monitoring Technique	In AQMA?	Relevant Exposure? (Y/N with distance (m) to relevant exposure)	Distance to kerb of nearest road (N/A if not applicable)	Does this location represent worst-case exposure?
Vicarage Road, Egham	Roadside	X501716 Y171383	PM_{10}, NO_2	TEOM / Chemilum. Analyser	N	Y (6.0m)	2.5m	Y

Figure 2-1 Location of Automatic Monitoring Station in Egham

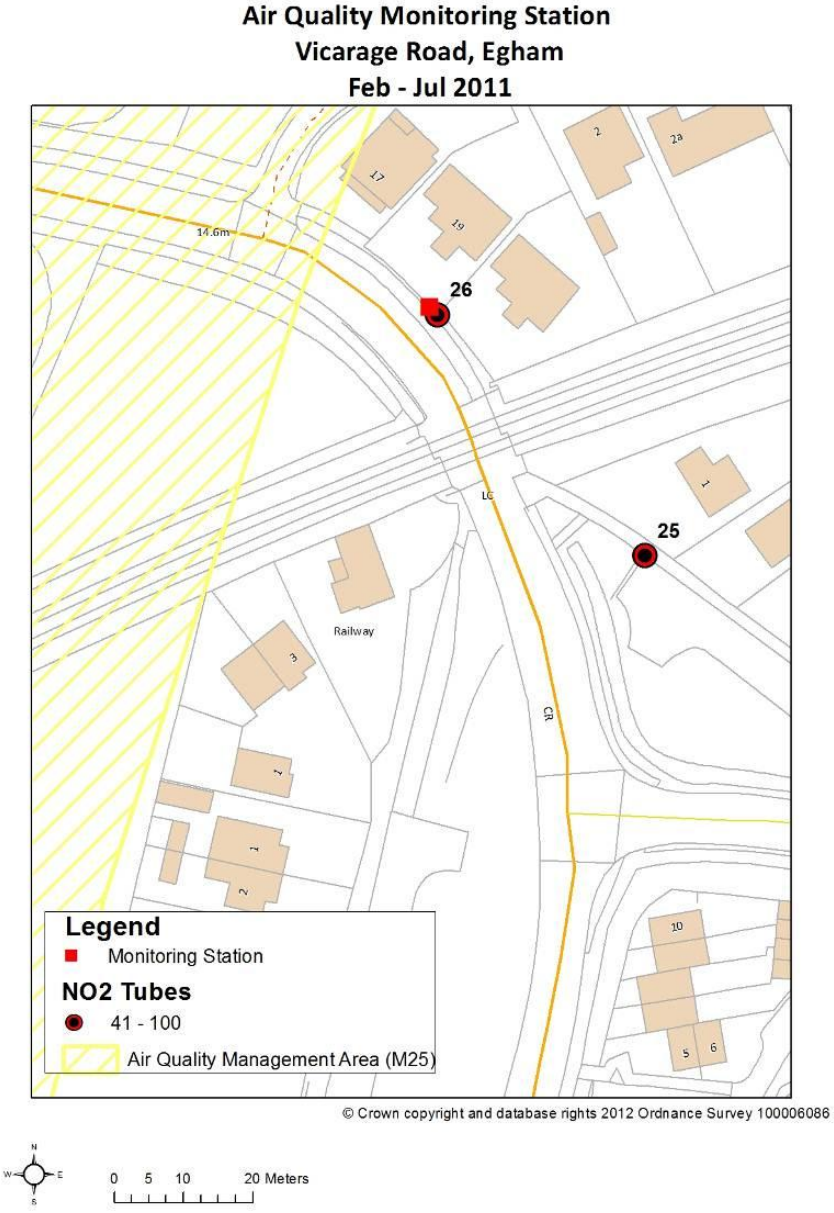


Figure 2-2 Site Photos of Automatic Monitoring Station in Egham

2.1.2 Non-Automatic Monitoring Sites

The Council carries out diffusion tube monitoring for nitrogen dioxide and benzene.

Nitrogen dioxide (NO_2) Monitoring Programme

Currently (December 2012) Runnymede has twenty six monitoring sites (**Table 2.2**), mostly at roadside locations, of which a few (RY1, RY6, RY8 and RY9) have been in operation since the launch of Defra's UK Nitrogen Dioxide Network programme in 1993. The programme operated until 2005 and has been continued on a voluntary basis.

Circa 2004, three tubes - RY10, RY11 and RY12 - were added to the programme for the purposes of a co-location study. They were located at a Highways Agency's M25 J13 site near Staines and deployed by the Centre for Sustainability, TRL, alongside the Highways Agency's continuous analyser. The monitoring stopped in March 2011 when the site was decommissioned (due to lack of funding).

Local knowledge and monitoring and modeling data from previous years provided basis for the identification of new monitoring sites. The new monitoring programme started in October 2009 and its focus is on town centres with roads of the following characteristics:

- Busy streets or junctions with residential properties and/or where people may spend 1 or more hours;
- Narrow congested streets with residential properties.

The sites are shown on the map in **Figure 2-3**.

Benzene Monitoring Programme

Benzene has been monitored for a number of years (since circa 1995) at a background location, next to a nitrogen dioxide diffusion tube at the site RY3 (site details in **Table 2.2**, with the location shown on maps in **Figures 2-3** and **2-4**).

Site Name	**Site Type**	**Site Type**	**XY OS Grid Ref**	**In AQMA?**	**Is monitoring collocated with a Continuous Analyser (Y/N)**	**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?**	**Monitoring Period**
RY3	Brockhurst Residential Home, Brox Road, Ottershaw	Urban background	X 502663 Y 163693	N	N	Y (22.0 m)	7.0 m	N	1995-to date

Figure 2-3 Map of Non-Automatic Monitoring Sites, 2010 (29 sites)

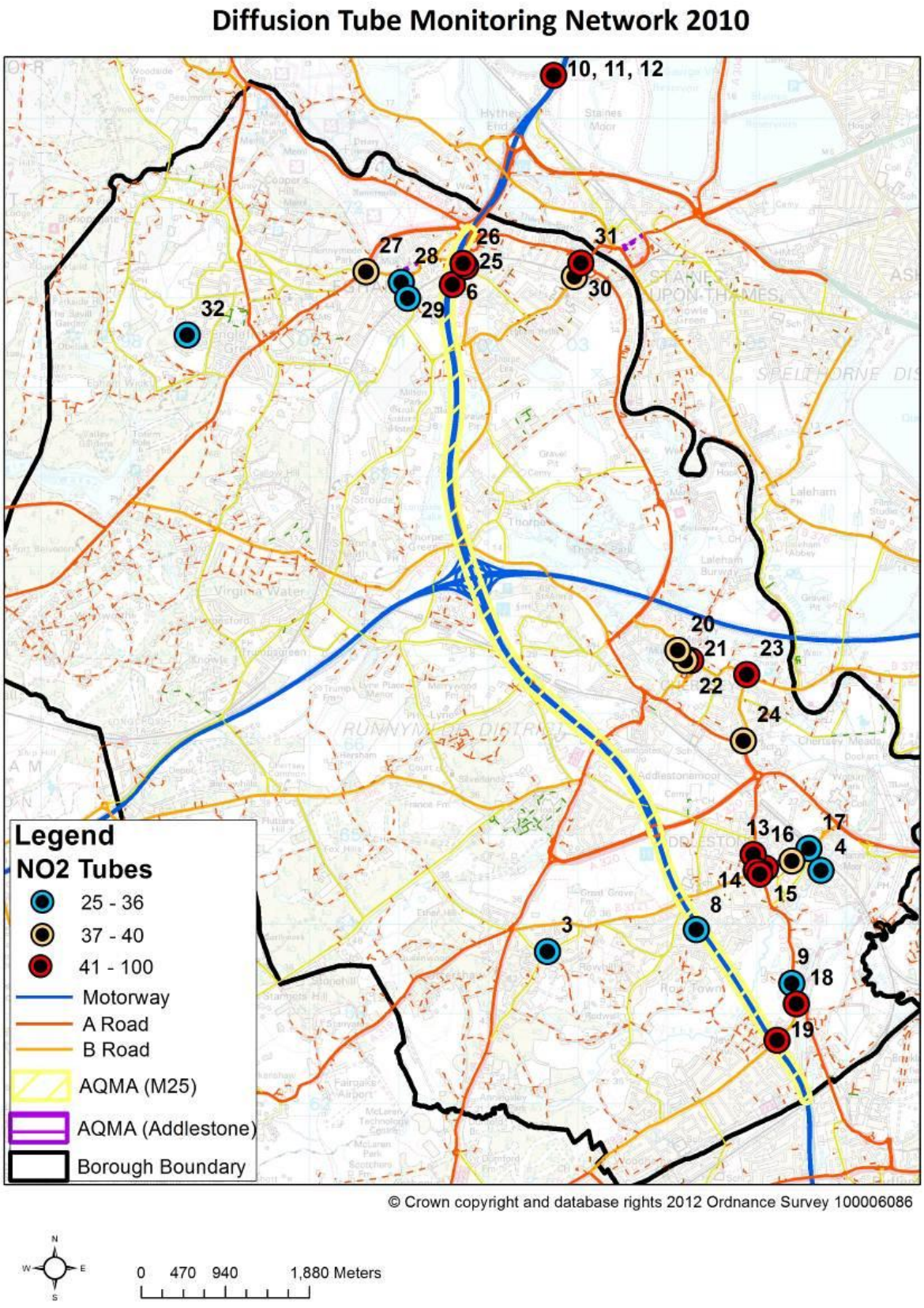


Figure 2-4 Map of Non-Automatic Monitoring Sites, 2011 (27 sites)

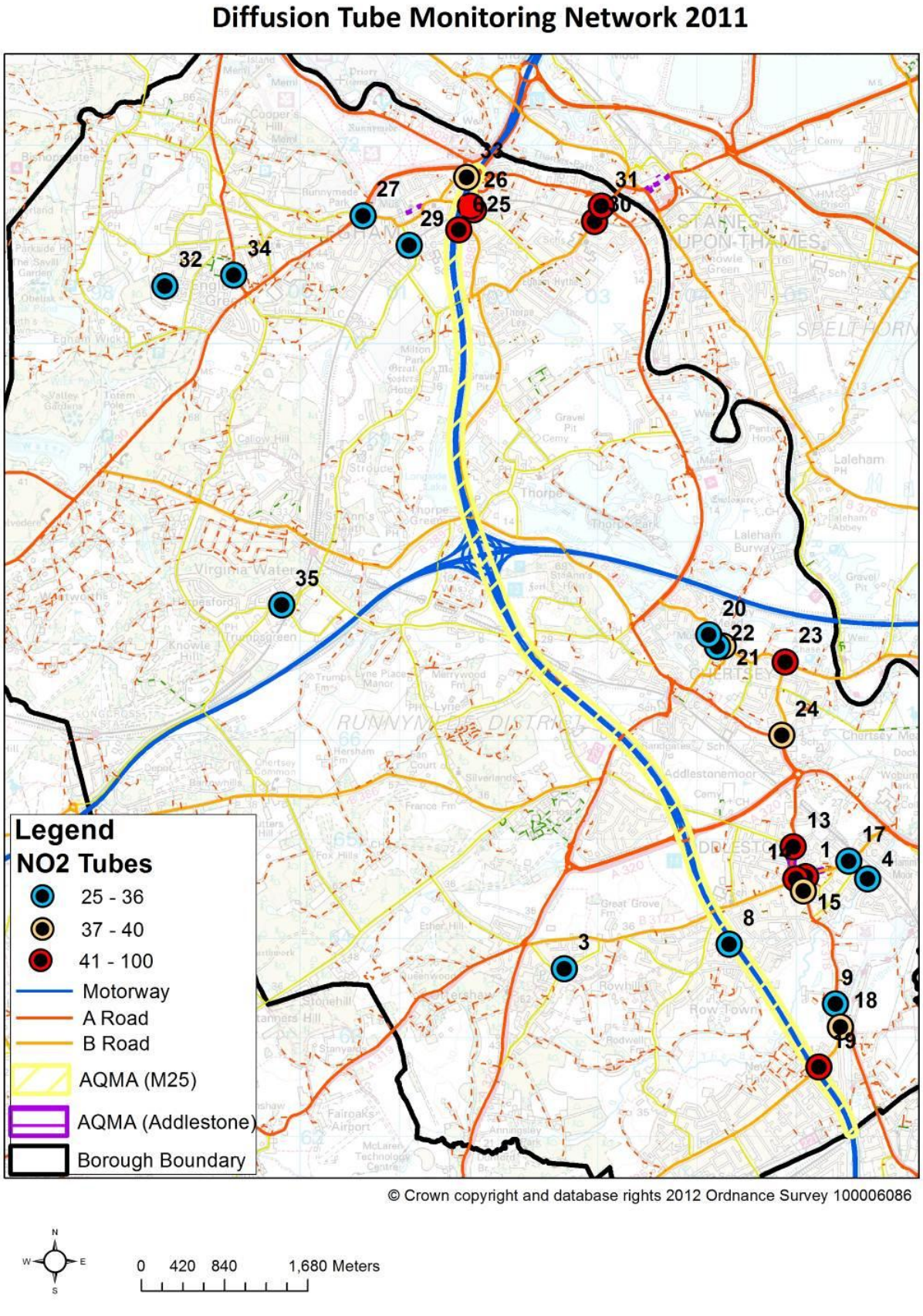


Table 2.2 Details of Non-Automatic Monitoring Sites

Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	In AQMA?	Is monitoring collocated with a Continuous Analyser (Y/N)	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?	Monitoring Period
RY1	Civic Centre, Station Road, Addlestone	Roadside	X 505095 Y 164623	Y	N	Y (2.0 m)	2.0 m	N	1993-to date
RY3	Brockhurst Residential Home, Brox Road, Ottershaw	Urban background	X 502663 Y 163693	N	N	Y (22.0 m)	7.0 m	N	1993-to date
RY4	Riverside Sheltered Housing, Pitson Close, Addlestone	Urban background	X 505712 Y 164622	N	N	Y (5.0 m)	5.0 m	N	1993-07/2012
RY6	Egham Sports Centre, Vicarage Road, Egham	Roadside	X 501595 Y 171124	Y	N	Y (12.0 m)	11.0 m	N	1993-to date
RY8 [8]	Ongar Place First School, Milton Road, Addlestone	Roadside	X 504325 Y 163940	Y	N	Y (26.0 m)	21.0 m	N	1993-to date
RY9	175 New Haw Road, New Haw	Roadside	X 505395 Y 163337	N	N	Y (13.0 m)	2.0 m	N	1993-to date
RY10 [1]	M25 J13, Staines Site B	Roadside	X 502807 Y 173572	? [2]	Y	N	34.0 m	N	2004-03/2011
RY11 [1]	M25 J13, Staines Site B	Roadside	X 502807 Y 173572	? [2]	Y	N	34.0 m	N	2004-03/2011
RY12 [1]	M25 J13, Staines Site B	Roadside	X 502807 Y 173572	? [2]	Y	N	34.0 m	N	2004-03/2011
RY13 [3]	44 High Street, Addlestone	Roadside	X 504959 Y 164778	Y/N [3]	N	Y (0.5 m)	2.0 m	N	10/2009-to date
RY14	1 Church Road, Addlestone	Roadside	X 504993 Y 164600	Y	N	Y (0.5 m)	1.5 m	Y	10/2009-to date
RY15 [4]	1-16 Dukes Court, Brighton Road,	Roadside	X 505036 Y 164554	Y	N	Y (4.5 m)	5.5 m	N	10/2009-to date

Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	In AQMA?	Is monitoring collocated with a Continuous Analyser (Y/N)	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?	Monitoring Period
	Addlestone								
RY16	116 Station Road, Addlestone	Roadside	X 505391 Y 164704	N	N	Y (6.5 m)	3.5 m	N	10/2009-12/2010
RY17 [5]	Railway crossing, Station Road, Addlestone	Roadside	X 505589 Y 164844	N	N	Y (0.5 m)	3.5 m	Y	10/2009-to date
RY18	New Haw Road/Woodham Lane roundabout, New Haw	Roadside	X 505443 Y 163107	N	N	Y (1.0 m)	4.5 m	Y	10/2009-to date
RY19	78 Woodham Lane, New Haw	Roadside	X 505227 Y 162701	Y	N	Y (8.5 m)	2.5 m	Y	10/2009-to date
RY20	26 Windsor Street, Chertsey	Roadside	X 504117 Y 167060	N	N	Y (0.5 m)	3.5 m	N	10/2009-06/2012
RY21	London Street/Heriot Road junction, Chertsey	Roadside	X 504261 Y 166945	N	N	Y (1.0 m)	1.0 m	Y	10/2009-to date
RY22	Guildford Street, Chertsey	Roadside	X 504203 Y 166940	N	N	Y (0.5 m)	3.5 m	Y	10/2009-to date
RY23	37 Bridge Road, Chertsey	Roadside	X 504888 Y 166786	N	N	Y (8.0 m)	1.0 m	Y	10/2009-to date
RY24	Eastworth Road/Chertsey Road junction	Roadside	X 504852 Y 166046	N	N	Y (9.5 m)	3.0 m	Y	10/2009-to date
RY25 [6]	Vicarage Rd/Pooley Green Rd junction, Egham	Roadside	X 501748 Y 171316	N	N	Y (7.5 m)	1.5 m	Y	10/2009-to date
RY26 [7]	Railway crossing, Vicarage Road, Egham	Roadside	X 501716 Y 171383	N	N	Y (6.0 m)	2.5 m	Y	10/2009-to date
RY27	Egham Hill roundabout (193/195 High Street), Egham	Roadside	X 500634 Y 171287	N	N	Y (3.0 m)	1.0 m	Y	10/2009-to date
RY28	38 Station Road,	Roadside	X 501028	N	N	Y (2.0 m)	2.5 m		10/2009-12/2010

Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	In AQMA?	Is monitoring collocated with a Continuous Analyser (Y/N)	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?	Monitoring Period
	Egham		Y 171167					Y	
RY29	Railway crossing, Station Road (3 Rusham Park Avenue), Egham	Roadside	X 501100 Y 170991	N	N	Y (2.0 m)	1.5 m	Y	10/2009-06/2011
RY30	Railway crossing, Thorpe Road, Egham	Roadside	X 502965 Y 171231	N	N	Y (5.0 m)	2.5 m	Y	10/2009-07/2011
RY31	Thorpe Road, Egham	Roadside	X 503036 Y 171386	N	N	Y (5.0 m)	1.0 m	Y	10/2009-07/2011
RY32	Beechtree Avenue, Englefield Green	Urban Background	X 498638 Y 170580	N	N	Y (8.0 m)	> 50.0 m	N	10/2009-07/2012
RY33	46 The Avenue, Egham	Roadside	X 501679 Y 171676	Y	N	Y (1.0 m)	15m from the Avenue & 43m from the M25	Y	01/2011–to date
RY34	Jct. of St Jude's Road & Bagshot Rd	Roadside	X 499334 Y 170688	N	N	Y (1.0 m)	1.0 m	Y	01/2011–to date
RY35	7 Fairview Cottages, Trumps Green Road, Virginia Water	Roadside	X 499815 Y 167362	N	N	Y (11.0 m)	2.0 m	N	07/2011-to date
RY36	5 Ham Moor Lane, Addlestone (Weybridge Business Park)	Industrial	X 506218 Y 164454	N	N	N	2.0 m	Y	05/2012-to date
RY37	3 Shakespeare Road, Addlestone (Weybridge Business Park)	Industrial	X 506093 Y 164481	N	N	Y (3.0 m)	1.5 m	N	05/2012-to date
RY38	The Beeches, Chestnut Drive, Egham	Roadside	X 499891 Y 170847	N	N	Y (30.0 m)	13.0 m	N	08/2012-to date
RY39	Chobham Lane, Longcross, near Kitsmead Lane	Roadside	X 498827 Y 166217	N	N	N	10m from Chobham Lane & 39m from the	Y	08/2012-to date

Site Name	Site Type	X OS Grid Ref	Y OS Grid Ref	In AQMA?	Is monitoring collocated with a Continuous Analyser (Y/N)	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?	Monitoring Period
	roundabout						M3		
RY40	Homewood Park, Stonehill Road	Urban Background	X 502052 Y 165119	N	N	N	68.0 m	N	08/2012-to date
RY41	1 Hampshire Court, Bush Close, Addlestone	Urban Background	X 505214 Y 164352	N	N	Y (9.0 m)	63.0 m	N	08/2012-to date

[1] RY10, RY11 and RY12 were co-location tubes deployed at the Highways Agency's M25 monitoring site alongside the Highways Agency's continuous analyser between 2004 and March 2011 when the site was decommissioned due to lack of funding.

[2] The above monitoring site was located outside the Borough boundary.

[3] Site moved to 1-22 Wyvern Place, High St, Addlestone on 01/01/2011 (to verify the AQMA boundary). The new location is outside the AQMA boundary.

[4] Site moved to 23 Brighton Rd, Addlestone on 01/01/2011 (to verify the AQMA boundary).

[5] Site moved to 158 Station Rd, Addlestone (considered to be a worst-case location).

[6] Site moved to 1 Pooley Green Road, Egham on 01/01/2011 (considered to be a worst-case location).

[7] A continuous analyser was operating at the site RY26 between February and July 2011 (please refer to **Section 2.1.1**).

[8] Tube moved higher up the fence from 01/09/2010.

2.2 Comparison of Monitoring Results with AQ Objectives

2.2.1 Nitrogen Dioxide

Automatic Monitoring Data

Results from short-term automatic monitoring of nitrogen dioxide at Vicarage Road, Egham in 2011 are presented in **Table 2.4** and **Table 2.5** (annual and 1-hour mean respectively).

The site was operated by the Transport Research Laboratory (TRL) from 1 February 2011 till 31 July 2011. Data for this site have been 'annualised' (**Appendix A**) and, due to the short-term period of monitoring, the 99.8th percentile of 1-hour means for nitrogen dioxide has been presented along the number of exceedences (**Table 2.5**).

Results show that the annual mean at the monitoring site exceeded the objective of 40 µg/m^3. The 'annualised' mean for NO_2 of 66.8 µg/m^3 recorded at the site shows reasonable agreement with the diffusion tube average of 62.5 µg/m^3 for the site RY26. Average monthly concentrations of NO_2 were the highest at early spring – March and April 2011 (79 µg/m3 and 77 µg/m3 respectively) and reduced in the summer months to approximately 60 µg/m^3 (**Table 2.6**).

As the site is not representative of relevant public exposure, Defra's calculation spreadsheet was used to estimate NO_2 concentration at the receptor nearest to the site. This indicated that the annual mean concentration of nitrogen dioxide at the façade of the nearest receptor in Vicarage Road exceeded 50 µg/m^3 in 2011 (**Table 2.3**). It can be expected that annual mean nitrogen dioxide concentrations at a few properties in Vicarage Road, Vicarage Crescent and Pooley Green near the railway crossing also exceeded the objective. Therefore, it will be necessary to proceed to a Detailed Assessment of nitrogen dioxide in those areas. In the future, it may be necessary to amend the existing M25 AQMA to include those properties.

Although the annual mean concentration exceeded 60 µg/m^3, which is considered indicative of a potential exceedence of the hourly mean NO_2 objective, this was not proven for the monitoring site. The 1-hour objective of 200 µg/m^3 was exceeded four times over the monitoring period of six months, which is below eighteen exceedences per year allowed. As percentiles, 99.8% of the 1-hour average values measured over the monitoring period fell below 177.6 µg/m^3. Thus, it is considered that the site was compliant with the 1-hour objective. The four exceedences occurred on 29, 30 and 31st March, in the morning hours of 6-8 am, mid-day (11-12 pm) and in the afternoon at 4-5 pm respectively, which largely coincides with peak travel hours.

The graphs in **Figure 2-5** show how emissions changed by day of the week and hour of the day. Mean NO_2 values for the plot were calculated by day of the week and then by hour of day. The plot shows clearly that concentrations were higher on weekdays and corresponded with morning and afternoon traffic peaks. Concentrations on Saturdays also remained relatively high, probably due to increased shopping and leisure trips. Unsurprisingly, the day of lowest concentration in the week was Sunday.

Table 2.3 Predicted annual mean concentration of nitrogen dioxide at receptor, 2011

Site	Annual Mean Concentr. 2011 [μg/m^3]	Estimated total annual mean background concentr.[1] 2011 [μg/m^3]	Distance from kerb to receptor	Distance from kerb to monitoring tube	Predicted annual mean concentr. at receptor[2] 2011 [μg/m^3]	Comment
Vicarage Road, Egham	66.8 ('annualised')	31.6	6.0 m	2.5 m	56.2	Potential exceedences of annual mean NO_2 objective in the vicinity of the railway crossing at Vicarage Road, Pooley Green Road and Vicarage Crescent.

[1] Source: Defra's background pollution maps.
[2] Defra's fall-off with distance calculation spreadsheet (Issue 4: 25/01/2011).

Table 2.4 Results of Automatic Monitoring of Nitrogen Dioxide: Comparison with Annual Mean Objective

Site ID	Site Type	Within AQMA?	Valid Data Capture for period of monitoring %[a]	Valid Data Capture 2011 % [b]	Annual Mean Concentration μg/m^3
					2011 [c]
Vicarage Road, Egham	Roadside	N	94.1	47.1	66.8 ('annualised')

[a] i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.
[b] i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%.)
[c] Means should be "annualised" as in Box 3.2 of TG(09), if monitoring was not carried out for the full year.

Table 2.5 Results of Automatic Monitoring for Nitrogen Dioxide: Comparison with 1-hour mean Objective

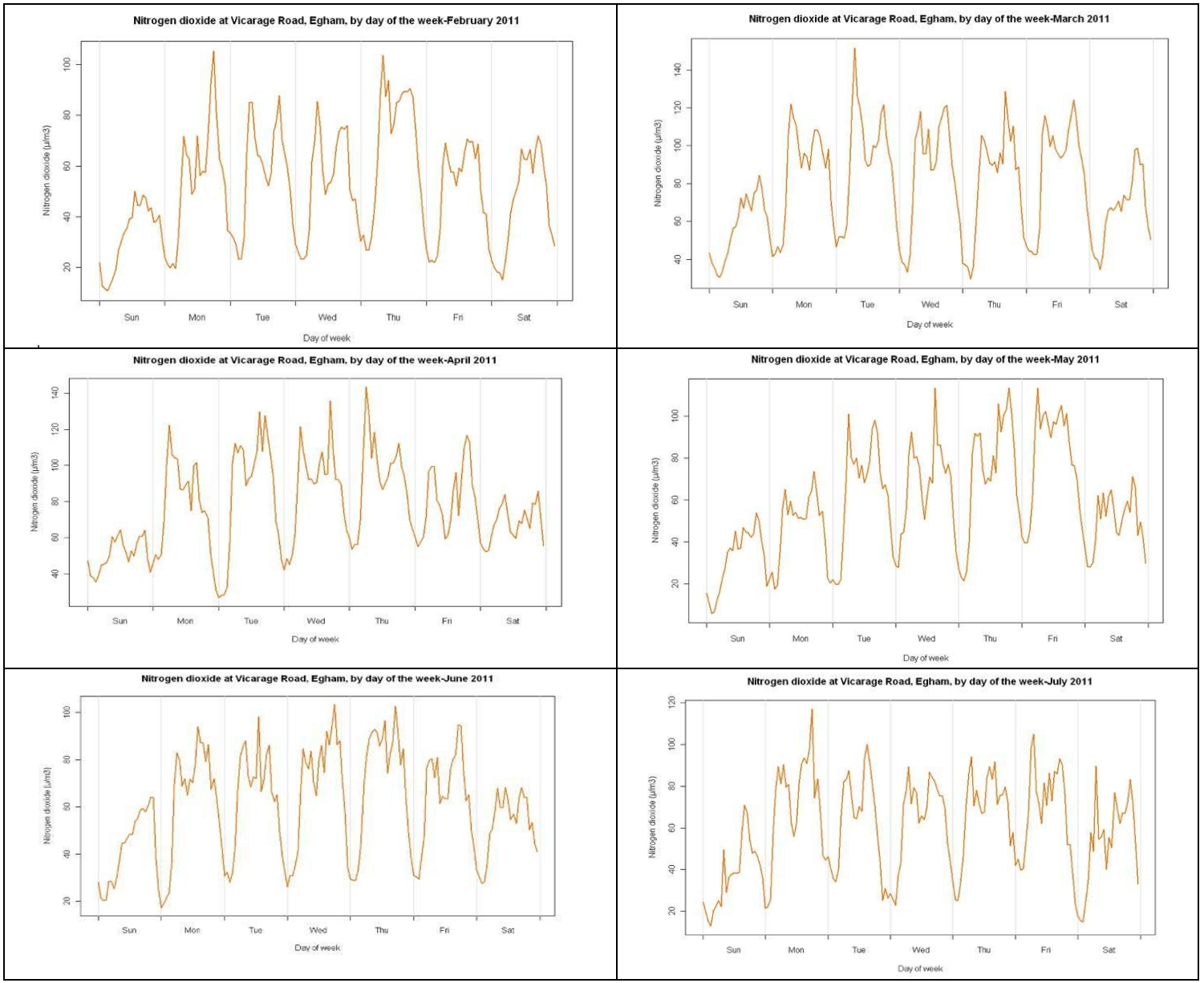
Site ID	Site Type	Within AQMA?	Valid Data Capture for period of monitoring %[a]	Valid Data Capture 2011 % [b]	Number of Exceedences of Hourly Mean (200 μg/m^3)
					2011 [c]
Vicarage Road, Egham	Roadside	N	94.1	47.1	4 (177.6)

[a] i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.
[b] i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%.)
[c] If the period of valid data is less than 90%, include the 99.8th percentile of hourly means in brackets
*Number of exceedences for previous years are optional.

Table 2.6 Nitrogen dioxide monitoring statistics (31/01/11-31/07/11)

February	March	April
no2 Min. : 2.97 1st Qu.: 29.23 Median : 46.85 Mean : 50.48 3rd Qu.: 68.69 Max. :146.07 NA's : 60.00	no2 Min. : 4.70 1st Qu.: 53.24 Median : 77.81 Mean : 78.79 3rd Qu.:101.44 Max. :241.47 NA's : 2.00	no2 Min. : 10.49 1st Qu.: 51.42 Median : 74.45 Mean : 77.44 3rd Qu.:103.55 Max. :181.51 NA's : 22.00
May	**June**	**July**
no2 Min. : 3.12 1st Qu.: 33.15 Median : 53.70 Mean : 58.19 3rd Qu.: 83.77 Max. :191.96 NA's : 12.00	no2 Min. : 3.25 1st Qu.: 38.50 Median : 58.78 Mean : 60.32 3rd Qu.: 79.93 Max. :175.30 NA's : 5.00	no2 Min. : 8.10 1st Qu.: 40.01 Median : 61.90 Mean : 61.48 3rd Qu.: 81.53 Max. :138.09 NA's :191.00

Figure 2-5 Nitrogen dioxide monthly concentrations by day of the week (31/01/11-31/07/11)



Diffusion Tube Monitoring Data

Results from the diffusion tube monitoring survey, 'new' monitoring programme, are presented in **Table 2.11** (2010 data) and **Table 2.12** (2011 data). Results from the established sites of the diffusion tube monitoring survey are shown in **Tables 2.9** (bias unadjusted) and **2.10** (bias adjusted). That dataset covers a much longer period of time, so it was possible to examine trends in concentrations at those sites, as shown in **Figure 2-6**. The annual mean concentrations above 40$\mu g/m^3$ were marked in bold.

- ***2010 as 'high pollution' year***

The results from Runnymede diffusion tube sites (**Table 2.11** and **Table 2.12**) demonstrate that 2010 is likely to have been a high pollution year, as reported. Cold winter weather in 2010 increased fuel, which caused higher emissions[7]. Most diffusion tube sites in Runnymede recorded higher nitrogen dioxide concentrations in 2010 than in 2011.

- ***Sites exceeding annual mean objective outside AQMAs***

The sites which exceeded the annual mean objective of 40 $\mu g/m^3$ in 2010 and/or 2011 outside AQMAs are listed in **Table 2.7** below. **Table 2.7** also shows the estimated concentrations at receptors nearest to those sites, calculated using Defra's nitrogen dioxide fall-off with distance spreadsheet.

As can be seen from the results from site RY13, Addlestone AQMA may have to be extended at its northern boundary. Further monitoring should continue further north along Chertsey Road, and up to the Chertsey Road A318/St Peter's Way A317 roundabout.

Elevated concentrations of nitrogen dioxide may affect a few properties at the New Haw Road / Woodham Lane roundabout (site RY18), however, it is considered that the annual mean objective has not been exceeded as the estimated annual mean concentrations of 40.7 $\mu g/m^3$ (2010) and 39.0 $\mu g/m^3$ (2011) at the receptor represented a worst-case scenario. It is recommended that monitoring at this site continues so that any potential exceedences of the objective in the future are recorded.

The area in immediate proximity of Heriot Road/London Street roundabout (site RY21) is considered to be the worst-case location for nitrogen dioxide concentrations in Chertsey town centre. The annual mean concentrations are not considered to be exceeding the objective, however future monitoring at the site is recommended.

Nitrogen dioxide concentrations at properties in the vicinity of Thorpe Road roundabout (site RY31) have not exceeded but were close to the annual mean objective in 2010/2011. However, the site was discontinued in August 2011 due to the shelving of the Heathrow Airport project as the main concern

[7] AEA (2012) *Air Pollution in the UK 2011.* A report prepared by AEA for Defra and the Devolved Administrations.

was that the project would add to delays at railway level crossings in the Borough, thus leading to local exceedences in annual mean nitrogen dioxide.

Diffusion tube RY26 underestimated the annual mean concentration in 2011 by approximately 7% when compared with the results from the continuous analyser (bias adjusted diffusion tube annual mean of 62.5μg/m^3 as compared to 'annualised' automatic monitoring mean of 66.8μg/m^3). Both the sites RY25 and RY26 recorded concentrations high enough to raise concern of annual mean objective having been exceeded at the residential properties nearest to the diffusion tube sites, in Vicarage Road, Vicarage Crescent and Pooley Green Road. A Detailed Assessment of air quality in the area is therefore recommended as discussed previously in the **Section 'Automatic Monitoring Data'** above).

Finally, concentrations at the receptors in the vicinity of the Bridge Road/Weir Road junction (site RY23) may have exceeded the annual mean objective in 2010/2011. Future monitoring at the site is recommended. It may also be necessary to proceed to a Detailed Assessment if the 2012 results show that concentrations have not reduced.

Table 2.7 Sites exceeding annual mean objective for nitrogen dioxide outside AQMAs, 2010-2011

Site	Annual Mean Concentr. 2011 [μg/m^3]	Estimated total annual mean background concentr.[1] 2011 [μg/m^3]	Distance from kerb to receptor	Distance from kerb to monitoring tube	Predicted annual mean concentr. at receptor[2] 2011 [μg/m^3]	Comment / Recommendation
RY13	49.3 (2011)	27.7 (2011)	7.5 m	2.0 m	42.6 (2011)	Site adjacent to Addlestone AQMA. showed that the AQMA could be extended at its northern boundary.
RY18	41.8 (2010) 40.1 (2011)	22.2 (2010) 21.4 (2011)	5.5 m	4.5 m	40.7 (2010) 39.0 (2011)	Continue monitoring at site RY18 as the annual mean concentrations at a few receptors at the New Haw Lane roundabout may be close to the objective. New Haw Lane and Woodham Road expected to be below the objective as indicated by the results from site RY9.
RY21	44.9 (2010) 37.3 (2011)	25.1 (2010) 24.3 (2011)	2.0 m	1.0 m	42.1 (2010) 35.5 (2011)	Continue monitoring at site RY21 as it represents a worst-case location in Chertsey town centre. Elevated concentrations may affect a few properties in the proximity of the London St / Heriot Rd junction. London Street expected to be below the annual mean objective as shown by monitoring at the site RY20.

RY23	56.0 (2010) 52.3 (2011)	25.1 (2010) 24.3 (2011)	9.0 m	1.0 m	42.3 (2010) 39.9 (2011)	Continue monitoring at site RY23 as the annual mean concentrations at a few receptors in the proximity of the Bridge Road / Weir Road junction may be close to the objective.
RY25, RY26	49.0 (RY25, 2010) 41.0 (RY25, 2011) 71.2 (RY26, 2010) 62.5 (RY26, 2011)	33.0 (2010) 31.6 (2011)	6.0 m	2.5 m	Above 40 (2010) Above 40 (2011)	Continue monitoring at the sites RY25 and RY25 due to potential exceedences of the annual mean NO_2 objective at a few receptors in the vicinity of the railway crossing at Vicarage Road, Pooley Green Road and Vicarage Crescent. It may be necessary to proceed to a Detailed Assessment or amend the existing M25 AQMA to include those properties.
RY31	41.3 (2010) 38.4 (2011)	28.9 (2010) 28.0 (2011)	6.0 m	1.0 m	36.8 (2010) 36.4 (2011)	Continue monitoring at site RY31 as the annual mean concentrations at a few receptors in Thorpe Road in the vicinity of the Causeway roundabout may be close to the objective.

[1] Source: Defra's background pollution maps.
[2] Defra's fall-off with distance calculation spreadsheet (Issue 4: 25/01/2011).

Sites exceeding annual mean objective inside AQMAs

Table 2.8 shows which sites exceeded the annual mean objective for NO_2 in 2010 and/or 2011 within the AQMAs . The results confirmed that exceedences of the annual mean NO_2 objective continue to occur in the AQMAs.

The 2011 results from site RY13 showed that the Addlestone AQMA could be extended at its northern boundary up till Green Lane roundabout. It is also recommended to start diffusion tube monitoring further north along Chertsey Road, and up to the Chertsey Road A318/St Peter's Way A317 roundabout.

Table 2.8 Sites exceeding annual mean objective for nitrogen dioxide within AQMAs, 2010-2011

Site(s)	Comment / Recommendation
RY1, RY13, RY14, RY15	Those sites are located at a roadside location within AQMA in Addlestone town centre. The results from the sites RY13, RY14 and RY15 confirmed that the original designation of the AQMA is still valid. The sites RY13 and RY15 were moved to locations further down the roads from January 2011 to verify the AQMA boundaries. The 2011 results from site RY13 showed that the AQMA could be extended at its northern boundary. It is recommended to start diffusion tube monitoring further north along Chertsey Road, and up to the Chertsey Road A318/St Peter's Way A317 roundabout.
RY6, RY19	The site is located within the M25 AQMA. The results at sites RY6 and RY19 confirm that the original designation of the AQMA is still valid.

Trends in concentrations

The results from established diffusion tube sites (**Tables 2.9** and **2.10**) cover sufficient period of time to examine trends in concentrations at those sites, as shown in **Figure 2-6**.

Due to changes to the site use, diffusion tube RY4 was located in an area of poor dispersion from 2009 onwards and therefore was excluded from the analysis.

It was also noted that NO_2 concentrations at site RY8 were significantly lower in the summer months. Although NO_2 concentrations exhibit seasonal patterns, with lower concentrations recorded in the summer, it is considered that the difference between summer and winter concentrations at site RY8 is so great (particularly in 2010) that it cannot be attributed merely to seasonal variation. The tube is installed on a fence and surrounded by vegetation, which may reduce dispersion. Also, earwigs had been found in the tube on a number of occasions during the summer months. Therefore, this site was also excluded from trend analysis.

The trend graph in **Figure 2-6** shows increasing annual mean concentrations at the sites RY1 (within the Addlestone AQMA) and RY6 (within the M25 AQMA) and decreasing concentrations at the roadside location RY9.

Table 2.9 NO_2 results for 1998-2012, established sites, bias unadjusted.

	Annual Mean Concentrations [µg/m^3] / Data Capture [%]														
Tube ID	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
RY1	38.8	**48.5**	35.9	37.2	36.1	35.5	35.1	27.6	28.5	38.6	37.6	**43.2**	**43.6**	**39.8**	**46.5**
	100.0	91.7	100.0	100.0	100.0	91.7	100.0	**58.3**	83.3	100.0	91.7	83.3	91.7	100.0	91.7
RY3	23.5	25.9	25.1	20.4	22.9	22.6	19.5	16.7	15.9	20.5	21.8	20.4	20.5	18.9	21.7
	91.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	83.3	91.7	83.3	100.0	91.7	100.0	100.0
RY4	24.8	26.6	25.5	25.4	22.2	21.8	17.8	17.4	19.9	22.3	23.8	22.7	24.0	25.5	22.4
	100.0	100.0	100.0	100.0	91.7	100.0	83.3	100.0	91.7	100.0	75.0	91.7	100.0	100.0	58.3
RY6	46.0	46.9	47.1	34.2	32.7	39.5	33.6	34.2	28.3	**40.2**	**42.1**	**42.1**	39.2	**40.5**	**41.4**
	100.0	100.0	91.7	91.7	100.0	100.0	91.7	83.3	91.7	100.0	83.3	91.7	58.3	100.0	83.3
RY8	26.3	29.2	26.6	30.0	25.7	29.7	22.0	23.0	19.9	22.7	24.2	24.0	30.3	23.0	23.8
	100.0	100.0	91.7	91.7	100.0	100.0	100.0	91.7	83.3	100.0	91.7	91.7	100.0	75.0	100.0
RY9	-	-	-	33.3	34.4	36.8	34.0	28.5	29.2	33.2	32.5	30.9	31.5	31.3	32.9
	-	-	-	100.0	100.0	100.0	100.0	100.0	91.7	91.7	91.7	91.7	100.0	100.0	100.0

Data capture of below 90%

Data not adjusted to estimate annual mean

Data adjusted to estimate annual mean

Table 2.10 NO_2 results for 1998-2011, established sites, bias adjusted (national database bias factor).

	Annual Mean Concentrations [µg/m^3] / Data Capture [%]													
Tube ID	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
RY1	*	*	34.8	**40.5**	**41.5**	37.2	**41.8**	34.2	36.5	**41.3**	36.9	**44.5**	**46.3**	**42.2**
	100.0	91.7	100.0	100.0	100.0	91.7	100.0	58.3	83.3	100.0	91.7	83.3	91.7	100.0
RY3	*	*	24.3	22.3	26.4	23.7	23.2	20.7	20.4	22.0	21.4	21.0	21.8	20.1
	91.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	83.3	91.7	83.3	100.0	91.7	100.0
RY4	*	*	24.7	27.7	25.5	22.9	21.2	21.6	25.5	23.8	23.3	23.4	25.4	27.0
	100.0	100.0	100.0	100.0	91.7	100.0	83.3	100.0	91.7	100.0	75.0	91.7	100.0	100.0
RY6	*	*	**45.7**	37.3	37.6	**41.5**	**40.0**	**42.4**	36.2	**43.0**	**41.3**	**43.4**	**41.6**	**42.9**
	100.0	100.0	91.7	91.7	100.0	100.0	91.7	83.3	91.7	100.0	83.3	91.7	58.3	100.0
RY8	*	*	25.8	32.7	29.5	31.2	26.2	28.5	25.5	24.3	23.7	24.7	32.2	24.4
	100.0	100.0	91.7	91.7	100.0	100.0	100.0	91.7	83.3	100.0	91.7	91.7	100.0	75.0
RY9	-	-	-	36.2	39.6	38.7	**40.5**	35.3	37.4	33.2	31.9	31.8	33.4	33.1
	-	-	-	100.0	100.0	100.0	100.0	100.0	91.7	91.7	91.7	91.7	100.0	100.0

Data capture of below 90%

Data were not adjusted to estimate annual mean

Data adjusted to estimate annual mean

Table 2.11 Results of Nitrogen Dioxide Diffusion Tubes in 2010

Site ID	Location	Site Type	Within AQMA ?	Data Capture 2010 (Number of Months or %)[b]	Data with less than 9 months has been annualised[c] (Y/N)	Confirm if data has been distance corrected (Y/N)	Annual mean concentration (Bias Adjustment factor = 1.06) 2010 (μg/m^3)	Comments
RY13	44 High Street, Addlestone	Roadside	**Y**	100.0	N	N	**52.9**	Results confirm the validity of the AQMA. In Jan 2011 the site was moved further down the road to verify the AQMA boundaries.
RY14	1 Church Road, Addlestone	Roadside	**Y**	100.0	N	N	**59.0**	Results confirm the validity of the AQMA. The site represents the worst-case location within the AQMA.
RY15	1-16 Dukes Court, Brighton Road, Addlestone	Roadside	**Y**	91.7	N	N	**46.4**	Results confirm the validity of the AQMA. In Jan 2011 the site was moved further down the road to verify the AQMA boundaries.
RY16	116 Station Road, Addlestone	Roadside	N	83.3	N	N	38.5	The annual mean concentration at the nearest receptor was estimated at 36.4 μg/m^3. The site was closed in Jan 2011.
RY17	Railway crossing, Station Road, Addlestone	Roadside	N	100.0	N	N	30.7	In Jan 2011 the site was moved to a location considered to be worst-case.
RY18	New Haw Road/Woodham Lane roundabout, New Haw	Roadside	N	100.0	N	N	**41.8**	The annual mean concentration at the nearest receptor was estimated at 40.7 μg/m^3. Elevated concentrations may affect few properties at the New Haw Road roundabout. New Haw Road (A318) expected to be below the annual mean objective as shown by monitoring at the site RY9.
RY19	78 Woodham Lane, New Haw	Roadside	**Y**	100.0	N	N	**45.9**	The site is located within the M25 AQMA. The results at sites RY6 and RY19 confirmed that the original designation of the M25 AQMA was still valid.
RY20	26 Windsor Street, Chertsey	Roadside	N	100.0	N	N	36.7	

Site ID	Location	Site Type	Within AQMA ?	Data Capture 2010 (Number of Months or %)[b]	Data with less than 9 months has been annualised[c] (Y/N)	Confirm if data has been distance corrected (Y/N)	Annual mean concentration (Bias Adjustment factor = 1.06) 2010 (μg/m^3)	Comments
RY21	London Street/Heriot Road junction, Chertsey	Roadside	N	100.0	N	N	**44.9**	The site is a worst-case location in Chertsey town centre. The annual mean concentration at the nearest receptor was estimated at 42.1 μg/m^3. Elevated concentrations may affect properties in the proximity of the London St / Heriot Rd junction. London Street expected to be below the annual mean objective as shown by monitoring at the site RY20.
RY22	Guildford Street, Chertsey	Roadside	N	100.0	N	N	37.6	
RY23	37 Bridge Road, Chertsey	Roadside	N	91.7	N	N	**56.0**	The annual mean concentration at the nearest receptor was estimated at 42.3 μg/m^3. Elevated concentrations may affect a few properties in the vicinity of the Bridge Road / Weir Road junction.
RY24	Eastworth Road/Chertsey Road junction	Roadside	N	100.0	N	N	39.9	
RY25	1 Pooley Green Road, Egham	Roadside	N	91.7	N	N	**49.0**	The annual mean concentration at the nearest receptor was estimated at 42.7 μg/m^3. Elevated concentrations may affect a few properties in Vicarage Road in the vicinity of the crossing. The tube moved closer to a receptor in Pooley Green Road in Jan 2011.
RY26	Railway crossing, Vicarage Road, Egham	Roadside	N	91.7	N	N	**71.2**	The annual mean concentrations at the few nearest receptors in Vicarage Crescent were estimated to be above 45 μg/m^3. Elevated concentrations may affect a few properties in Vicarage Road, Vicarage Crescent and Pooley Green Road in the vicinity of the crossing.
RY27	Egham Hill roundabout (193/195 High Street), Egham	Roadside	N	100.0	N	N	38.0	
RY28	38 Station Road, Egham	Roadside	N	83.3	N	N	36.1	No exceedences of the annual mean objective estimated at the nearest receptors. The site was closed in Jan 2011.
RY29	Railway crossing, Station Road (3 Rusham Park Avenue), Egham	Roadside	N	91.7	N	N	33.1	No exceedences of the annual mean objective estimated at the nearest receptors. The site was closed in Jul 2011.

Site ID	Location	Site Type	Within AQMA ?	Data Capture 2010 (Number of Months or %)[b]	Data with less than 9 months has been annualised[c] (Y/N)	Confirm if data has been distance corrected (Y/N)	Annual mean concentration (Bias Adjustment factor = 1.06) 2010 (μg/m^3)	Comments
RY30	Railway crossing, Thorpe Road, Egham	Roadside	N	91.7	N	N	38.4	No exceedences of the annual mean objective estimated at the nearest receptor, however due to high sensitivity of the location, the site was retained for 2011.
RY31	Thorpe Road, Egham	Roadside	N	66.7	**Y**	N	**41.3**	The annual mean concentration at the nearest receptor was estimated at 36.8 μg/m^3. Elevated concentrations may affect a few properties in Thorpe Road in the vicinity of the Causeway roundabout.
RY32	Beechtree Avenue, Englefield Green	Urban Background	N	75.0	N	N	25.0	

[b] i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%.)
[c] Means should be "annualised" as in Box 3.2 of TG(09), if monitoring was not carried out for the full year.

Table 2.12 Results of Nitrogen Dioxide Diffusion Tubes in 2011

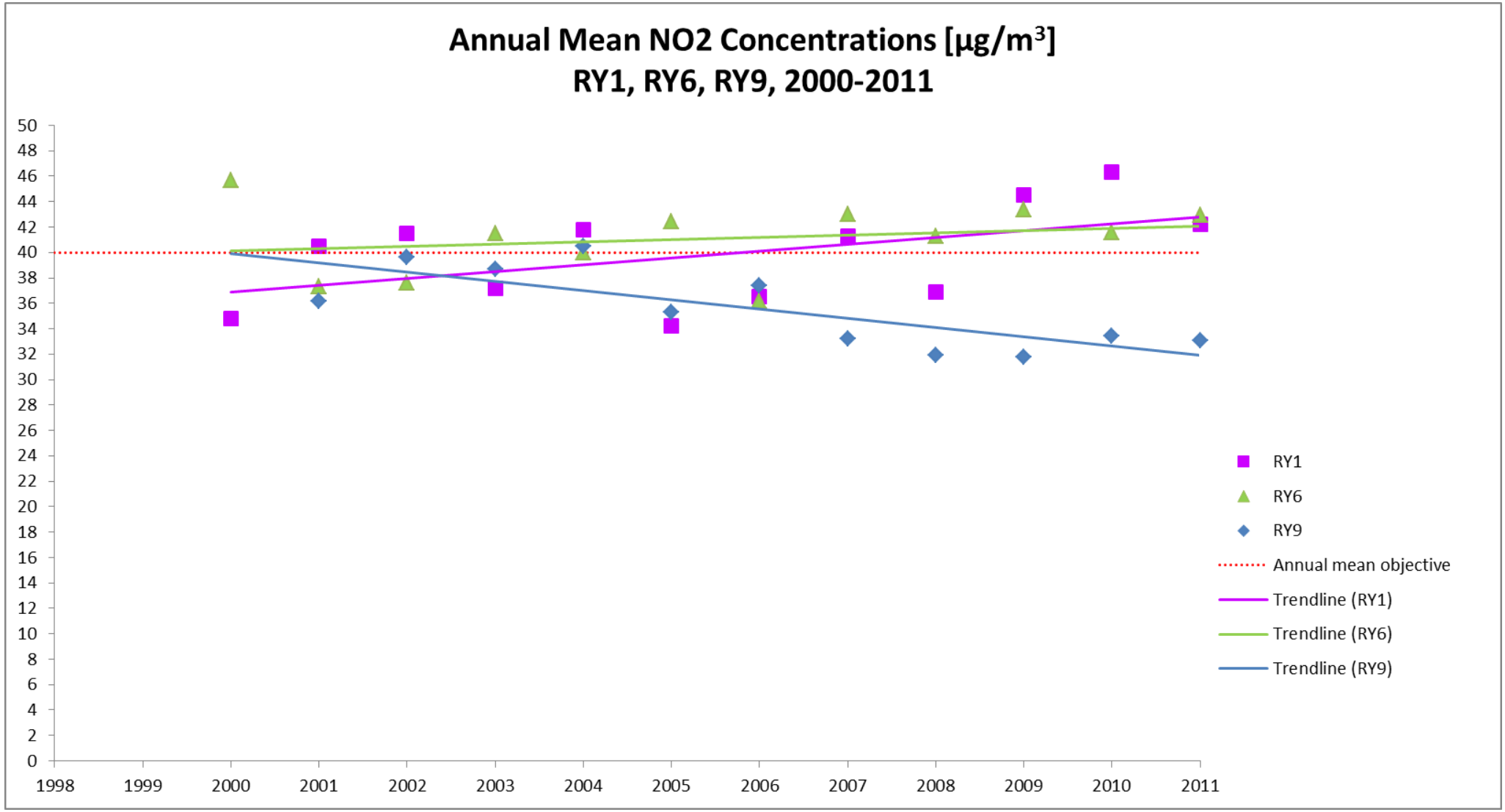
Site ID	Location	Site Type	Within AQMA?	Data Capture 2011 (Number of Months or %)[b]	Data with less than 9 months has been annualised[c] (Y/N)	Confirm if data has been distance corrected (Y/N)	Annual mean concentration (Bias Adjustment factor = 1.06) 2011 (μg/m^3)	Comments
RY13	1-22 Wyvern Place, High St, Addlestone	Roadside	Y	83.3	N	N	**49.3**	Results confirm that the AQMA could be extended at its northern boundary.
RY14	1 Church Road, Addlestone	Roadside	Y	100.0	N	N	**60.4**	Results confirm the validity of the AQMA. The site represents the worst-case location within the AQMA.
RY15	23 Brighton Rd, Addlestone	Roadside	Y	83.3	N	N	**39.3**	Results confirmed the validity of the AQMA southern boundary.
RY17	158 Station Rd, Addlestone	Roadside	N	83.3	N	N	35.7	The site did not exceed the annual mean objective, however should be retained as new development was constructed at the railway station in Addlestone in December 2012.

Site ID	Location	Site Type	Within AQMA?	Data Capture 2011 (Number of Months or %)[b]	Data with less than 9 months has been annualised[c] (Y/N)	Confirm if data has been distance corrected (Y/N)	Annual mean concentration (Bias Adjustment factor = 1.06) 2011 (μg/m^3)	Comments
RY18	New Haw Road/Woodham Lane roundabout, New Haw	Roadside	N	100.0	N	N	**40.1**	Annual mean concentration at the nearest receptor was estimated at 39.0 μg/m^3. Elevated concentrations may affect few properties at the New Haw Road roundabout.
RY19	78 Woodham Lane, New Haw	Roadside	Y	100.0	N	N	**45.4**	The site is located within the M25 AQMA. The results at sites RY6 and RY19 confirm that the original designation of the M25 AQMA is still valid.
RY20	26 Windsor Street, Chertsey	Roadside	N	91.7	N	N	32.2	The site did not show exceedences of the annual mean objectives in either 2010 or 2011. The tube was removed in 2012.
RY21	London Street/Heriot Road junction, Chertsey	Roadside	N	83.3	N	N	**37.3**	The site is a worst-case location in Chertsey town centre. The annual mean concentration at the nearest receptor was estimated at 35.5 μg/m^3.
RY22	Guildford Street, Chertsey	Roadside	N	100.0	N	N	31.4	
RY23	37 Bridge Road, Chertsey	Roadside	N	100.0	N	N	**52.3**	The annual mean concentration at the nearest receptor was estimated at 39.9 μg/m^3. Elevated concentrations may affect a few properties in the vicinity of the Bridge Road / Weir Road junction.
RY24	Eastworth Road/Chertsey Road junction	Roadside	N	100.0	N	N	36.7	
RY25	Vicarage Rd/Pooley Green Rd junction, Egham	Roadside	N	50.0	**Y**	N	**41.0**	The annual mean concentration at the nearest receptor was estimated at 38.8 μg/m^3. Elevated concentrations may affect a few properties in Pooley Green Road in the vicinity of the crossing.
RY26	Railway crossing, Vicarage Road, Egham	Roadside	N	100.0	N	N	**62.5**	The annual mean concentrations at the few nearest receptors in Vicarage Crescent were estimated to be above 40 μg/m^3. Elevated concentrations may affect a few properties in Vicarage Road, Vicarage Crescent and Pooley Green Road in the vicinity of the crossing.
RY27	Egham Hill roundabout (193/195 High Street), Egham	Roadside	N	100.0	N	N	36.1	

Site ID	Location	Site Type	Within AQMA?	Data Capture 2011 (Number of Months or %)[b]	Data with less than 9 months has been annualised[c] (Y/N)	Confirm if data has been distance corrected (Y/N)	Annual mean concentration (Bias Adjustment factor = 1.06) 2011 (μg/m^3)	Comments
RY29	Railway crossing, Station Road (3 Rusham Park Avenue), Egham	Roadside	N	50.0	**Y**	N	24.8	No exceedences of the annual mean objective estimated at the nearest receptors. The site was closed in Jul 2011.
RY30	Railway crossing, Thorpe Road, Egham	Roadside	N	33.3	**Y**	N	**40.7**	No exceedences of the annual mean objective estimated at the nearest receptor. The site was removed in Aug 2011.
RY31	Thorpe Road, Egham	Roadside	N	66.7	**Y**	N	**41.3**	The annual mean concentration at the nearest receptor was estimated at below the annual mean objective. The site was closed in Aug 2011.
RY32	Beechtree Avenue, Englefield Green	Urban Background	N	75.0	N	N	25.0	
RY33	46 The Avenue, Egham	Roadside	**Y**	83.3	N	**Y**	37.6	Site representative of relevant exposure, within AQMA. Results confirm the validity of the AQMA.
RY34	Jcn. Of St Jude's Rd & Bagshot Rd	Roadside	N	83.3	N	N	29.9	
RY35	7 Fairview Cottages, Trumps Green Road, Virginia Water	Roadside	N	33.3	**Y**	N	28.6	

[b] i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%.)
[c] Means should be "annualised" as in Box 3.2 of TG(09), if monitoring was not carried out for the full year.

Figure 2-6 Trends in Annual Mean Nitrogen Dioxide Concentrations measured at Diffusion Tube Monitoring Sites



2.2.2 PM_{10}

Automatic Monitoring Data

Results from short-term automatic monitoring of nitrogen dioxide at Vicarage Road, Egham in 2011 are presented in **Table 2.13** and **Table 2.14** (annual and 1-hour mean respectively).

The site was operated by the Transport Research Laboratory (TRL) from 1 February 2011 till 31 July 2011. Data for this site have been 'annualised' (**Appendix A**) and, due to the short-term period of monitoring, the 90th percentile of 24-hour means for PM_{10} has been presented along the number of exceedences (**Table 2.14**).

Results show that the site was compliant with both the annual and the 24-hour mean objective in 2011.

The 'annualised' mean of 22.6 µg/m^3 was well below the annual mean objective of 40 µg/m^3 for PM_{10}. Average monthly concentrations of PM_{10} were the highest at early spring – between February and April 2011 (30.1 µg/m^3 in February, 27.0 µg/m^3 in March and 29.0 µg/m^3 in April), and reduced in the summer months to approximately 23 µg/m^3 (**Table 2.17**).

The 24-hour objective of 50 µg/m^3 was exceeded five times over the monitoring period of six months, which is below thirty five exceedences per year allowed. As percentiles, 90% of the 24-hour average values measured over the monitoring period fell below 40.2 µg/m^3. Thus, it is considered that the site was compliant with the 24-hour objective. The five exceedences occurred in early spring - on 18 February, 26 March and 20-22 April (highest 24-hour mean of 65 µg/m^3 recorded on 21 April).

The area extending 55-70 m from the M25 centreline had been declared an AQMA for both nitrogen dioxide and particulate matter PM_{10} in 2001. Although the monitoring station in Egham was located 88 m (in a straight line) away from the motorway's centreline, it was considered a worst-case location due to its exposure to traffic in Vicarage Road waiting behind the railway barriers at the level crossing. The results for particulate matter PM_{10} from the monitoring site in Egham can therefore be used to support the revocation of the M25 AQMA for PM_{10}.

Tables 2.15 and **2.16** include PM_{10} data from the M25 J13 automatic monitoring site near Staines ('the M25 B site'). That site was operated by TRL on behalf of the Highways Agency, until March 2011 when the site was decommissioned (due to lack of funding). The monitoring station was located at the very edge of the motorway. Monitoring results from the site have been available for the years 2007, 2008 and 2010 and show that the site was compliant with both the annual and the 24-hour mean objective during those periods of time. Those results can also be used to support the revocation of the M25 AQMA for PM_{10}.

On the basis of the results from the Highway's Agency continuous monitoring site in Staines (years 2007-2010) and the results from the short-term automatic monitoring in Vicarage Road, Egham (2011), it is proposed to proceed to a Detailed Assessment for the areas of the existing AQMA along the M25 to review the validity of the original AQMA designation with respect to particulates.

Table 2.13 Results of Automatic Monitoring of PM_{10}: Comparison with Annual Mean Objective (EGHAM - VICARAGE ROAD, 01/02/2011-31/07/2011)

Site ID	Site Type	Within AQMA?	Valid Data Capture for monitoring Period %[a]	Valid Data Capture 2011 %[b]	Confirm Gravimetric Equivalent (Y or NA)	Annual Mean Concentration μg/m³ 2011 [c]
Vicarage Road, Egham	Roadside	N	96.5	48.3	Y	22.6 'annualised' (TEOM, VCM corrected data)

[a] i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.
[b] i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%.)
[c] Means should be "annualised" as in Box 3.2 of TG(09), if monitoring was not carried out for the full year.

Table 2.14 Results of Automatic Monitoring for PM_{10}: Comparison with 24-hour mean Objective (EGHAM- VICARAGE ROAD, 01/02/2011-31/07/2011)

Site ID	Site Type	Within AQMA?	Valid Data Capture for monitoring Period %[a]	Valid Data Capture 2011 %[b]	Confirm Gravimetric Equivalent	Number of Exceedences of 24-Hour Mean (50 μg/m³) 2011
Vicarage Road, Egham	Roadside	N	96.5	48.3	Y	5 (40.2)

[a] i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.
[b] i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%.)
[c] if data capture is less than 90%, include the 90th percentile of 24-hour means in brackets

Table 2.15 Results of Automatic Monitoring of PM_{10}: Comparison with Annual Mean Objective (M25 B SITE, STAINES, 2007-2010)[8]

Site ID	Site Type	Within AQMA?	Valid Data Capture for monitoring Period %[a]	Valid Data Capture 2010 %[b]	Confirm Gravimetric Equivalent (Y or NA)	Annual Mean Concentration μg/m^3			
						2007*[c]	2008*[c]	2009*[c]	2010*[c]
M25 B Site, Staines **	Roadside	Outside the Borough			Y	28.3 (TEOM, data x 1.3)	26.3 (TEOM, data x 1.3)	Unreadable worksheet	24.9 (TEOM, VCM corrected data)

[a] i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.
[b] i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%.)
[c] Means should be "annualised" as in Box 3.2 of TG(09), if monitoring was not carried out for the full year.
* Optional
** X OS Grid Ref.: X502807 Y173572

Table 2.16 Results of Automatic Monitoring for PM_{10}: Comparison with 24-hour mean Objective (M25 B SITE, STAINES, 2007-2010)[9]

Site ID	Site Type	Within AQMA?	Valid Data Capture for monitoring Period %[a]	Valid Data Capture 2010 %[b]	Confirm Gravimetric Equivalent	Number of Exceedences of 24-Hour Mean (50 μg/m^3)			
						2007*	2008*	2009*	2010*
M25 B Site, Staines**	Roadside	Outside the Borough		99.3	Y	21 (TEOM, data x 1.3)	18 (TEOM, data x 1.3)	Unreadable worksheet	11 (TEOM, VCM corrected data)

[a] i.e. data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.
[b] i.e. data capture for the full calendar year (e.g. if monitoring was carried out for six months the maximum data capture for the full calendar year would be 50%.)
[c] if data capture is less than 90%, include the 90th percentile of 24-hour means in brackets
* Optional
** X OS Grid Ref.: X502807 Y173572

[8] Analysed from data available from the following website: Highway's Agency (no date). *Knowledge Compedium. M25 Monitoring Data (2007-2010)* [Online] Available from http://webarchive.nationalarchives.gov.uk/20120810121037/http://www.highways.gov.uk/knowledge_compendium/1543167B6E944BB1A1AFD23D8615D403.aspx
[9] As above

Table 2.17 PM_{10} monitoring statistics (31/01/11-31/07/11)

February	March	April
pm10 Min. : 1.43 1st Qu.:17.55 Median :27.08 Mean :30.13 3rd Qu.:38.70 Max. :75.87 NA's :92.00	pm10 Min. : 4.47 1st Qu.:15.63 Median :23.86 Mean :26.99 3rd Qu.:35.80 Max. :87.60 NA's :49.00	pm10 Min. : 4.60 1st Qu.: 17.20 Median : 25.00 Mean : 28.96 3rd Qu.: 35.08 Max. :105.30 NA's : 2.00
May	**June**	**July**
pm10 Min. : 4.40 1st Qu.:17.70 Median :23.20 Mean :23.96 3rd Qu.:29.10 Max. :67.70 NA's :11.00	pm10 Min. : 5.50 1st Qu.: 15.70 Median : 20.90 Mean : 22.01 3rd Qu.: 27.20 Max. :122.00 NA's : 5.00	pm10 Min. : 2.80 1st Qu.: 15.90 Median : 20.90 Mean : 21.57 3rd Qu.: 26.10 Max. :115.60 NA's : 31.00

2.2.3 Sulphur Dioxide

Runnymede Borough Council does not undertake monitoring for sulphur dioxide.

2.2.4 Benzene

The annual mean concentrations from the BTEX tube were below the objective of 5.00 µg/m^3 in 2010/2011 and the preceding years.

Site ID	Data Capture	Annual mean concentrations (µg/m^3)*				
		2007	2008	2009	2010	2011
RY3	100%	n.d.	2.4	2.1	1.6	1.3

* Converted from ppb (1ppb = 3.25 µg/m^3)

The BTEX tube at site RY3 is sited at a background location, over 20 m away from the nearest local road. The results have been much below the objective of 5.00 µg/m^3 for a number of years, therefore it was decided to move the monitoring tube to a worst-case location where benzene concentrations are expected to be the highest.

There are no sites in the Borough where it would be necessary to proceed to a Detailed Assessment for benzene on the basis of the screening criteria for benzene sources (industrial installations, major petrol storage deport or relevant petrol stations) as detailed in the box 5.5 of the TG(09) guidance.

However, there are two petrol stations considered to be worst-case locations for benzene exposure (**Table 2.18**). The existing BTEX tube will be moved to the petrol station in Bridge Road from January 2013 to determine the levels of benzene at that location.

Table 2.18 Petrol station locations to be assessed for benzene emissions

Petrol Station	Annual petrol throughput	Distance to Road & Road AADT	Stage 2 RS fitted?	Distance from pumps to receptor
Chertsey Service Station, 102 Bridge Road, Chertsey, Surrey, KT16 7LR	40,000-70,000 l per week	AADT = 30,000	Fitted in January 2013	10 m
Runnymede Service Station, 38-45 The Avenue, Egham, Surrey, TW20 9AD	2,464,000 l (2009 throughput for diesel & petrol)	Unknown AADT	Not fitted.	10 m

2.2.5 Summary of Compliance with AQS Objectives

Runnymede Borough Council has measured concentrations of nitrogen dioxide above the annual mean objective at relevant locations outside of the AQMA, and **will need to proceed to a Detailed Assessment**, for the area in vicinity of the railway crossing in Vicarage Road, Egham and possibly the area in vicinity of the Bridge Road / Weir Road junction in Chertsey if the 2012 results show that concentrations have not reduced.

Addlestone AQMA may have to be extended at its northern boundary. Further monitoring should continue further north along Chertsey Road, and up to the Chertsey Road A318/St Peter's Way A317 roundabout.

On the basis of the results from the Highway's Agency continuous monitoring site in Staines (years 2007-2010) and the results from the short-term automatic monitoring in Vicarage Road, Egham (2011), it is proposed to proceed to a Detailed Assessment for the areas of the existing AQMA along the M25 to review the validity of the original AQMA designation with respect to particulates (PM_{10}).

3 Road Traffic Sources

Runnymede Borough Council has reviewed traffic flow and speed data for roads in the borough as part of Sustainability Appraisal of the emerging Local Plan 2013. A Transport Assessment Report was produced by the Transport Section of the Surrey County Council in December 2012, which considered the cumulative traffic impacts of future development as proposed in the emerging Local Plan 2013. The County Transport model (SINTRAM60_121217_DERAv4)[10] was used to evaluate the development proposals with the forecast year of 2026 against the model base year of 2009.

Three development scenarios have been considered in the study:

Scenario 1	Committed development; Including DERA North Site (90,000sqm commercial facilities).
Scenario 2	Committed development and outstanding permissions; windfalls.
Scenario 3	Scenario 2 plus DERA North Site 200 dwellings, plus DERA Southern Site 1300 dwellings.

The Transport Assessment Report concluded that that the biggest impact (increase in traffic flows) would occur between the 2009 base and 2026 Scenario 1 (committed development) and that the PM period is slightly worse than the AM period. There is little impact between scenario 2 (proposed development) and scenario 3 (DERA Whole Site). The greatest differences occur on the minor roads.

Roads identified in the study to experience significant (over 25%) increase in traffic flow between the yaers 2009 (base year) and 2026 as a result of the new development proposed by the emerging Local Plan 2013 are listed in Section 3.6.

3.1 Narrow Congested Streets with Residential Properties Close to the Kerb

Runnymede Borough Council confirms that there are no new/newly identified congested streets with a flow above 5,000 vehicles per day and residential properties close to the kerb, that have not been adequately considered in previous rounds of Review and Assessment.

3.2 Busy Streets Where People May Spend 1-hour or More Close to Traffic

Runnymede Borough Council confirms that there are no new/newly identified busy streets where people may spend 1 hour or more close to traffic.

[10] SINTRAM is a strategic transport model that encapsulates the road network of Surrey and surrounding local authorities; at a national level the model incorporates all strategic roads within Great Britain. SINTRAM is run in the OmniTRANS version 6.0.16 modelling software.

3.3 Roads with a High Flow of Buses and/or HGVs.

Runnymede Borough Council confirms that there are no new/newly identified roads with high flows of buses/HDVs.

3.4 Junctions

Runnymede Borough Council confirms that there are no new/newly identified busy junctions/busy roads.

3.5 New Roads Constructed or Proposed Since the Last Round of Review and Assessment

Runnymede Borough Council confirms that there are no new/proposed roads.

3.6 Roads with Significantly Changed Traffic Flows

On the basis of Surrey County Council's Transport Assessment Report (2012), **Tables 12.1-12.3**, roads considered to experience significant (over 25%) increase in traffic flow between the years 2009 (base year) and 2026 include the following roads listed in **Table 3.1** and **Table 3.2** below:

- Addlestone: B3121 Church Road and A319 Chertsey Road;
- Chertsey: A317 Eastworth Road, B386 Holloway Hill, A320 Guildford Road, A317 St Peter's Way, Chilsey Green Road, St Anns Road;
- Ottershaw: A319 Chobham Road, Almners Road, Longcross Road, Stonehill Road, Foxhills Road, Hardwick Lane, Kitsmead Lane;
- Egham: A30 Egham Hill, A320 Staines Road;
- Virginia Water: A30 London Road, Trumps Green Road, Wellington Avenue.

Table 3.1 Roads most sensitive to additional traffic between 2026 Scenario 3 and 2009 Base (AM)

Link No.	Direction	Road Name	Capacity (vph)	2009 Base Flow (vph)	2026 Scenario 3 Flow (vph)	Abs. Diff in Flow (vph)	% Diff in Flow	Any current monitoring for NO2?
9373	2	C10 Trumps Green Road	1200	328	440	112	34.1%	Yes - RY35
9674	2	A320 Chilsey Green Road	1200	558	1031	473	84.8%	No
9682	1	A319 Chobham Road	1200	317	755	438	138.2%	No
10739	1	M25 J12 slip on to M3 E	3800	1847	2388	541	29.3%	Not at this location, however RY6, RY19 & RY33 provide monitoring data for the M25 AQMA.
10750	2	M25 J12 slip off to M3 W	3400	1583	2052	469	29.6%	Not at this location, however RY6, RY19 & RY33 provide monitoring data for the M25 AQMA.
16450	1	A30 London Road	1200	466	781	315	67.6%	Yes - RY38 & RY34
16453	1	A30 Egham Hill	1700	461	828	367	79.6%	Yes - RY38 & RY34
16757	1	A320 Staines Road	1200	441	839	398	90.2%	No
17463	2	M25 J11 Off-Slip	3800	530	912	382	72.1%	No receptors at this location.
17756	2	Unc Almners Road	1200	256	648	392	153.1%	No
19184	2	B386 Longcross Road	1700	656	822	166	25.3%	No
19188	2	B386 Longcross Road	1700	832	1044	212	25.5%	No
19189	1	C10 Chobham Lane	1200	213	636	423	198.6%	No
19192	1	C10 Trumps Green Road	1700	261	378	117	44.8%	Yes - RY35
19192	2	C10 Trumps Green Road	1700	330	438	108	32.7%	Yes - RY36
19193	2	C10 Trumps Green Road	1700	213	636	423	198.6%	Yes - RY37
19194	1	Unc Wellington Avenue	1200	150	365	215	143.3%	No
19195	1	A319 Chertsey Road	1200	317	676	359	113.2%	Yes - RY43 from March 2013 - possible extension of Addlestone AQMA
19197	2	Unc Stonehill Road	1200	506	857	351	69.4%	No
1920	1	B3121 Church Road	1700	566	808	242	42.8%	Yes - RY14

3								
19210	1	Unc Foxhills Road	800	263	643	380	144.5%	No
19211	2	Unc Foxhills Road	1700	263	643	380	144.5%	No
19224	1	A30 London Road	3400	1077	1353	276	25.6%	Yes - RY38 & RY34
19225	1	A30 London Road	3400	732	994	262	35.8%	Yes - RY38 & RY34
19225	2	A30 London Road	3400	748	976	228	30.5%	Yes - RY38 & RY34
19242	2	B386 Longcross Road	1700	616	781	165	26.8%	No
19244	2	Kitsmead Lane	1200	259	450	191	73.7%	No
19245	2	Kitsmead Lane	1200	264	403	139	52.7%	No
19245	1	Kitsmead Lane	1200	266	403	137	51.5%	No
19258	2	A317 Eastworth Road	800	879	1180	301	34.2%	Yes - RY24

Table 3.2 Roads most sensitive to additional traffic between 2026 Scenario 3 and 2009 Base (PM)

Link No.	Direction	Road Name	Capacity (vph)	2009 Base Flow (vph)	2026 Scenario 3 Flow (vph)	Abs. Diff in Flow (vph)	% Diff in Flow	Any current monitoring for NO2?
9373	2	C10 Trumps Green Road	1200	426	767	341	80.0%	Yes - RY35
9674	2	A320 Chilsey Green Road	1200	396	1191	795	200.8%	No
9682	1	A319 Chobham Road	1200	349	728	379	108.6%	No
15915	2	A320 Guidford Road	1700	718	1304	586	81.6%	No
16757	1	A320 Staines Road	1200	141	681	540	383.0%	No
16761	1	B375 St Anns Road	1200	622	994	372	59.8%	No
17458	1	A317 St Peter's Way	3500	737	1089	352	47.8%	No
17748	1	B386 Holloway Hill	1700	1120	1554	434	38.8%	No
17758	1	Hardwick Lane	1200	168	344	176	104.8%	No
19188	2	B386 Longcross Road	1700	388	883	495	127.6%	No
19189	1	C10 Chobham Lane	1200	184	674	490	266.3%	No
19195	1	A319 Chertsey Road	1200	349	728	379	108.6%	Yes - RY43 from March 2013 - possible extension of Addlestone AQMA
19210	1	Unc Foxhills Road	800	263	655	392	149.0%	No
19211	2	Unc Foxhills Road	1700	263	655	392	149.0%	No
19242	2	B386 Longcross Road	1700	511	893	382	74.8%	No
19245	2	Kitsmead Lane	1200	270	420	150	55.6%	No
19258	2	A317 Eastworth Road	800	541	1136	595	110.0%	Yes - RY24

Runnymede Borough Council has assessed new/newly identified roads with significantly changed traffic flows, and concluded that it will not be necessary to proceed to a Detailed Assessment at this time as the changes were identified on the basis of Surrey County Council's Transport Assessment Report (2012) of the emerging Local Plan and refer to proposed development scenarios for the period 2009-2026. It is recommended to start diffusion tube monitoring in those of the identified areas that are currently not included in the monitoring programme to be aware of any potential future changes in nitrogen dioxide concentrations.

3.7 Bus and Coach Stations

Runnymede Borough Council confirms that there are no relevant bus stations in the Local Authority area.

4 Other Transport Sources

4.1 Airports

Runnymede Borough Council confirms that there are no airports in the Local Authority area.

The closest airport to Runnymede is Heathrow. The distance from the Borough's boundary to Heathrow Airport (Terminal 5) is about 6 km, so relevant exposure within 1,000m of the airport does not fall within the boundaries of Runnymede.

4.2 Railways (Diesel and Steam Trains)

4.2.1 Stationary Trains

Runnymede Borough Council confirms that there are no locations where diesel or steam trains are regularly stationary for periods of 15 minutes or more, with potential for relevant exposure within 15m.

4.2.2 Moving Trains

Runnymede Borough Council confirms that there are no locations with a large number of movements of diesel locomotives, and potential long-term relevant exposure within 30m.

4.3 Ports (Shipping)

Runnymede Borough Council confirms that there are no ports or shipping that meet the specified criteria within the Local Authority area.

5 Industrial Sources

5.1 Industrial Installations

5.1.1 New or Proposed Installations for which an Air Quality Assessment has been Carried Out

Runnymede Borough Council confirms that there are no new or proposed industrial installations for which planning approval has been granted within its area or nearby in a neighbouring authority.

5.1.2 Existing Installations where Emissions have Increased Substantially or New Relevant Exposure has been Introduced

Runnymede Borough Council confirms that there are no industrial installations with substantially increased emissions or new relevant exposure in their vicinity within its area or nearby in a neighbouring authority.

5.1.3 New or Significantly Changed Installations with No Previous Air Quality Assessment

Runnymede Borough Council confirms that there are no new or proposed industrial installations for which planning approval has been granted within its area or nearby in a neighbouring authority.

5.2 Major Fuel (Petrol) Storage Depots

There are no major fuel (petrol) storage depots within the Local Authority area.

5.3 Petrol Stations

Runnymede Borough Council confirms that there are no petrol stations meeting the specified criteria.

5.4 Poultry Farms

Runnymede Borough Council confirms that there are no poultry farms meeting the specified criteria.

6 Commercial and Domestic Sources

6.1 Biomass Combustion – Individual Installations

A planning application RU.12/1061 was received by the Council in October 2012 to install a biomass boiler at a Sainsbury's store at The Causeway, Staines. The application was supported by an Air Quality Assessment, which found that the maximum predicted increase in annual average NO_2 exposure in 2012 as a result of the development at the nearest sensitive receptor was 0.73µg/m^3. The maximum predicted increase in the annual average exposure to nitrogen dioxide at any existing modelled residential receptor location, as a result of the proposed development was 0.40µg/m3, at 16 Farmers Road. The maximum predicted increase in annual average PM_{10} exposure at the nearest receptor façades within the vicinity of the proposed biomass boiler is predicted to be 0.23µg/m^3.

The annual mean NO_2 at the residential receptors closest to the monitoring sites in Thorpe Road was estimated to be compliant with the objective (**Table 2.7** in **Section 2**). As the annual mean was much below 60 mg/m^3 (**Table 6.1**), it was considered unlikely for the 1-hour mean to be exceeded. On the basis of the above results, the development was permitted without imposing any conditions / obligations.

Table 6.1 Monitored annual mean nitrogen dioxide concentrations at RY30 and RY31, 2010-2011.

Site ID	Location	Site Type	Within AQMA?	Data Capture 2010 (Number of Months or %)[b]	Data with less than 9 months has been annualised[c] (Y/N)	Confirm if data has been distance corrected (Y/N)	Annual mean concentration (Bias Adjustment factor = 1.06) 2010 (mg/m^3)	Annual mean concentration (Bias Adjustment factor = 1.06) 2011 (mg/m^3)
RY30	Railway crossing, Thorpe Road, Egham	Roadside	N	91.7	N	N	38.5	**40.7 ('annualised')**
RY31	Thorpe Road, Egham	Roadside	N	66.7	**Y**	N	**41.3 ('annualised')**	**41.1 ('annualised')**

Runnymede Borough Council has assessed the biomass combustion plant, and concluded that it will not be necessary to proceed to a Detailed Assessment.

6.2 Biomass Combustion – Combined Impacts

Runnymede Borough Council has assessed the biomass combustion plant, and concluded that it will not be necessary to proceed to a Detailed Assessment.

6.3 Domestic Solid-Fuel Burning

Runnymede Borough Council confirms that there are no areas of significant domestic fuel use in the Local Authority area.

7 Fugitive or Uncontrolled Sources

Runnymede Borough Council confirms that there are no potential sources of fugitive particulate matter emissions in the Local Authority area.

8 Local / Regional Air Quality Strategy

The Air Quality Strategy for Surrey forms part of Surrey's third Local Transport Plan completed by the Surrey County Council in April 2011. Further details of the Strategy are provided in **Chapter 10**.

9 Climate Change Strategies

Two Climate Change Strategies have been produced for Surrey. One forms part of Surrey's third Local Transport Plan completed by the Surrey County Council in April 2011. Further details of the Surrey County Council's Climate Change Strategy are provided in **Chapter 10**.

A Climate Change Strategy was also produced by the Surrey Climate Change Partnership (SCCP) in 2009. The Strategy seeks to provide a framework to address climate change across Surrey over the period to 2020. The Strategy was meant to be delivered by the members of the SCCP - all eleven Surrey's district and borough councils and Surrey County Council.

The SCCP Strategy has three core objectives:

- Emission reductions;
- Adapting to climate change;
- Raising awareness.

Under these three objectives, the Strategy identified a range of Programmes and Deliverables based on key government performance indicators and targets for carbon reduction and climate change adaptation.

The first objective – emission reductions – was meant to be sought in the following areas ('workstreams'):

(1) Existing housing
(2) Business and Public sectors
(3) Land use
(4) Transport
(5) Resource management
(6) Renewable energy

(1) Existing housing – looking at energy efficiency measures

The following are programmes and deliverables developed for this area (workstream):

Workstream: Domestic Energy		
Programme	**Deliverables**	**Good Practice Examples**
Improving housing performance	▪ Deliver programmes for improving efficiency of existing housing stock (insulation, lighting and heating systems)	▪ Warmth 1000– a three year programme to tackle 'hard to treat, hard to heat' properties by providing funding to improve energy rating of the houses. ▪ Warmfront – a scheme providing a package of insulation and heating improvements up to the value of £3,500 (or £6,000 where oil, low
Promoting innovation	▪ Demonstration projects. ▪ Engagement with housing developers, estate managers.	

Monitoring energy use	▪ Infrared detection. ▪ Free/loan energy meters for residents.	carbon or renewable technologies are recommended). It is a Government-funded initiative for households on certain income-related benefits living in properties that are poorly insulated and/or do not have a working central heating system.
Providing Guidance to residents	▪ Distribution of guidance. ▪ Media campaigns.	

(2) Business and Public sectors - looking at energy efficiency measures

The following are programmes and deliverables developed for this area (workstream):

Workstream: Public Sector and Business Energy		
Programme	**Deliverables**	**Good Practice Examples**
Local Authority carbon reduction (NI185)	▪ Carbon reduction programme. ▪ Establish internal working group. ▪ Service delivery plans. ▪ Effective metering, monitoring and reporting	▪ Installation of PowerPerfector (Voltage Power Optimisation) equipment in Council buildings. It is a technology that optimises the voltage for electrical equipment so that it can work more efficiently thus saving. ▪ Development of a sustainable energy strategy which incorporates an energy action plan for implementation for Councils ▪ Installation of Smart Metering (Smart meters give accurate information on the quantity of electricity and gas used at monthly, daily or hourly intervals allowing companies to analyse their energy consumption) in Council offices. ▪ Installation of sub-metering again to enable improved energy management across their estate. ▪ Installation of Smart Energy Monitors in office buildings to display instant (real-time) information on gas and electricity consumption to visitors and staff in order to encourage energy saving practices. ▪ Implementing the concept of 'Transition Towns' where communities seek to adopt lower carbon living (Dorking, Farnham). ▪ Making commitments on carbon management – carbon neutral cities, communities or key business activities (through reducing and compensating for unavoidable emissions. Example: Eastleigh BC set up CarbonFREE – an offsetting fund for local partners to support local sustainable energy projects).
Community Engagement	▪ Establish network of community champions. ▪ Co-ordinate and support funding opportunities for community groups to access	
Public sector decision making	▪ Undertake sustainability appraisals for new projects and programmes. ▪ Climate proofing criteria applied to all public sector capital spend through grant conditions.	
Private / public sector engagement	▪ Develop partnership approach with major businesses.	
Guidance for business	▪ Utilise and develop business guidance networks. ▪ Produce guidance for businesses on carbon reduction.	

(3) Land use – new development sustainable planning guidance, promotion of good practice, sustainable design/ sustainable construction and adopting land use and management practices to contribute to carbon reductions.

The following are programmes and deliverables developed for this area (workstream):

Workstream: Land Use Planning		
Programme	**Deliverables**	**Good Practice Examples**
Strategic Planning	▪ Co-ordinate mitigation in and between spatial plans. ▪ Target neighbourhoods for increased funding and investment to reduce carbon emissions 'Green Action Zones'	▪ Setting standards for low carbon development through Local Development Frameworks ▪ Development of incentive schemes to

Planning Guidance	▪ Develop county-wide good practice guidance. ▪ Development of a carbon reduction fund to raise funds for investment through low carbon planning requirements	raise funds to encourage low carbon developments. Where low carbon policy is not met by developers they must invest into a pot which will be used to fund large scale renewable projects across the borough. ▪ Provision of green infrastructure (network of green spaces and other environmental features including parks, open spaces, playing fields, woodlands, allotments and private gardens). ▪ Carbon capture initiatives ▪ Biomass energy provision ▪ Travel behaviour change programmes e.g. Smarter Travel Sutton managed by a partnership of the council, TfL and local stakeholders and aimed at boosting the levels of walking, cycling and public transport use.
Land Use and Biodiversity	▪ Evaluate scope for increased carbon capture through land use. ▪ Guidance for land managers.	

(4) Transport – reducing energy use and emissions

The following are programmes and deliverables developed for this area (workstream):

Workstream: Transport		
Programme	**Deliverables**	**Surrey Good Practice Examples**
Transport Planning	▪ Evaluate carbon impacts of transport plans / options	▪ Travel planning, ▪ CO_2 restrictions on lease cars, ▪ Waste fleet mileage and route review to ensure optimum efficiency ▪ Smarter travel team dedicated to introducing initiatives to reduce staff and business mileage within organisations ▪ Cycle demonstration town status within Surrey – providing investment for the improvement of cycle routes and cycle parking in and around Woking over the next few years.
Travel Plans	▪ Produce company green travel plans	
Fleet and Vehicle performance	▪ Enforce restrictions on lease car carbon emissions ▪ Increase environmentally friendly fuel mixes in fleet vehicle use ▪ Fleet mileage mapping exercise	
Public Transport	▪ Launch incentives to promote school buses to reduce car mileage across the County	
Walking and Cycling	▪ Encourage staff to cycle through incentives and improved facilities. ▪ Provide a number of pool bikes and fuel efficient cars	

(5) Resource management – looking at measures to minimise resource use

The following are programmes and deliverables developed for this area (workstream):

Workstream: Resource Management		
Programme	**Deliverables**	**Good Practice Examples**
Sustainable Procurement	▪ Develop sustainability procurement policy. ▪ Develop whole life costing procedure for procurement. Engagement programme with the major suppliers.	▪ Sustainable procurement policies, project impact assessments, supplier questionnaires and green purchasing guidance, e.g. Lewisham BC mapped the carbon footprint of its entire supply chain. ▪ Introduction of an initial sustainability appraisal to be undertaken as a mandated step in a formal project management process to identify environmental impacts and apply management processes to reduce these.
Waste Management	▪ Assess carbon impacts of waste disposal operations ▪ Promote waste minimisation ▪ Energy from waste	
Water Management	▪ Engage with water management industry ▪ Promote water efficiency measures	

(6) Renewable energy – through looking at measures to increase renewable energy generation

Runnymede Borough Council – England

The following are programmes and deliverables developed for this area (workstream):

Workstream: Renewable Energy		
Programme	**Deliverables**	**Surrey Good Practice Examples**
Policy and Planning	▪ Adopt strategy and principles for designing in and retro-fitting where feasible ▪ Assess renewable energy options in strategic plans	▪ Integration of photovoltaic panels within numerous Council buildings. ▪ Setting up local renewable energy partnerships and projects providing advice on renewable energy, grants and feasibility studies. ▪ Biomass and CHP plants.
New development	▪ Undertake feasibility studies on all new development and refurbishment	
Community schemes	▪ Incorporate technologies for generation / distribution where feasible	
Renewables supply chain	▪ Investigate viability and large scale fuel supply	

10 Local Transport Plans and Strategies

Local Transport Plans in England and Wales are the main mechanisms for implementing transport policies at the local level and local authorities in England were encouraged to integrate their action plans or include air quality information in their LTP.

Surrey's third Local Transport Plan (LTP3) consists of several specific strategies. The purpose of each strategy is to set out the most cost-effective measures to tackle problems and address objectives and targets of the Plan.

Objectives to be sought by the Climate Change and Air Quality Strategies are listed in **Table 11.1** below. A list of local measures evaluated as preferred actions that will be taken or will be considered further is shown in **Table 11.2**. It is unknown whether any of the actions listed in **Table 11.2** are being or will be considered specifically for Runnymede.

In terms of tackling congestion, the focus of the previous Local Transport Plan was on Guildford, Woking and Redhill/Reigate as regional hubs. The AQMA covering the whole area of Spelthorne, and attributed to traffic on local roads, was considered a priority area to tackle air pollution.

The current plan also recognises the importance of the regional hubs:

Surrey is also facing pressure from the need for additional development, both within and outside its boundaries. The bulk of Surrey's housing allocations will be located in relation to the county's three hubs of Guildford, Woking and Reigate/Redhill. It is important that new development enjoys good access to local facilities and services, including employment, has a reduced need to use motorised transport, and allows good access to national rail and road networks to facilitate longer distance travel[11].

Outside Surrey, developments that might impact upon Surrey in terms of travel and transport include those proposed at East Grinstead and Horsham in West Sussex, Bordon and Aldershot in Hampshire, as well as plans related to both Gatwick and Heathrow airports[12].

Table 10.1 Objectives and targets of Climate Change and Air Quality Strategies of LTP3 (2011)

AIR QUALITY STRATEGY	CLIMATE CHANGE STRATEGY
AIM:	**AIM:**
The Air Quality Strategy aims to reduce air pollution from traffic on the county road network so that the county road traffic related Air Quality Management Areas can be	The aim of the Climate Change Strategy is to reduce carbon dioxide emissions from transport in Surrey and from the transport infrastructure and activities of Surrey Strategic

[11] Surrey County Council (2011) *Surrey Transport Plan: Congestion Strategy*
[12] As above.

undeclared – contingent on other strategies and funding. **OBJECTIVES:** ▪ Incorporate appropriate physical measures in infrastructure schedules, and implement as and when funding becomes available. ▪ Identify and agree options for the enforcement of existing regulations for parking, loading and utility works schedules, and implement as and when funding becomes available. ▪ Identify and agree options for supporting travel choices that are better for air quality, and implement as and when funding becomes available. ▪ Consider air quality issues in borough and district-led planning processes and areas of responsibility. **INDICATORS:** ▪ Revocation of AQMAS on the county road network. **TARGETS:** ▪ Revocation of two AQMAs on the county road network during 2011 – 2015.	Partnership. **OBJECTIVES:** ▪ Reduce distance travelled (vehicle kms) by reducing the need to travel. ▪ Increase the proportion of travel by sustainable modes such as walking and cycling, maintain public transport patronage and increase vehicle occupancy. ▪ Switch to lower carbon vehicles, encourage efficient driving and manage traffic flows. ▪ Reduce energy use of transport infrastructure and services. ▪ Manage the risks posed to transport, by forecasted effects of climate change. **INDICATORS:** ▪ Carbon reduction from road transport. ▪ Carbon reduction from SCC business travel. ▪ Climate change adaptation. **TARGETS:** ▪ 10%[1] reduction in absolute emissions of carbon dioxide from all road transport except motorway traffic, to be achieved by 2020 and increasing to 25% reduction by 2035 on 2007 levels of 2,114 k tones (1.9 tonnes per capita). ▪ 28% reduction in carbon emissions from SCC business travel by 2013/14 compared with 2008 baseline of 5.5 k tones CO_2. ▪ Establishment of climate change adaptation target awaiting clarification from central government for single data list.

[1] The Climate Change Strategy's target to reduce emissions of carbon dioxide from all road transport (except motorway traffic) by 10% by 2020 as compared worth 2007 baseline is expected to be composed of approximately 7% from national measures and 3% from local measures.

Table 10.2 Preferred measures of Climate Change and Air Quality Strategies of LTP3 (2011)

INFRASTRUCTURE MEASURES	Strategy which is the main promoter of the measure
Upgrade streetlights and include dimming management for reduced energy consumption.	Asset Management
Specify use of sustainable materials for highways maintenance and minimise waste to landfill.	Asset Management
Climate change adaptation planning to identify risks, most effective responses and take action in prioritised areas e.g. wet spots database.	Climate Change
Procure lower emissions vehicles for SCC fleet and incorporate into tenders for contracted works.	Climate Change
New and/or improved cycle lane.	Cycling
New and/or improved cycle track.	Cycling
Cycle parking.	Cycling
Infrastructure to support use of hybrid/electric vehicles.	Climate Change
Transport interchange infrastructure.	Local Bus
Tree planting and green roofs within schemes.	Air Quality
Park and Ride	Local Bus

Park and Stride	Walking
Parking and loading restrictions.	Parking
Removal / installation of traffic signals.	Congestion

MANAGEMENT OF INFRASTRUCTURE MEASURES	Strategy which is the main promoter of the measure
Providing supported bus services using prioritisation methodology.	Local Bus
Freight Quality Partnerships.	Freight
Continuation and development of partnership arrangements between the county council and bus operators.	Local Bus
Integrated Demand Management.	Congestion
Police enforcement including speed limits.	Road Safety
Civil parking enforcement – officers and CCTV	Parking
Smart Card ticketing.	Local Bus
Urban Traffic Management and Control (UTMC).	Congestion
Coordination of roadworks.	Congestion

PROMOTIONAL AND BEHAVIOURAL MEASURES	Strategy which is the main promoter of the measure
Workplace travel planning.	Travel Planning
Car share database.	Travel Planning
Car clubs.	Travel Planning
School travel planning.	Travel planning
Workplace travel planning.	Travel Planning
Cycle training.	Travel planning
Encourage internet use to facilitate access to services.	Travel Planning
Home working.	Travel Planning
Promotion of eco-driving.	Climate Change
Encourage fuel efficient driving through voluntary use of intelligent speed adaptation technology on satnavs.	Climate Change.
Wheels to Learn	Accessibility

INFORMATION PROVISION MEASURES	Strategy which is the main promoter of the measure
Advisory signage (e.g. turn off engine at level crossings).	Air Quality

PRICING MEASURES	Strategy which is the main promoter of the measure
Differential parking charges	Parking

OTHER MEASURES (INCLUDING LAND USE MEASURES)	Strategy which is the main promoter of the measure

Working with partners to consider climate change issues:	
▪ In Local Development Framework process to plan location and type of development and local infrastructure improvements and controls.	Air Quality / Climate Change
▪ In identification of appropriate developer-funded mitigation schemes.	Air Quality / Climate Change
▪ In providing guidance on parking provision.	Air Quality / Climate Change
Include sustainable travel accessibility in decision-making criteria of the Surrey Strategic Partnership "Estates Review".	Climate Change
Enforcement of fuel vehicle labelling in car showrooms.	Climate Change
Encourage boroughs and districts to consider adopting minimum emission standards or vehicle age restrictions into taxi licensing procedures.	Air Quality

11 Air Quality Planning Policies

New Local Plan

Runnymede Borough Council is currently carrying out a public consultation (until 28 March 2013) on the Pre-Submission version of the new Local Plan (Core Strategy), scheduled to be adopted in 2014. The new LDF will replace the current Local Plan (2001), providing strategic framework to future development in Runnymede up till 2026[13].

The new Local Plan currently under consultation does not contain a specific policy for Air Quality.

Runnymede has not published any Development Plan Documents (DPDs) or Supplementary Plan Documents (SPDs) to date.

It is intended that elements of the existing Local Plan (2001) will be replaced by the new Core Strategy (now under consultation) when it is adopted in 2014. Further parts will be replaced by the Development Management Policies DPD when it is adopted at a later date. These – and other - Development Plan Documents (DPD's), together with the Minerals and Waste Plans produced by Surrey County Council will comprise the statutory development plan for the Borough.

The Council continues to use Supplementary Planning Guidance (SPG) as a material consideration in determining planning applications. SPG is supplementary to the adopted 2001 Local Plan. These policies and guidance will be reviewed and incorporated as appropriate in the DPD's identified in this Scheme. **Table 11.1** below lists the existing SPG, which have relevance to air quality.

Table 11.1 Supplementary Planning Guidance and Draft Policy Guidance with relevance to air quality

Document Title	Date Adopted	Saved Local Plan or SPlan Policy	DPD containing New Policies
Trees Woodlands & Hedgerows SPG	July 2003	NE12, NE13, NE14 SEP NRM7	DM DPD
SPG on Car Parking October 2001 (this document has 3 appendices)	Local Plan Appendix B	MV9, MV10 SEP T4 & T5	DM DPD
Renewable Energy Interim Advice Note (not an SPG)	February 2010	SEP NRM11 (only for developments of more than 10 dwellings or 1000sqm of floorspace	CS, DM DPD

[13] The Planning and Compulsory Purchase Act (2004) introduced changes to the planning system. Planning authorities were required to prepare Local Development Frameworks. This was a collection of local plan documents with a Core Strategy as the central document. Other documents could include Site Allocations, Development Management Policies, Development Plan Documents (DPDs) and Area Action Plans (all of which were optional).

At present, by law, the Local Plan has to contain a Core Strategy and Site Allocations Development Plan Document, which sets out which areas of land are planned for development (shown on a 'proposals map'). If their need can be justified, the Local Plan could also contain: Area Action Plans, Development Management Development Plan Document, other Development Plan Documents (providing policies on key issues in a locality that will be given full statutory weight in the planning process) and Supplementary Planning Documents (providing non-statutory guidance on important local issues).

Existing Local Plan

The existing Local Plan (Second Alteration), adopted in April 2001, is a document containing all the local planning policies, which set out the way that buildings and land are used and developed.

The Surrey Structure Plan (2004) was adopted as part of the Local Plan and originally saved for three years until December 2007. A number of Local Plan policies were 'saved' in 2004, with some being deleted. In April 2007 the Council's Planning Committee decided to save a wider range of policies from the 2001 Local Plan. From 28th September 2007 a number of policies in the 2001 Local Plan ceased to have effect following a Direction by the Secretary of State under Paragraph 1(3) of Schedule 8 to the Planning and Compulsory Purchase Act 2004.

The remaining policies continue to be part of the development plan and are referred to as 'saved polices'. These polices continue to be used in determining planning applications and guiding appropriate development. The schedule in **Table 11.2** below lists all the 2001 adopted Local Plan policies relevant to air quality and identifies which of them were 'saved' in September 2007, and which LDD will contain a new policy that will eventually replace them.

Surrey Structure Plan (2004) was wholly replaced by the Regional Spatial Strategy (South East Plan) in May 2009, which in turn has been scheduled by the Coalition Government for revocation at some time in the future. At the time of writing, The South East Plan is still in force and remains part of the existing Local Plan.

Table 11.2 Schedule of policies saved and not saved from the 2001 Runnymede Borough Local Plan with relevance to air quality

Policy Number	Subject matter	Recommend	Reason	To be covered / replaced inLDD
MV1	Land use & transport studies	Not saved	Covered by Structure Plan and LTP/ To be carried forward to LP	CS
MV2	Highway works & traffic management	Not saved	Covered by Structure Plan, LTP and LDF	CS
MV3	Transport infrastructure contributions	Saved	To be carried forward to LP / Used by DC	CS (IDP and CIL)
MV4	Access and circulation arrangements	Saved	To be carried forward to LP / Used by DC	DM
MV5	Access to public transport	Saved	To be carried forward to LP / Used by DC	CS
MV6	Bus Facilities	Not saved	Covered by Structure Plan and LTP/ To be carried forward to LP	CS
MV7	Rail Services	Saved	To be carried forward to LP / Used by DC	CS
MV8	Lorry movements	Not saved	Covered by Structure Plan and LTP	N/A
MV9	Parking Standards	Saved	To be carried forward to LP / Used by DC	DM
MV10	Car park provision in town centres	Not Saved	Requirements for commuted payments not acceptable.	DM
MV11	Private non residential parking	Not saved	Not Used	DM
MV13	Cyclists	Saved	To be carried forward	CS

			to LP / Used by DC	
MV14	Pedestrians	Saved	To be carried forward to LP / Used by DC	CS
NE2	Impact of new development	Not saved	Not Used	N/A
NE12	Tree protection	Saved	To be carried forward to LP / Used by DC	DM (green infrastructure)
NE14	Trees and development	Saved	To be carried forward to LP / Used by DC	DM (green infrastructure)
NE16	SNCIs	Saved	To be carried forward to LP / Used by DC	DM (green infrastructure)
NE17	County sites	Saved	To be carried forward to LP / Used by DC	DM (green infrastructure)
NE18	Enhancement of SNCIs	Saved	To be carried forward to LP / Used by DC	DM (green infrastructure)
NE20	Species protection	Saved	To be carried forward to LP / Used by DC	CS (green infrastructure)
BE1	Planning briefs/design guidance	Not saved	Not Used	N/A
BE2	Townscape character	Saved	To be carried forward to LP / Used by DC	DM
BE4	Conservation area review	Saved	To be carried forward to LP / Used by DC	DM
BE5	Development in conservation areas	Saved	To be carried forward to LP / Used by DC	DM
BE5A	Demolition in conservation areas	Saved	To be carried forward to LP / Used by DC	DM
BE6	design guidance in conservation areas	Saved	To be carried forward to LP / Used by DC	DM
BE7	Enhancement schemes in cons areas	Saved	To be carried forward to LP / Used by DC	DM

12 Planning Applications

Table 12.4 below lists all planning applications, for which air quality assessment was either provided or for which it was/will be considered. The total number of residential units to be constructed between the years 2010 and 2026 as proposed by the emerging Local Plan has been given in **Table 12.5**.

Apart from the redevelopment of the former DERA site in Longcross, individual applications are not likely to give rise to significant air quality impacts. However, taken cumulatively, they may be the source of significant emissions, leading to exceedences of air quality objectives.

Runnymede Borough Council has reviewed traffic flow and speed data for roads in the borough as part of Sustainability Appraisal of the emerging Local Plan 2013. A Transport Assessment Report was produced by the Transport Section of the Surrey County Council in December 2012, which considered the cumulative traffic impacts of future development as proposed in the emerging Local Plan 2013. The County Transport model (SINTRAM60_121217_DERAv4)[14] was used to evaluate the development proposals with the forecast year of 2026 against the model base year of 2009.

Three development scenarios have been considered in the study:

Scenario 1	Committed development; Including DERA North Site (90,000sqm commercial facilities).
Scenario 2	Committed development and outstanding permissions; windfalls.
Scenario 3	Scenario 2 plus DERA North Site 200 dwellings, plus DERA Southern Site 1300 dwellings.

The report concluded that that the biggest impact would occur between the 2009 base and 2026 Scenario 1 (committed development) and that the PM period is slightly worse than the AM period. There is little impact between scenario 2 (proposed development) and scenario 3 (DERA Whole Site). The greatest differences occur on the minor roads.

Table 12.1 lists roads most sensitive to additional traffic between 2026 Scenario 1 and 2009 Base.
Table 12.2 lists roads most sensitive to additional traffic between 2026 Scenario 2 and 2009 Base.
Table 12.3 lists roads most sensitive to additional traffic between 2026 Scenario 3 and 2009 Base.

[14] SINTRAM is a strategic transport model that encapsulates the road network of Surrey and surrounding local authorities; at a national level the model incorporates all strategic roads within Great Britain. SINTRAM is run in the OmniTRANS version 6.0.16 modelling software.

Table 12.1 Table a Roads most sensitive to additional traffic between 2026 Scenario 1 and 2009 Base (AM & PM)

AM

Link No.	Road Name	Capacity (vph)	2009 Base Flow (vph)	2026 Scen. 1 Flow (vph)	Abs. Diff in Flow (vph)	% Diff in Flow	Scen. 1 VCR	Flow Rank	Overall Rank
Strategic Route Network (SRN)									
16684,2	M25 Jnt 13-12	9500	6297	7395	1099	17.4%	0.85	1	40
16685,1	M25 J13-12	9500	6297	7395	1099	17.4%	0.85	1	41
16652,1	M25 J12-13	9500	7999	8741	741	9.3%	0.99	3	92
16682,1	M25 Jnt 12-13	9500	7999	8741	741	9.3%	0.99	3	90
16683,2	M25 J12-13	9500	7999	8741	741	9.3%	0.99	3	91
10743,1	M3 J2-3	5700	4271	4904	633	14.8%	0.91	6	53
10753,2	M3 J3-2	5700	4271	4904	633	14.8%	0.91	6	52
10738,2	M25 J12-11	5700	4450	5024	575	12.9%	0.99	8	57
10739,1	M25 J12 slip on to M3 E	3800	1847	2371	524	28.4%	0.65	9	103
10750,2	M25 J11 Slip Off to M3 W	3400	1583	2036	453	28.6%	0.62	10	73
9656,2	M25 J12-13	5700	5295	5669	374	7.1%	1.08	11	45
10740,2	M3 J2 slip off to M25 N	3800	2705	3072	367	13.6%	0.86	12	87
10450,2	M3 J2-1	5700	3190	3553	363	11.4%	0.66	13	168
10451,1	M3 J1-2	5700	3190	3553	363	11.4%	0.66	13	169
10453,2	M3 J2-1	5700	3190	3553	363	11.4%	0.66	13	170
10713,1	M3 J1-2	3800	1234	1578	344	27.9%	0.43	16	122
17463,2	M25 AC J11 Off-Slip	3800	530	834	304	57.4%	0.23	17	78
10742,2	M3 J2 slip off to M25 N	3800	2447	2750	303	12.4%	0.78	18	104
10744,2	M25 J12 slip on to M3 W	3800	3037	3326	289	9.5%	0.94	19	124
10705,2	M25 Jnt 11-12	7600	7961	8244	284	3.6%	1.18	20	71
Link No.	Road Name	Capacity (vph)	2009 Base Flow (vph)	2026 Scen. 1 Flow (vph)	Abs. Diff in Flow (vph)	% Diff in Flow	Scen. 1 VCR	Flow Rank	Overall Rank
Local Road Network (LRN)									
9674,2	A320 Chilsey Green Road	1200	558	944	385	69.0%	0.83	1	2
19210,1	Unc Foxhills Road	800	263	643	381	144.8%	0.83	2	1
19211,2	Unc Foxhills Road	1700	263	643	381	144.8%	0.39	2	5
9682,1	A319 Chobham Road	1200	317	676	359	113.3%	0.58	4	6
19195,1	A319 Chertsey Road	1200	317	676	359	113.3%	0.58	4	7
19197,2	Unc Stonehill Road	1200	506	857	351	69.4%	0.73	6	10
16757,1	A320 Staines Road	1200	441	760	319	72.2%	0.66	7	3
16450,1	A30 London Road	1200	466	781	315	67.6%	0.68	8	4
19189,1	C10 Chobham Lane	1200	213	519	307	144.2%	0.45	9	9
19193,2	C10 Trumps Green Road	1700	213	519	307	144.2%	0.32	9	11
19258,2	A317 Eastworth Road	800	879	1180	301	34.3%	1.54	11	8
17756,2	Unc Almers Road	1200	256	552	296	115.7%	0.47	12	15
16453,1	A30 Egham Hill	1700	461	748	287	62.3%	0.46	13	17
9697,1	A320 Guildford Road	1200	1217	1495	278	22.9%	1.31	14	19
19224,1	A30 London Road	3400	1077	1353	276	25.6%	0.41	15	83
19225,1	A30 London Road	3400	732	994	262	35.8%	0.30	16	61
19203,1	B3121 Church Road	1700	566	808	242	42.7%	0.49	17	31
9346,1	B375 Bridge Road	1200	1196	1433	237	19.8%	1.23	18	25
19225,2	A30 London Road	3400	748	976	229	30.6%	0.30	19	88
19194,1	Unc Wellington Avenue	1200	150	365	215	142.9%	0.32	20	13

PM

Link No.	Road Name	Capacity (vph)	2009 Base Flow (vph)	2026 Scen. 1 Flow (vph)	Abs. Diff in Flow (vph)	% Diff in Flow	Scen. 1 VCR	Flow Rank	Overall Rank
Strategic Route Network (SRN)									
16652,1	M25 J12-13	9500	7256	8446	1190	16.4%	0.94	1	107
16682,1	M25 Jnt 12-13	9500	7256	8446	1190	16.4%	0.94	1	106
16683,2	M25 J12-13	9500	7256	8446	1190	16.4%	0.94	1	108
9656,2	M25 J12-13	5700	4868	5633	765	15.7%	1.05	4	72
16684,2	M25 Jnt 13-12	9500	5891	6574	683	11.6%	0.73	5	135
16685,1	M25 J13-12	9500	5891	6574	683	11.6%	0.73	5	134
10705,2	M25 Jnt 11-12	7600	8382	9035	654	7.8%	1.26	7	44
9641,1	M25 Jnt 11-10	7600	6495	7118	622	9.6%	1.01	8	161
10431,1	M25 J11-10	7600	6495	7118	622	9.6%	1.01	8	163
10432,1	M25 J11-10	7600	6495	7118	622	9.6%	1.01	8	162
9655,1	M3 J2 slip off to M25 N	3800	3494	3983	489	14.0%	1.11	11	96
10708,2	M25 Jnt 12-11	7600	6809	7295	485	7.1%	1.03	12	241
10449,2	M3 J3-2	5700	4962	5410	448	9.0%	1.00	13	137
10622,2	M3 J2-3	5700	4962	5410	448	9.0%	1.00	13	138
9639,1	M25 J11-10	5700	5439	5884	445	8.2%	1.12	15	125
10740,2	M3 J2 slip off to M25 N	3800	2388	2813	425	17.8%	0.79	16	148
10706,2	M25 J11-12	5700	6010	6411	401	6.7%	1.20	17	28
10430,1	M25 Jnt 10-11	7600	7638	8038	400	5.2%	1.12	18	325
11923,2	M25 J10-11	7600	7638	8038	400	5.2%	1.12	18	327
11924,2	M25 J10-11	7600	7638	8038	400	5.2%	1.12	18	326
Link No.	Road Name	Capacity (vph)	2009 Base Flow (vph)	2026 Scen. 1 Flow (vph)	Abs. Diff in Flow (vph)	% Diff in Flow	Scen. 1 VCR	Flow Rank	Overall Rank
Local Road Network (LRN)									
9674,2	A320 Chilsey Green Road	1200	396	1191	795	200.7%	1.01	1	1
16757,1	A320 Staines Road	1200	141	681	540	382.6%	0.58	2	10
19237,1	C10 Chobham Lane	1200	132	639	507	382.7%	0.54	3	5
19236,2	C10 Chobham Lane	1200	121	626	505	417.2%	0.53	4	9
19188,2	B386 Longcross Road	1700	388	883	494	127.3%	0.53	5	11
19189,2	C10 Chobham Lane	1200	184	674	491	267.3%	0.58	6	13
19193,1	C10 Trumps Green Road	1700	184	674	491	267.3%	0.41	6	14
17748,1	B386 Holloway Hill	1700	1120	1554	434	38.8%	0.94	8	4
19234,2	C10 Chobham Lane	1200	295	725	430	146.0%	0.61	9	12
19258,2	A317 Eastworth Road	800	541	954	413	76.4%	1.22	10	2
19210,1	Foxhills Road	800	263	655	392	149.3%	0.83	11	65
19211,2	Foxhills Road	1700	263	655	392	149.3%	0.39	11	131
9682,1	A319 Chobham Road	1200	349	728	379	108.7%	0.62	13	86
19195,1	A319 Chertsey Road	1200	349	728	379	108.7%	0.62	13	87
15915,2	A320 Guildford Road	1700	718	1095	377	52.5%	0.67	15	21
19221,1	B386 Longcross Road	1700	186	561	375	201.6%	0.34	16	20
16761,1	B375 St. Anns Road	1200	622	994	373	59.9%	0.84	17	7
12233,1	A30 Bypass	5100	2191	2545	354	16.1%	0.51	18	102
17458,1	A317 St Peter's Way	3500	737	1089	352	47.8%	0.31	19	96
9373,2	C10 Trumps Green Road	1200	426	767	341	79.9%	0.65	20	3

Table 12.2 Roads most sensitive to additional traffic between 2026 Scenario 2 and 2026 Scenario 1 (AM & PM)

AM

Link No.	Road Name	Capacity (vph)	2026 Scen. 1 Flow (vph)	2026 Scen. 2 Flow (vph)	Abs. Diff in Flow (vph)	% Diff in Flow	Scen.2 VCR	Flow Rank	Overall Rank
Strategic Route Network (SRN)									
10713,1	M3 J1-2	3800	1578	1629	51	3.3%	0.44	1	113
10706,2	M25 J11-12	5700	6232	6277	45	0.7%	1.20	2	62
10743,1	M3 J2-3	5700	4904	4944	40	0.8%	0.92	3	144
10753,2	M3 J3-2	5700	4904	4944	40	0.8%	0.92	3	145
9639,1	M25 J11-10	5700	5613	5651	38	0.7%	1.12	5	87
10705,2	M25 Jnt 11-12	7600	8244	8281	37	0.5%	1.18	6	99
9656,2	M25 J12-13	5700	5669	5706	37	0.7%	1.09	7	95
10738,2	M25 J12-11	5700	5024	5053	28	0.6%	0.99	8	176
9641,1	M25 Jnt 11-10	7600	7026	7048	22	0.3%	1.03	9	139
10431,1	M25 J11-10	7600	7026	7048	22	0.3%	1.03	9	137
10432,1	M25 J11-10	7600	7026	7048	22	0.3%	1.03	9	136
17463,2	M25 AC J11 Off-Slip	3800	834	855	21	2.5%	0.24	12	189
16684,2	M25 Jnt 13-12	9500	7395	7415	20	0.3%	0.85	13	211
16685,1	M25 J13-12	9500	7395	7415	20	0.3%	0.85	13	209
9653,1	M3 J2-1	5700	4459	4475	16	0.4%	0.83	15	207
10450,1	M3 J2-1	5700	4459	4475	16	0.4%	0.83	15	205
10453,1	M3 J2-1	5700	4459	4475	16	0.4%	0.83	15	206
9654,2	M3 J2-1	3800	2839	2852	13	0.5%	0.80	18	215
16652,1	M25 J12-13	9500	8741	8752	11	0.1%	0.99	19	237
16682,1	M25 Jnt 12-13	9500	8741	8752	11	0.1%	0.99	19	238
Link No.	Road Name	Capacity (vph)	2026 Scen. 1 Flow (vph)	2026 Scen. 2 Flow (vph)	Abs. Diff in Flow (vph)	% Diff in Flow	Scen.2 VCR	Flow Rank	Overall Rank
Local Road Network (LRN)									
9714,2	A317 Weybridge Road	3400	1301	1380	79	6.1%	0.42	1	46
9682,1	A319 Chobham Road	1200	676	751	75	11.0%	0.64	2	4
19195,1	A319 Chertsey Road	1200	676	751	75	11.0%	0.64	2	5
19189,1	C10 Chobham Lane	1200	519	592	73	14.0%	0.51	4	3
19193,2	C10 Trumps Green Road	1700	519	592	73	14.0%	0.36	4	5
9708,2	B3121 Station Road	800	282	345	62	22.1%	0.44	6	2
9716,1	B3121 Station Road	800	282	345	62	22.1%	0.44	6	1
16763,1	B3376 Pooley Green Road	1200	1046	1106	60	5.8%	0.96	8	8
17763,2	Unc Lyne Crossing Road	1200	230	290	60	26.1%	0.25	9	7
16453,1	A30 Egham Hill	1700	748	806	58	7.7%	0.49	10	17
19203,1	B3121 Church Road	1700	808	857	49	6.0%	0.52	11	37
16702,1	Unc Prune Hill	1200	565	613	47	8.4%	0.53	12	17
16456,1	B3376 New Wickham Lane	1200	797	844	47	5.9%	0.72	13	44
9674,1	A320 Chilsey Green Road	1200	602	648	46	7.7%	0.57	14	9
9066,1	A317 Chertsey Road	1600	898	943	45	5.0%	0.61	15	22
19184,2	B386 Longcross Road	1700	656	700	45	6.8%	0.43	16	38
17764,1	Unc Lyne Crossing Road	1200	462	506	44	9.5%	0.44	17	21
16450,1	A30 London Road	1200	781	824	43	5.5%	0.71	18	11
9417,2	B388 Mill House Lane	1200	797	840	43	5.4%	0.73	19	47
9675,1	B388 Thorpe Road	1200	797	840	43	5.4%	0.73	19	48

PM

Link No.	Road Name	Capacity (vph)	2026 Scen. 1 Flow (vph)	2026 Scen. 2 Flow (vph)	Abs. Diff in Flow (vph)	% Diff in Flow	Scen. 2 VCR	Flow Rank	Overall Rank
Strategic Route Network (SRN)									
16684,2	M25 Jnt 13-12	9500	6574	6685	111	1.7%	0.74	1	73
16685,1	M25 J13-12	9500	6574	6685	111	1.7%	0.74	1	75
10738,2	M25 J12-11	5700	4483	4584	101	2.2%	0.86	3	54
17462,1	M25 AC J11 Off-Slip	3800	1411	1481	71	5.0%	0.40	4	69
10708,2	M25 Jnt 12-11	7600	7295	7357	63	0.9%	1.04	5	60
17463,2	M25 AC J11 Off-Slip	3800	506	565	59	11.8%	0.15	6	67
10450,2	M3 J2-1	5700	3598	3643	45	1.2%	0.66	7	141
10451,1	M3 J1-2	5700	3598	3643	45	1.2%	0.66	7	140
10453,2	M3 J2-1	5700	3598	3643	45	1.2%	0.66	7	138
9653,1	M3 J2-1	5700	3519	3562	43	1.2%	0.65	10	153
10450,1	M3 J2-1	5700	3519	3562	43	1.2%	0.65	10	151
10453,1	M3 J2-1	5700	3519	3562	43	1.2%	0.65	10	149
10713,1	M3 J1-2	3800	1958	1998	41	2.1%	0.54	13	128
16652,1	M25 J12-13	9500	8446	8484	39	0.5%	0.95	14	151
16682,1	M25 Jnt 12-13	9500	8446	8484	39	0.5%	0.95	14	157
16683,2	M25 J12-13	9500	8446	8484	39	0.5%	0.95	14	153
9656,2	M25 J12-13	5700	5633	5666	33	0.6%	1.05	17	89
10705,2	M25 Jnt 11-12	7600	9035	9065	29	0.3%	1.26	18	111
10706,2	M25 J11-12	5700	6411	6436	25	0.4%	1.20	19	108
10714,2	M25 J12 slip on to M3 E	3800	2092	2115	24	1.1%	0.58	20	180
Link No.	Road Name	Capacity (vph)	2026 Scen. 1 Flow (vph)	2026 Scen. 2 Flow (vph)	Abs. Diff in Flow (vph)	% Diff in Flow	Scen. 2 VCR	Flow Rank	Overall Rank
Local Road Network (LRN)									
19221,1	B386 Longcross Road	1700	561	771	210	37.5%	0.46	1	4
19241,1	B386 Longcross Road	1700	466	662	196	42.0%	0.40	2	6
19243,1	B386 Longcross Road	1700	466	662	196	42.0%	0.40	2	7
19242,2	B386 Longcross Road	1700	511	706	195	38.0%	0.42	4	10
19234,2	C10 Chobham Lane	1200	725	918	192	26.5%	0.78	5	9
19239,1	B386 Longcross Road	1700	461	652	191	41.4%	0.39	6	11
9714,1	A317 Weybridge Road	3400	1094	1245	152	13.9%	0.38	7	19
15915,2	A320 Guildford Road	1700	1095	1234	140	12.8%	0.75	8	2
9715,2	A317 Woburn Hill	1200	986	1116	130	13.2%	0.96	9	2
9729,1	A317 Woburn Hill	1200	986	1116	130	13.2%	0.96	9	4
19258,2	A317 Eastworth Road	800	954	1081	127	13.3%	1.38	11	1
9714,2	A317 Weybridge Road	3400	1224	1346	122	10.0%	0.41	12	24
9697,1	A320 Guildford Road	1200	1190	1305	115	9.6%	1.11	13	8
9715,1	A317 Woburn Hill	1200	1040	1132	92	8.8%	0.97	14	13
9729,2	A317 Woburn Hill	1200	1040	1132	92	8.8%	0.97	14	12
17748,2	B386 Holloway Hill	1700	1084	1168	84	7.7%	0.70	16	14
17455,2	M25 J10	1600	784	861	77	9.8%	0.55	17	16
19254,1	A320 Guildford Road	1700	1065	1142	77	7.2%	0.69	18	17
9674,2	A320 Chilsey Green Road	1200	1191	1262	71	6.0%	1.08	19	15
9674,1	A320 Chilsey Green Road	1200	770	833	63	8.1%	0.71	20	18

Table 12.3 Roads most sensitive to additional traffic between 2026 Scenario 3 and 2026 Scenario 1 (AM & PM)

AM

Link No.	Road Name	Capacity (vph)	2026 Scen. 1 Flow (vph)	2026 Scen. 3 Flow (vph)	Abs. Diff in Flow (vph)	% Diff in Flow	Scen.3 VCR	Flow Rank	Overall Rank
Strategic Route Network (SRN)									
17463,2	M25 AC J11 Off-Slip	3800	834	912	78	9.4%	0.25	1	84
9656,2	M25 J12-13	5700	5669	5742	74	1.3%	1.09	2	66
10741,2	M3 J2 Slip Off to M25 S	3400	806	880	73	9.1%	0.27	3	78
10705,2	M25 Jnt 11-12	7600	8244	8314	70	0.8%	1.19	4	73
10706,2	M25 J11-12	5700	6232	6277	45	0.7%	1.20	5	100
10708,2	M25 Jnt 12-11	7600	7483	7526	43	0.6%	1.09	6	118
10713,1	M3 J1-2	3800	1578	1618	40	2.5%	0.44	7	163
10743,1	M3 J2-3	5700	4904	4942	38	0.8%	0.92	8	170
10753,2	M3 J3-2	5700	4904	4942	38	0.8%	0.92	8	172
17462,1	M25 AC J11 Off-Slip	3800	1870	1906	35	1.9%	0.52	10	185
10709,2	M3 J2 Slip on to M25 S	3800	2459	2491	32	1.3%	0.70	11	179
16684,2	M25 Jnt 13-12	9500	7395	7423	28	0.4%	0.85	12	202
16685,1	M25 J13-12	9500	7395	7423	28	0.4%	0.85	12	203
17460,2		3800	2012	2037	25	1.2%	0.57	14	206
9641,1	M25 Jnt 11-10	7600	7026	7044	18	0.3%	1.03	15	181
10431,1	M25 J11-10	7600	7026	7044	18	0.3%	1.03	15	183
10432,1	M25 J11-10	7600	7026	7044	18	0.3%	1.03	15	180
10739,1	M25 J12 slip on to M3 E	3800	2371	2388	17	0.7%	0.66	18	232
10750,2	M25 J11 Slip Off to M3 W	3400	2036	2052	16	0.8%	0.63	19	224
16652,1	M25 J12-13	9500	8741	8756	16	0.2%	1.00	20	243
Link No.	Road Name	Capacity (vph)	2026 Scen. 1 Flow (vph)	2026 Scen. 3 Flow (vph)	Abs. Diff in Flow (vph)	% Diff in Flow	Scen.3 VCR	Flow Rank	Overall Rank
Local Road Network (LRN)									
19188,2	B386 Longcross Road	1700	832	1044	212	25.5%	0.63	1	4
19244,2	Kitsmead Lane	1200	259	450	190	73.3%	0.39	2	1
19184,2	B386 Longcross Road	1700	656	822	166	25.3%	0.50	3	8
19242,2	B386 Longcross Road	1700	616	781	165	26.8%	0.47	4	7
19189,2	C10 Chobham Lane	1200	700	855	155	22.1%	0.73	5	9
19193,1	C10 Trumps Green Road	1700	700	855	155	22.1%	0.52	5	10
19245,2	Kitsmead Lane	1200	264	403	138	52.4%	0.34	7	3
19245,1	Kitsmead Lane	1200	266	403	137	51.2%	0.35	8	5
19192,1	C10 Trumps Green Road	1700	261	378	118	45.1%	0.23	9	11
19189,1	C10 Chobham Lane	1200	519	636	117	22.5%	0.54	10	16
19193,2	C10 Trumps Green Road	1700	519	636	117	22.5%	0.38	10	18
9373,2	C10 Trumps Green Road	1200	328	440	111	33.9%	0.38	12	2
19192,2	C10 Trumps Green Road	1700	330	438	108	32.7%	0.26	13	15
9373,1	C10 Trumps Green Road	1200	432	533	101	23.5%	0.45	14	6
17746,2	B386 Longcross Road	1700	1225	1326	101	8.2%	0.81	15	12
17756,2	Almers Road	1200	552	648	96	17.4%	0.55	16	22
9674,2	A320 Chilsey Green Road	1200	944	1031	87	9.3%	0.90	17	14
16453,1	A30 Egham Hill	1700	748	828	80	10.6%	0.51	18	36
16757,1	A320 Staines Road	1200	760	839	79	10.4%	0.72	19	13
9682,1	A319 Chobham Road	1200	676	755	79	11.6%	0.65	20	33

PM

Link No.	Road Name	Capacity (vph)	2026 Scen. 1 Flow (vph)	2026 Scen. 3 Flow (vph)	Abs. Diff in Flow (vph)	% Diff in Flow	Scen. 3 VCR	Flow Rank	Overall Rank
Strategic Route Network (SRN)									
10450,2	M3 J2-1	5700	3598	3685	88	2.4%	0.67	1	155
10451,1	M3 J1-2	5700	3598	3685	88	2.4%	0.67	1	154
10453,2	M3 J2-1	5700	3598	3685	88	2.4%	0.67	1	152
16684,2	M25 Jnt 13-12	9500	6574	6660	86	1.3%	0.74	4	141
16685,1	M25 J13-12	9500	6574	6660	86	1.3%	0.74	4	140
16652,1	M25 J12-13	9500	8446	8523	77	0.9%	0.95	6	156
16682,1	M25 Jnt 12-13	9500	8446	8523	77	0.9%	0.95	6	158
16683,2	M25 J12-13	9500	8446	8523	77	0.9%	0.95	6	156
17462,1	M25 AC J11 Off-Slip	3800	1411	1484	73	5.2%	0.40	9	122
10738,2	M25 J12-11	5700	4483	4556	72	1.6%	0.86	10	130
10708,2	M25 Jnt 12-11	7600	7295	7362	67	0.9%	1.04	11	99
10706,2	M25 J11-12	5700	6411	6470	59	0.9%	1.21	12	94
17463,2	M25 AC J11 Off-Slip	3800	506	563	57	11.3%	0.15	13	107
10743,1	M3 J2-3	5700	5358	5410	52	1.0%	0.98	14	174
10753,2	M3 J3-2	5700	5358	5410	52	1.0%	0.98	14	172
10712,2	M3 J2 Slip on to M25 S	3800	1640	1692	52	3.2%	0.47	16	175
10711,1	M3 J2 slip off to M25 N	3400	685	736	51	7.4%	0.22	17	123
10740,2	M3 J2 slip off to M25 N	3800	2813	2856	43	1.5%	0.80	18	176
10713,1	M3 J1-2	3800	1958	1993	36	1.8%	0.54	19	207
9656,2	M25 J12-13	5700	5633	5667	34	0.6%	1.05	20	125
Link No.	Road Name	Capacity (vph)	2026 Scen. 1 Flow (vph)	2026 Scen. 3 Flow (vph)	Abs. Diff in Flow (vph)	% Diff in Flow	Scen. 3 VCR	Flow Rank	Overall Rank
Local Road Network (LRN)									
19242,2	B386 Longcross Road	1700	511	893	381	74.6%	0.54	1	1
19241,1	B386 Longcross Road	1700	466	769	303	64.9%	0.46	2	3
19243,1	B386 Longcross Road	1700	466	769	303	64.9%	0.46	2	4
17748,2	B386 Holloway Hill	1700	1084	1367	283	26.1%	0.82	4	2
19239,1	B386 Longcross Road	1700	461	720	259	56.2%	0.43	5	8
19221,1	B386 Longcross Road	1700	561	819	258	46.1%	0.49	6	9
15915,2	A320 Guildford Road	1700	1095	1304	210	19.2%	0.79	7	5
19188,1	B386 Longcross Road	1700	807	1014	207	25.7%	0.61	8	15
19234,2	C10 Chobham Lane	1200	725	915	190	26.2%	0.77	9	17
9697,1	A320 Guildford Road	1200	1190	1378	188	15.8%	1.17	10	7
19258,2	A317 Eastworth Road	800	954	1136	181	19.0%	1.45	11	6
17758,1	Hardwick Lane	1200	168	344	176	104.9%	0.29	12	12
19244,1	Kitsmead Lane	1200	267	439	172	64.4%	0.38	13	11
19254,1	A320 Guildford Road	1700	1065	1236	170	16.0%	0.75	14	10
9714,1	A317 Weybridge Road	3400	1094	1261	167	15.3%	0.38	15	38
9714,2	A317 Weybridge Road	3400	1224	1388	164	13.4%	0.42	16	41
19245,2	Kitsmead Lane	1200	270	420	150	55.6%	0.36	17	13
9715,2	A317 Woburn Hill	1200	986	1131	146	14.8%	0.98	18	13
9729,1	A317 Woburn Hill	1200	986	1131	146	14.8%	0.98	18	15
19256,2	B386 Holloway Hill	1700	1141	1277	136	11.9%	0.77	20	18

Table 12.4 Proposed developments over 100 residential units

Location	Planning Application	Proposed Number of Residential Units and/or Proposed Area of Commercial Space	Proposed Number of Car Parking Spaces	Comments
Addlestone, Land at Aviator Park, Station Road, Addlestone, KT15 2PG	none	200	unknown	The site is near but not immediately adjacent to Addlestone AQMA. Screened by the planning Department as not likely to arise in significant air quality impacts due to the scale of the proposal.
Addlestone Bourneside, Civic Offices, Station Road and Police Station, Garfield Road (outline), Addlestone, KT15 2AH	RU.06/0066 Outline application Grant Consent - subject to conditions 26-06-2006	153	130 (0.85 per unit)	Air quality assessment not required. Applicant may need to reapply for outline or full planning permission.
Addlestone North, Land at Roakes Avenue, Addlestone, KT15 2HE	RU.07/0145 Reserved Matters application Grant Consent - subject to conditions 29-03-2007	124	169 (1.36 per unit)	Air quality assessment not required. Applicant may need to reapply for outline or full planning permission.
Addlestone North, Former Safeway foodstore Addlestone Northd carpark, 179 Station Road, Addlestone	RU.09/0316 Grant Consent - subject to conditions 25-06-2009	112	82 (0.73 per unit)	Consent granted. Air quality assessment not required. Development in progress.
Chertsey Meads, Former Gas Works Site, Pretoria Road, Chertsey, KT16 9LN	RU.08/0273 Full Planning Permission Grant Consent - subject to conditions 06-06-2008	121	145 (1.2 per unit)	Full planning permission. Air quality assessment not required.
Chertsey Meads, Hanworth Lane, Chertsey (Reserve Site)	none	150	unknown	
Chertsey South & Rowtown, Land at Franklands Drive, Chertsey	RU.05/0818 Outline Application	350	unknown	Consent granted. Air quality assessment not required. Development in progress.
Egham Hythe, Land at Wapshott Road, Bowes Road & Cornwall Way, Egham	RU.04/1050 Full Planning Permission Allowed subject to conditions 04-09-2006	181	176 (0.97 per unit)	Full planning permission. Air quality assessment not required.
Englefield Green, Former Brunel University, Runnymede Campus, Coopers Hill Lane	RU.11/0207 Outline Application Grant Consent - subject to conditions (28-06-2012).	104	unknown	Consent granted.
Former DERA site, Chobham Lane, Longcross (North Site)		200 plus 80,000 m^3 commercial area		Potential significant adverse effects when assessed cumulatively with the redevelopment of DERA South Site.
Former DERA site, Chobham Lane, Longcross (South Site)	none	1300		Potential significant adverse effects.

Table 12.5 Total proposed residential development in Runnymede

TOTAL -RUNNYMEDE

Total Proposed Number of Residential Units in Runnymede

Development size (units)	Number of developments	No. of units in developments this size	% of total number of units
1-10	164	501	**11.1%**
11-50	35	839	**18.6%**
51-100	2	177	3.9%
101-200	8	1145	**25.4%**
>200	2	1850	**41.0%**
Total	**211**	**4512**	**100.0%**

ADDLESTONE

Total Proposed Number of Residential Units in Addlestone

Development size (units)	Number of developments	No. of units in developments this size	% of total number of units
1-10	35	118	**12.18%**
11-50	7	177	**18.27%**
51-100	1	85	8.77%
101-200	4	589	**60.78%**
>200	0	0	0.00%
Total	**47**	**969**	**100.00%**

CHERTSEY

Total Proposed Number of Residential Units in Chertsey

Development size (units)	Number of developments	No. of units in developments this size	% of total number of units
1-10	27	78	7.70%
11-50	11	314	31.00%
51-100	0	0	0.00%
101-200	2	271	26.75%
>200	1	350	34.55%
Total	**41**	**1013**	**100.00%**

EGHAM & ENGLEFIELD GREEN

Total Proposed No. of Residential Units in Egham & Engl. Green

Development size (units)	Number of developments	No. of units in developments this size	% of total number of units
1-10	46	146	20.86%
11-50	10	177	25.29%
51-100	1	92	13.14%
101-200	2	285	40.71%
>200	0	0	0.00%
Total	**59**	**700**	100.00%

VIRGINIA WATER

Total Proposed Number of Residential Units in Virginia Water

Development size (units)	Number of developments	No. of units in developments this size	% of total number of units
1-10	16	36	2.24%
11-50	2	68	4.24%
51-100	0	0	0.00%
101-200	0	0	0.00%
>200	1	1500	93.52%
Total	**19**	**1604**	100.00%

Addlestone, Chertsey, Egham, Virginia Water	**4286**
Thorpe, Foxhills, New Haw, Ottershaw, Woodham	**226**
TOTAL	**4512**

13 Implementation of Action Plans

In 2008, a draft action plan was prepared for Runnymede Air Quality Management Areas, which set out measures aimed at improving air quality and achieving the air quality objectives in the Borough. The draft AQAP was last reviewed and updated in 2012.

The draft Plan (2012) consists of measures grouped into categories according to project type / purpose (**Table 13.1**).

It must be stated that the Council's influence over air quality in the AQMAs is limited due to road traffic remaining the main source of emissions. The road network in Runnymede is managed by the Surrey County Council except for the motorways, which are managed by the Highways Agency.

The following are reasons for the delayed implementation of the Plan:

Shortage of Resources

Substantial reductions in transport emissions could be achieved by implementing large-scale transport and infrastructure projects, such as schemes restricting high polluting vehicles from entering specific areas, variable car parking charges, or road tunnels under railway level crossings.

The main constraint that can be anticipated is the lack of funding. Due to financial constraints, the new Local Transport Plan LTP3, similar to LTP2, prioritised Surrey's transport hubs (Guildford, Woking, Reigate & Banstead) for the delivery of its strategies and transport measures.

Sources of air quality funding available to district/borough councils mainly include revenue funding, Environmental Department's budget and developer contributions.

Currently, the departmental budget is sufficient to cover the cost of the nitrogen dioxide diffusion tube network.

Specific projects may be successful to receive funding through Defra's annual Air Quality Grants programme.

It is proposed in the Draft Sustainability Appraisal Report (SAR)[15] of the emerging Local Plan (currently under consultation) that every new development meeting the CIL's definition of a dwelling is

[15] The above document can be found at: http://ww2.runnymede.gov.uk/ldf/Consultation_documents/Sustainability_Appraisal_Report/DRAFT%20Sustainability%20Appraisal%20Report.pdf

Please note that the SAR makes references to Appendix 15 (Emissions Reductions), which is available from:

required to contribute towards the cost of tackling poor air quality. These financial contributions secured through Community Infrastructure Levy (CIL) would be then spent on offsetting measures (as listed in Appendix 15 of the SAR).

In addition, to minimise site-specific direct emissions from new developments and reduce exposure of new residents to poor air quality, developers could be required to implement redesign and mitigation measures according to the magnitude of impacts and existing pollutant concentrations at the development site. Appropriate measures could be secured through planning conditions and /or obligations (Section 106 agreements).

To determine whether new development could contribute towards air quality projects, a feasibility study needs to be carried out to test the ability of a range of development types proposed in the emerging Local Plan to make contributions to measures identified in the AQAP through a Community Infrastructure Levy (CIL). A feasibility study of AQAP measures should also be completed to identify the most cost effective projects.

Joint Working

- Runnymede Planning Department

Currently, the Council does not have policies specifically addressing air pollution or greenhouse gas emissions ('Renewable Energy' Interim Advice Note (2010) includes the requirement for 10% of energy for all new developments to come from renewable sources, however the Note has not been the subject of public consultation) and proposals for new development do not volunteer to implement any air quality or energy efficiency measures unless such improvements are required by legislation.

It needs to be discussed with the Planning Department whether an air quality / climate change Supplementary Planning Document (SPD) could be introduced to address air pollution and greenhouse gas emissions associated with new development and provide guidance on air quality and climate changes mitigation measures required to ensure the sustainability of development policies of the emerging Local Plan. Furthermore, air quality / climate change issues would be assessed in the same consistent manner and developers would be required to achieve higher standard of design (less emissions, more energy efficient) and implement measures supporting sustainable transport / air quality. The SPD would take account of the issue of cumulative effects and interactions and possible trade-offs between climate change and air pollution mitigation measures and ensure that air/greenhouse gas emissions from new development are minimised.

- Surrey County Council

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http://ww2.runnymede.gov.uk/ldf/Consultation_documents/Sustainability_Appraisal_Report/Appendices/Appendix%2015%20EmissionsReductions/SAR_Appendix_15.pdf

Runnymede Borough Council has no authority over transport, which is managed by the Surrey County Council's transport department. It is, therefore, hoped that the Draft AQAP (2012) could be integrated with Surrey's Local Transport Plan.

- The Highways Agency

In May 2009, Connect Plus, a consortium consisting of Balfour Beatty, Skanska, Atkins and Egis, appointed as the contractor for M25 DBFO (Design, Build, Finance and Operate) project, a 30 year 'concession', started the widening works on the M25. Atkins has been commissioned by Connect Plus to produce an Air Quality Management Plan for the M25. The report, in draft form, was reviewed by the HA in January 2010. Runnymede BC was promised a copy of the report once it has been completed, which we never received. However, we were informed that there was only one reference in the report relevant to the M25 AQMA in Runnymede - specifically to J11/J12 near Runnymede - indicating a potential monitoring site for 5 diffusion tubes at AQMA along the corridor of the M25 (between J10-J11).

Officers at Runnymede BC held a meeting with Connect Plus in April 2010 to discuss the issue of the M25 AQMA, however the Connect Plus air quality management plan for the M25 was still under development at that time and no conclusions were reached.

In March 2011 TRL decommissioned a continuous monitoring site at J13 of the M25 near Staines due to lack of further funding from the Highways Agency.

In April 2011, The Highways Agency ceased a diffusion tube monitoring project managed by RPS (Highways Agency Diffusion Tube Survey within AQMAs) and two M25 diffusion tube sites in Runnymede (51 and 52), where tubes were deployed by the Council's staff on behalf of RPS, were closed (data collected during that project, available for the period April 2006-April 2011 can be downloaded from Runnymede air quality website).

National Policy

Under the Environment Act 1995, local authorities have a duty to work towards improving air quality, however, there is no legal obligation for them to achieve the air quality objectives as so many sources of emissions are outside local authority control.

Although the rationale for the existing air quality policy is understandable, the consequences are that air quality issues are not prioritised as there is no real incentive or obligation to direct staff and financial resources into improvements that are perceived as not essential (especially at the time when other services have been cut).

Table 13.1 Feasibility of measured proposed by the Draft Air Quality Plan (2012)

Measure	Funding	Support within Organisation	Support from Residents	Support from External Organisations	National Policy	Feasibility
Monitoring – Diffusion tubes	Sufficient – from Environmental Protection Division's budget.	Sufficient.	Sufficient.	Sufficient.	Adequate.	High
Monitoring – Continuous NO_x analyser	Insufficient at the moment. Funding would have to include the costs of purchase and additional continuous funding for maintenance and data processing. Funding can be obtained through Air Quality Grant.	Sufficient if there was funding.	Unknown. Requires consultation with residents / Councillors.	Unknown.	Adequate. Funding available from Air Quality grant sufficient for short-term projects.	Low
Transport Infrastructure Projects	Insufficient. Requires very high levels of investment. Development of infrastructure (transport) is not in the power of RBC.	Unknown. Requires support from: - Head of Environmental Protection; - Director of Technical Services; - Head of Planning; - Chief Executive; - Elected Councillors.	Unknown. Requires consultation with residents / Councillors.	Insufficient. Transport projects are managed by the SCC. There is significant uncertainty regarding future levels of funding. With transport projects priority will be given to Surrey transport hubs.	Inadequate. There is no legal requirement for local authorities to meet air quality objectives. There is no framework to help local authorities implement large air quality projects.	Low
Transport Emission Control Measures Installation of electric vehicle charge points. Provision of renewable refuelling infrastructure.	Insufficient. Requires very high levels of investment.	Insufficient. Requires support from: - Head of Environmental Protection; - Director of Technical Services; - Head of Planning; - Chief Executive; - Elected Councillors.	Possibly sufficient. Residents may welcome better access to refuelling infrastructure.	Insufficient. Transport projects are managed by the SCC. There is significant uncertainty regarding future levels of funding. With transport projects priority will be given to Surrey transport hubs.	There is no framework to help local authorities implement large air quality projects. Some schemes could benefit from national incentives such as Vehicle Excise Duty (VED) regime to incentivise further a switch to lower emission private vehicles. Incentives could also be provided through the tax regime to encourage low-emission HGVs.	Low
Transport Emission Control Measures	Sufficient.	Possibly sufficient. Requires support from: - Head of	Unknown. Requires consultation with	Insufficient. Requires a consultation with	Adequate.	Medium

Idling vehicles enforcement – HGV drivers.		Environmental Protection; - Director of Technical Services; - Head of Planning; - Chief Executive; - Elected Councillors.	residents / Councillors.			
Transport Emissions Control Measures 'Low emission zone' – restriction on deliveries; - Buses.	Insufficient. Requires very high levels of investment.	Insufficient. Requires support from: - Head of Environmental Protection; - Director of Technical Services; - Chief Executive; - Elected Councillors.	Unknown. Requires a resident survey or Councillors' advice.	Unknown. Requires consultation.	Inadequate. There is no legal requirement for local authorities to meet air quality objectives. There is no framework to help local authorities implement large air quality projects.	Low
Transport Emission Control Measures Investments to improve the standard of Runnymede's bus fleet / Council's fleet.	Insufficient. Requires very high levels of investment.	Insufficient. Requires support from: - Head of Environmental Protection; - Director of Technical Services; - Chief Executive; - Elected Councillors.	Possibly sufficient.	Sufficient if funded from RBC budget.	Inadequate. There is no legal requirement for local authorities to meet air quality objectives. There is no framework to help local authorities implement large air quality projects.	Low
Transport EmissionsControl Measures Emissions related car parking charges.	Insufficient.	Insufficient. Requires support from: - Head of Environmental Protection; - Director of Technical Services; - Chief Executive; - Elected Councillors.	Unknown. Requires consultation with residents / Councillors.	Unknown. Requires consultation.	Inadequate. There is no legal requirement for local authorities to meet air quality objectives. Without other incentives, Councillors are unlikely to support car parking charging schemes that require additional investment and may not be supported by residents.	Low
Emissions Control Measures Roadside	Insufficient. Funding would need to cover the cost of equipment and officer's time.	Insufficient. Requires support from: - Head of Environmental	Unknown. Requires consultation with residents /	Insufficient. Requires a consultation with SCC etc etc	Inadequate. There is no legal requirement for local authorities to meet air quality objectives.	Low

emission testing in the AQMA.		Protection; - Director of Technical Services; - Chief Executive; - Elected Councillors.	Councillors.		Councillors are unlikely to support investment in air quality schemes.	
Emissions Control through Planning System	Unknown.	Insufficient. Requires support from: - Head of Environmental Protection; - Head of Planning - Director of Technical Services; - Chief Executive; - Elected Councillors.	Unknown. Requires consultation with residents / Councillors.	Sufficient..	Inadequate. There is no legal requirement for local authorities to meet air quality objectives. Councillors are unlikely to support investment in air quality schemes.	Medium
Smarter Travel Promotion	Possibly sufficient.	Insufficient. Requires support from: - Head of Environmental Protection; - Director of Technical Services.	Unknown. Requires consultation with residents / Councillors.	Sufficient.	Inadequate. There is no legal requirement for local authorities to meet air quality objectives. Councillors are unlikely to support investment in air quality schemes.	Medium - High

14 Conclusions and Proposed Actions

14.1 Conclusions from New Monitoring Data

14.1.1 Nitrogen Dioxide

The results from Runnymede diffusion tube sites demonstrate that 2010 is likely to have been a high pollution year, as it was reported. Most diffusion tube sites in Runnymede recorded higher nitrogen dioxide concentrations in 2010 than in 2011.

Sites exceeding annual mean objective outside AQMAs

The annual mean objective for nitrogen dioxide was exceeded at the following diffusion tube monitoring sites in 2010 and/or 2011 outside AQMAs: RY13, RY18, RY21, RY23, RY25, RY26, RY31. It is estimated that nitrogen dioxide concentrations at receptors nearest to those sites, calculated using Defra's nitrogen dioxide fall-off with distance spreadsheet exceeded the annual mean objective at sites RY13, RY23, RY25 and RY26.

As can be seen from the results from site RY13, Addlestone AQMA may have to be extended at its northern boundary. Further monitoring should continue further north along Chertsey Road, and up to the Chertsey Road A318/St Peter's Way A317 roundabout.

Results from short-term automatic monitoring of nitrogen dioxide at Vicarage Road, Egham, in 2011 show that the annual mean of 66.8 $\mu g/m^3$ recorded at the monitoring site exceeded the objective. This has been confirmed by the results from diffusion monitoring sites RY25 and RY26, both of which recorded concentrations high enough to raise concern of annual mean objective having been exceeded in 2010 and 2011 at the residential properties nearest to the diffusion tube sites, in Vicarage Road, Vicarage Crescent and Pooley Green Road. Therefore, it will be necessary to proceed to a Detailed Assessment of nitrogen dioxide in those areas. In the future, it may be necessary to amend the existing M25 AQMA to include those properties.

Finally, concentrations at the receptors in the vicinity of the Bridge Road/Weir Road junction (site RY23) may have exceeded the annual mean objective in 2010/2011. Future monitoring at the site is recommended. It may also be necessary to proceed to a Detailed Assessment for this area if the 2012 results show that concentrations have not reduced.

Sites exceeding annual mean objective inside AQMAs

The results from 2010/2011 confirmed that exceedences of the annual mean NO_2 objective continue to occur in the AQMAs.

Trends in concentrations

The results from established diffusion tube sites (six sites) cover sufficient period of time to examine trends in concentrations at those sites. The trend graph in **Figure 2.6** shows increasing annual mean concentrations at the sites RY1 (within the Addlestone AQMA) and RY6 (within the M25 AQMA) and decreasing concentrations at the roadside location RY9.

14.1.2 PM_{10}

On the basis of the results from the Highway's Agency continuous monitoring site in Staines (years 2007-2010) and the results from the short-term automatic monitoring in Vicarage Road, Egham (2011), it is proposed to proceed to a Detailed Assessment for the areas of the existing AQMA along the M25 to review the validity of the original AQMA designation with respect to particulates (PM10).

14.1.3 Benzene

The results for site RY3 have been much below the objective of 5.00 µg/m3 for a number of years, therefore it was decided to move the monitoring tube to a worst-case location where benzene concentrations are expected to be the highest. However, there are two petrol stations considered to be worst-case locations for benzene exposure (details in **Table 2.18**). The existing BTEX tube will be moved to the petrol station in Bridge Road from January 2013 to determine the levels of benzene at that location.

14.2 Conclusions from Assessment of Sources

On the basis of Surrey County Council's Transport Assessment Report (2012), **Tables 12.1-12.3**, roads considered to experience significant (over 25%) increase in traffic flow between the years 2009 (base year) and 2026 include the following roads listed in **Table 3.1** below:

- Addlestone: B3121 Church Road and A319 Chertsey Road;
- Chertsey: A317 Eastworth Road, B386 Holloway Hill, A320 Guildford Road, A317 St Peter's Way, Chilsey Green Road, St Anns Road;
- Ottershaw: A319 Chobham Road, Almners Road, Longcross Road, Stonehill Road, Foxhills Road, Hardwick Lane, Kitsmead Lane;
- Egham: A30 Egham Hill, A320 Staines Road;
- Virginia Water: A30 London Road, Trumps Green Road, Wellington Avenue.

It will not be necessary to proceed to a Detailed Assessment at this time as the changes were identified on the basis of a Transport Assessment of the emerging Local Plan and refer to proposed development scenarios for the period 2009-2026. However, it is recommended to start diffusion tube

monitoring in some of those areas currently not included in the monitoring programme to be aware of any potential future changes in nitrogen dioxide concentrations.

14.3 Other Conclusions

Currently, the Council does not have policies specifically addressing air pollution or greenhouse gas emissions ('Renewable Energy' Interim Advice Note (2010) includes the requirement for 10% of energy for all new developments to come from renewable sources, however the Note has not been the subject of public consultation).

The new Local Plan currently under consultation does not contain a specific policy for Air Quality either.

14.4 Proposed Actions

Monitoring

Diffusion tube monitoring for nitrogen dioxide should continue at locations where annual mean concentrations are predicted to either have exceeded or have remained close to exceeding the objective at sensitive receptors outside AQMAs, which includes: RY13 (High Street, Addlestone), RY18 (New Haw Road / Woodham Lane roundabout), RY21 (Heriot Road/London Street roundabout in Chertsey), RY25 and RY26 (Vicarage Road, Egham), and RY23 (the Bridge Road/Weir Road junction).

Diffusion tube monitoring for nitrogen dioxide should also comprise sites at the roads identified in the Transport Assessment of the emerging Local Plan as likely to experience significant (over 25%) increase in traffic flow as a result of the proposed development scenarios for the period 2009-2026. This includes:

- Addlestone: B3121 Church Road and A319 Chertsey Road;
- Chertsey: A317 Eastworth Road, B386 Holloway Hill, A320 Guildford Road, A317 St Peter's Way, Chilsey Green Road, St Anns Road;
- Ottershaw: A319 Chobham Road, Almners Road, Longcross Road, Stonehill Road, Foxhills Road, Hardwick Lane, Kitsmead Lane;
- Egham: A30 Egham Hill, A320 Staines Road;
- Virginia Water: A30 London Road, Trumps Green Road, Wellington Avenue.

The existing BTEX tube for benzene monitoring will be moved to a worst-case location where benzene concentrations are expected to be the highest. There are two petrol stations considered to be worst-case locations for benzene exposure (details in **Table 2.18**). Therefore, from January 2013 the BTEX tube will be moved to the petrol station in Bridge Road to determine the levels of benzene at that location.

Detailed Assessment

On the basis of the monitoring results presented in this report, it is necessary to proceed to a Detailed Assessment for the area in vicinity of the railway crossing in Vicarage Road, Egham and possibly the area in vicinity of the Bridge Road / Weir Road junction in Chertsey if the 2012 results show that concentrations have not reduced.

On the basis of the results from the Highway's Agency continuous monitoring site in Staines (years 2007-2010) and the results from the short-term automatic monitoring in Vicarage Road, Egham (2011), it is proposed to proceed to a Detailed Assessment for the areas of the existing AQMA along the M25 to review the validity of the original AQMA designation with respect to particulates (PM_{10}).

Planning

A feasibility study would be required to determine whether new development could contribute towards air quality projects through a Community Infrastructure Levy (CIL).

It needs to be discussed with the Planning Department whether an air quality / climate change Supplementary Planning Document (SPD) could be introduced to address air pollution and greenhouse gas emissions associated with new development and to provide guidance on air quality and climate changes mitigation measures required to ensure the sustainability of development policies of the emerging Local Plan.

AQAP

A feasibility study of AQAP measures should be completed to identify the most cost effective projects.

2013 Progress Report

The next course of action will be to submit a 2013 Progress Report by end of April 2013.

Appendices

Appendix A: QA/QC Data

Appendix B: PPC installations within Runnymede

Appendix C: AQMAs within Runnymede

Appendix A: QA:QC Data

Diffusion Tube Bias Adjustment Factors

Runnymede's diffusion tubes are supplied by Lambeth Scientific Services Limited.

50% triethanolamine (TEA) solution is the absorbent used to prepare the tubes.

The bias adjustment factor applied is a combined bias adjustment factor derived from the national database of co-location studies, available from the LAQM Support Website.

Table A1 below provides the list of correction factors for the years 2000-2009.

Table A 1 Diffusion Tube Bias Adjustment Factors, 2000-2011 (Spreadsheet Version Number: 06/12)

Year	Bias Adjustment Factor
2000	0.97
2001	1.09
2002	1.15
2003	1.05
2004	1.19
2005	1.24
2006	1.28
2007	1.07
2008	0.98
2009	1.03
2010	1.06
2011	1.06

Factor from Local Co-location Studies (if available)

Co-location tube site (tubes RY10, RY11 and RY12) closed in March 2011 when the Highways Agency's M25 J13 continuous monitoring site near Staines was decommissioned (due to lack of funding).

PM Monitoring Adjustment

The automatic monitoring site at Vicarage Road, Egham, was operated by the Transport Research Laboratory (TRL) from 1 February 2011 till 31 July 2011. During the monitoring period, the project was wholly managed by TRL. Fully ratified data was provided to RBC at the end of the monitoring period. PM_{10} was monitored using a TEOM, which was more cost-effective than using a more accurate but twice as expensive TEOM with FDMS. The TEOM data has been adjusted using the Volatile Correction Model (VCM), according to the recommendations in TG (09) guidance.

The Highways Agency's M25 J13 automatic monitoring site near Staines ('the M25 B site') was also operated by TRL. PM_{10} was monitored by a TEOM and the data presented in this report for the years 2007 and 2008 were adjusted to gravimetric equivalent using a multiplication factor of 1.3, whereas the more recent data from 2010 were VCM corrected.

Short-term to Long-term Data adjustment

Six-month nitrogen dioxide and particulate matter automatic monitoring data from the monitoring site in Vicarage Road, Egham, were 'annualised' using Technical Guidance (09), Box 3.2.

Nitrogen dioxide diffusion tube monitoring data with data capture rate below 75% were adjusted to estimate an annual mean concentration using the same guidance (Technical Guidance (09), Box 3.2).

The nearest continuous monitoring sites best meeting the relevant criteria for the adjustment of short-term monitoring data are:

- Mole Valley – Dorking (all data fully ratified)
  - 95% data capture rate for NO_2 between 01/01/2010 and 31/12/2010
  - 90% data capture rate for NO_2 between 01/01/2011 and 31/12/2011
- Harrow – Stanmore (all data fully ratified)
  - 91% data capture rate for NO_2 between 01/01/2010 and 31/12/2010
  - 98% data capture rate for NO_2 between 01/01/2011 and 31/12/2011

The sites are part of the LAQN network and the monitoring results were derived from the LAQN website.

2010

Table A 2 Adjustment to estimate annual mean NO_2 concentration for site RY6, 2010

2010				
Site	**Site Type**	**Annual Mean**	**Period Mean***	**Ratio**
Mole Valley, Dorking	Urban Background	25.8	29.0	0.890
Harrow, Stanmore	Urban Background	27.0	30.9	0.874
			Average	**0.882**

*Period Mean to adjust site RY6 results: Jan, Feb, Aug, Sep, Oct, Nov, Dec 2010

Table A 3 Adjustment to estimate annual mean NO_2 concentration for site RY31, 2010

2010				
Site	**Site Type**	**Annual Mean**	**Period Mean***	**Ratio**
Mole Valley, Dorking	Urban Background	25.8	28.9	0.893
Harrow,	Urban	27.0	31.2	0.865

Stanmore	Background			
			Average	**0.879**

* Period Mean to adjust site RY31 results: Jan, Feb, Apr, Jun, Sep, Oct, Nov, Dec 2010

2011

Table A 4 Adjustment to estimate annual mean NO_2 concentration for site RY25, 2011

2011				
Site	**Site Type**	**Annual Mean**	**Period Mean***	**Ratio**
Mole Valley, Dorking	Urban Background	22.6	20.4	1.108
Harrow, Stanmore	Urban Background	25.2	23.4	1.077
			Average	**1.093**

*Period Mean to adjust site RY25 results: Feb, May, Jun, Jul, Nov, Dec 2011

Table A 5 Adjustment to estimate annual mean NO_2 concentration for site RY29, 2011

2011				
Site	**Site Type**	**Annual Mean**	**Period Mean***	**Ratio**
Mole Valley, Dorking	Urban Background	22.6	24.9	0.908
Harrow, Stanmore	Urban Background	25.2	26.6	0.947
			Average	**0.928**

* Period Mean to adjust site RY29 results: Jan-Jun 2011

Table A 6 Adjustment to estimate annual mean NO_2 concentration for site RY30, 2011

2011				
Site	**Site Type**	**Annual Mean**	**Period Mean**	**Ratio**
Mole Valley, Dorking	Urban Background	22.6	18.1	1.249
Harrow, Stanmore	Urban Background	25.2	18.3	1.377
			Average	**1.313**

* Period Mean to adjust site RY30 results: Apr-Jul 2011

Table A 7 Adjustment to estimate annual mean NO_2 concentration for site RY31, 2011

2011				
Site	**Site Type**	**Annual Mean**	**Period Mean**	**Ratio**
Mole Valley, Dorking	Urban Background	22.6	22.5	1.004
Harrow, Stanmore	Urban Background	25.2	22.2	1.135
			Average	**1.070**

* Period Mean to adjust site RY31 results: Mar, Apr, May, Jun, Jul 2011

Table A 8 Adjustment to estimate annual mean NO_2 concentration for site RY35, 2011

2011

Site	Site Type	Annual Mean	Period Mean	Ratio
Mole Valley, Dorking	Urban Background	22.6	22.4	1.009
Harrow, Stanmore	Urban Background	25.2	25.9	0.973
			Average	**0.991**

* Period Mean to adjust site RY35 results: Jul, Oct, Nov, Dec 2011

Table A 9 Egham automatic site adjustment – NO_2

Site	Site Type	Annual Mean	Period Mean	Ratio
Mole Valley, Dorking	Urban Background	22.6	22.9	0.987
Harrow, Stanmore	Urban Background	25.2	23.8	1.059
			Average	**1.023**

* Period Mean to adjust site results: Feb-Jul 2011

Table A 10 Egham automatic site adjustment – PM_{10}

Site	Site Type	Annual Mean**	Period Mean	Ratio
Mole Valley, Dorking	Urban Background	20.5	23.3	0.880
Harrow, Stanmore	Urban Background	19.5	22.1	0.882
			Average	**0.881**

* Period Mean to adjust site results: Feb-Jul 2011
** Gravimetric equivalent

QA/QC of Automatic Monitoring

The automatic monitoring site at Vicarage Road, Egham, was operated by the Transport Research Laboratory (TRL) from 1 February 2011 till 31 July 2011. During the monitoring period, the project was wholly managed by TRL, which included:

- equipment set up and servicing;
- supply of calibration gases;
- fortnightly calibrations at the monitoring site and filter changes;
- daily data checks using a remote access system to ensure that data was collected and equipment was running properly.;
- data validation and ratification in accordance with Defra Technical Guidance LAQM TG (09).

Fully ratified data was provided to RBC at the end of the monitoring period.

QA/QC of diffusion tube monitoring

Nitrogen dioxide

Laboratory Performance and WASP scheme

Lambeth Scientific Services Limited follows the procedures set out in the Harmonisation Practical Guidance and participates in the WASP scheme operated by the Health and Safety Laboratory.

From January 2010 till December 2011 (Rounds 108 to 115 of the WASP NO2 Proficiency Test, an average 70% of Lambeth Scientific Services' laboratory results for test samples were determined to be satisfactory.

Laboratory Precision

The precision results for individual laboratories, available from the LAQM Support spreadsheet database of co-location studies (Spreadsheet Version Number: 06/12) show that two out of three studies had 'poor' precision in 2010 and two out of six studies had 'poor' precision in 2011.

Benzene

BTEX passive diffusion tubes for VOC monitoring are supplied by Lambeth Scientific Services. The absorbent used is Chromosorb 106 with an uptake ratio of 1.72. The tubes are subject to the WASP QA/QC programme in the same way as NO_2 tubes. Ratification of results was undertaken by comparing the ratio of concentration of BTEX compounds analysed. Where significant variation of the ration (3.5:1:2:1) was observed, the data for that month was discarded.

Appendix B: PPC installations within Runnymede

Permitted Facilities in the Runnymede Borough Council Area
Under the Pollution Prevention Control Act 1999

Part B Facilities

Permit Number	Type of Activity	Operators Name and Site Contact	Permitted Address
PPC4(2)	Sec 3.1 Cement Mortar Batching	Lafarge Aggregates Limited. Mr G Sturgess 07972 533643	Longside, Thorpe Lea Road, Egham, Surrey, TW20 8RH
PPC7(2) EP	Sec 6.4 Respraying Road Vehicles	Medcalf & Company (Coachbuilders) Limited. Mr Angelo Scandone 01932 563026	Medcalf & Company (Coachbuilders) Limited, Fordwater Trading Estate, Fordwater Road, Chertsey, Surrey, KT16 8HG
PPC8(2) EP	Sec 6.4 Respraying Road Vehicles	LA Coachworks (Weybridge) Limited. Mr Paul Mullen 01932 858879	LA Coachworks (Weybridge) Limited, Byron Road, Addlestone, Surrey, KT15 2SY
PPC10(1)	Sec 3.5 Mobile Crusher	Capital Demolition Limited. Mr Dennis Read 01932 346222	Capital Demolition Limited, Capital House, Woodham Park Road, Woodham, Addlestone, Surrey, KT15 3TG
PPC15(2) EP	Sec 6.4 Respraying Road Vehicles	Mr David Hutchens, trading as Panel-wise. Mr David Hutchens 01932 856460	Mr David Hutchens, trading as Panel-wise, Hamm Moor Lane, Weybridge Trading Estate, Weybridge, Surrey, KT15 2SD
PPC18(4) EP10	Sec 1.2 Petrol Storage	Wheatsheaf Service Station. Service Station 01344 846130	Wheatsheaf Service Station, London Road, Virginia Water, Surrey, GU25 4QE
PPC19(3) EP10	Sec 1.2 Petrol Storage	Shell Thorpe Lea Road. Service Station 01784 455970	Shell Thorpe Lea Road, 171 Thorpe Lea Road, Egham, Surrey, TW20 8HP
PPC20(3) EP	Sec 1.2 Petrol Storage	Shell Ottershaw. Service Station 01932 879930	Shell Ottershaw, Guildford Road, Ottershaw, Chertsey Surrey, KT16 PG

Permit Number	Type of Activity	Operators Name and Site Contact	Permitted Address
PPC21(3) EP	Sec 1.2 Petrol Storage	Trident Garages Limited. Service Station 01932 874411	Trident Garages Limited, Guildford Road, Ottershaw, Chertsey, KT16 0NZ
PPC22(2)	Sec 1.2 Petrol Storage	Staines Service Station. Service Station 01784 463572	Staines Service Station, Chertsey Lane, Staines, Middlesex, TW18 3LS
PPC23(4) EP10	Sec 1.2 Petrol Storage	Shell Addlestone. Service Station 01932 839960	Shell Addlestone, Chertsey Road, Addlestone, Surrey, KT15 2ED
PPC24(3) EP	Sec 1.2 Petrol Storage	Shell Egham. Service Station 01784 430930	Shell Egham, 186/7 High Street, Egham, Surrey, TW20 9DX
PPC25(2)	Sec 1.2 Petrol Storage	Chertsey Service Station. Service Station 01932 562702	Chertsey Service Station, 102 Bridge Road, Chertsey, Surrey, KT16 7LR
PPC26(3)	Sec 1.2 Petrol Storage	Runnymede Service Station. Service Station 01784 485982	Runnymede Service Station, 38-45 The Avenue, Egham, Surrey, TW20 9AD
PPC28(3) EP	Sec 1.2 Petrol Storage	Egham Hill SF Connect. Service Station 01784 497589	Egham Hill SF Connect, 1 Egham Hill, Egham, Surrey, TW20 0ET
PPC30(2) EP	Sec 1.2 Petrol Storage	Sainsbury Supermarkets Limited. Service Station 01784 456644	Sainsbury Supermarkets Ltd, The causeway, Staines, Middlesex, TW18 3AG
PPC33(2) EP	Sec 1.2 Petrol Storage	Sainsbury Supermarkets Limited. Service Station 01932 566503	1 The Sainsbury Centre Heriot Road Chertsey Surrey KT16 9AQ
PPC36(2) EP	Sec 1.2 Petrol Storage	Tesco Filling Station. Service Station 01932 741407 if you have problems, contact Andy Berry at Tesco Andy.Berry@uk.tesco.com	Tesco Filling Station, 117 Station Road, Addlestone, Surrey, KT15 2AS
PPC37(1)	Sec 3.5 Mobile	Capital Demolition Limited. Mr Dennis Read	Capital Demolition Limited, Capital House, Woodham Park Road,

	Crusher	01932 346222	Woodham, Addlestone, Surrey, KT15 3TG
PPC40(1)	Sec 7 Dry Cleaners	Zekmur Bros Limited. Mr Kusdil 01932 847411	Zeki Dry Cleaner & Laundry, 83 Station Road, Addlestone, surrey, KT15 2AR
PPC41(3) EP	Sec 6.4 Respraying Road Vehicles	Chertsey Car Care Ltd. Mr Martin Morgan 01932 560690	Chertsey Car Care Ltd. Crystal Haven House, Hanworth Lane Trading Estate, Chertsey, Surrey, KT16 9JX
PPC44	Sec 7 Dry Cleaning	Lampton Cleaners Ltd T/A Harringtons. Michael Corby 01784 433439	9 Station Approach Virginia Water Surrey GU25 4DW
PPC46	Sec 7 Dry Cleaning	Saphire Dry Cleaners Mrs S Waters 01932 353735	15 The Broadway New Haw Addlestone Surrey KT15 3EU
PPC47	Sec 7 Dry Cleaning	Softly Clean Dry Cleaners T/A Softly Clean Mr A Cachra 01932 851900	1 High Street Addlestone Surrey KT15 1TL
PPC50	Sec 7 Dry Cleaning	Egham Dry Cleaners Mr B Tamraz 01784 477300	44 High Street Egham Surrey TW20 9DP
PPC51	Sec 7 Dry Cleaning	Johnson Dry Cleaners Mr Darryl Neville 02073521763 07949050662	Sainsbury's The Causeway, Staines, TW18 3AP
PPC52 EP	Sec 7 Dry Cleaning	Direct Dry Cleaning Mr Paul MaGill 01737 361666 07947 780807	Direct Dry Cleaning, Unit 2 Fordwater, Trading Estate, Ford Road, Chertsey, Surrey, KT16 8HG
PPC53 EP	Sec 3.5 Mobile Crusher	Cemex UK Materials Limited	Cemex UK Materials Limited, Cemex House, Coldharbour Lane, Thorpe, Egham, Surrey, TW20 8TD
PPC54 EP	Sec 3.5 Mobile Crusher	Cemex UK Materials Limited	Cemex UK Materials Limited, Cemex House, Coldharbour Lane, Thorpe, Egham, Surrey, TW20 8TD
PPC55 EP	Sec 3.5 Mobile Roadstone Coating	Cemex UK Materials Limited	Cemex UK Materials Limited, Cemex House, Coldharbour Lane, Thorpe, Egham, Surrey, TW20 8TD
PPC 56 EP	Sec 7 Dry Cleaning	Riva Dry Cleaners Mr Fiaz Ahmad (Manager) 01932 560555	3 Burwood Parade, Guildford Street, Chertsey, KT16 9AE
PPC57 EP	Sec 3.5 Mobile Batching Plant	Cemex UK Materials Limited	Cemex UK Materials Limited, Cemex House, Coldharbour Lane, Thorpe, Egham, Surrey, TW20 8TD
PPC58	Sec 3.5 Mobile Batching Plant	Cemex UK Materials Limited	Cemex UK Materials Limited, Cemex House, Coldharbour Lane, Thorpe, Egham, Surrey, TW20 8TD

EP			
PPC59 EP10	Sec 3.5 Mobile Crusher	Cemex UK Materials Limited	Cemex UK Materials Limited, Cemex House, Coldharbour Lane, Thorpe, Egham, Surrey, TW20 8TD
PPC60 EP10	Sec 3.5 Mobile Crusher	Cemex UK Materials Limited	Cemex UK Materials Limited, Cemex House, Coldharbour Lane, Thorpe, Egham, Surrey, TW20 8TD

Part A2 Facilities

None

Part A1 Facilities– Permitted and Regulated by the Environment Agency

Permit Number	Type of Activity	Operators Name	Permitted Address
AP3039SD	Sec 5.1 A(1)(a) And 5.1 A(1)(d) Incineration	The Veterinary Laboratories Agency.	The Weybridge Incineration Plant, Veterinary Laboratories Agency, Woodham Lane, New Haw, Addlestone, KT15 3NB
WP3635SJ	Sec 5.2A(1)(b) Disposal of waste in landfil	Cemex UK Materials Limited.	Cemex UK Materials Limited, Addlestone Quarry, Byfleet Road, Addlestone, Weybridge, Surrey, KT15 3LA
CP3334LF	Sec 5.2A(1)(b) Disposal of waste in landfil	Cemex UK Materials Limited	Cemex UK Materials Limited, Norlands Lane, Thorpe, Egham, Surrey, TW20 8SS
EPR/DP3090SF	Sec 5.3 Disposal of waste other than by incineration or landfill. (Sewage Sludge Treatment, less than 250,000tpa)	Thames Water Utilities Ltd, Chertsey Sewage Treatment Works	Thames Water Utilities Ltd, Chertsey Sewage Treatment Works, Lyne Lane, Lyne, Chertsey, KT16 0AR
EA/EPR/DP3691EF/A001 (EAWML 101006)	Permit application for the composting of green waste	Collier Environmental services Ltd, Trumps Farm, Kitsmead Lane, Longcross, Chertsey, Surrey, KT16 0EF	Collier Environmental services Ltd, Trumps Farm, Kitsmead Lane, Longcross, Chertsey, Surrey, KT16 0EF
EA/EPR/HP3132TV/A001 At application stage Oct 2010	CHP Sec 1.1, Part A(1) (b) (iii)	Thames Water Utilities Ltd, Chertsey Sewage Treatment Works	Thames Water Utilities Ltd, Chertsey Sewage Treatment Works, Lyne Lane, Lyne, Chertsey, KT16 0AR
EA/EPR/FP3293ET/V004 (EAWML 83061)	Permit for the Civic Amenity Site	Sita Surrey Ltd,	Sita Surrey Ltd, Lyne Lane CAS, Lyne Lane, Thorpe, KT16 0AP
EPR/HB3733R	Standard rules	Dennis Read, Capital House	Capital Demolition Limited, Capital

P/A001	environmental Permit 2010 No.12 (waste activity soil/aggregate)		House, Woodham Park Road, Woodham, Addlestone, Surrey, KT15 3TG
EPR/PP3599EZ /S003 Received 28 Nov 2012	Application for an Environmental Permit	Thorpe Park Operations Ltd	Thorpe Park, Staines Road, Chertsey, Surrey, KT16 8PN

Note: EP = Documentation updated to the Environmental Permitting Regulations.

Updated November 2012

Appendix C: AQMAs within Runnymede

Figure C 1 Boundaries of the M25 AQMA (declared in November 2001)

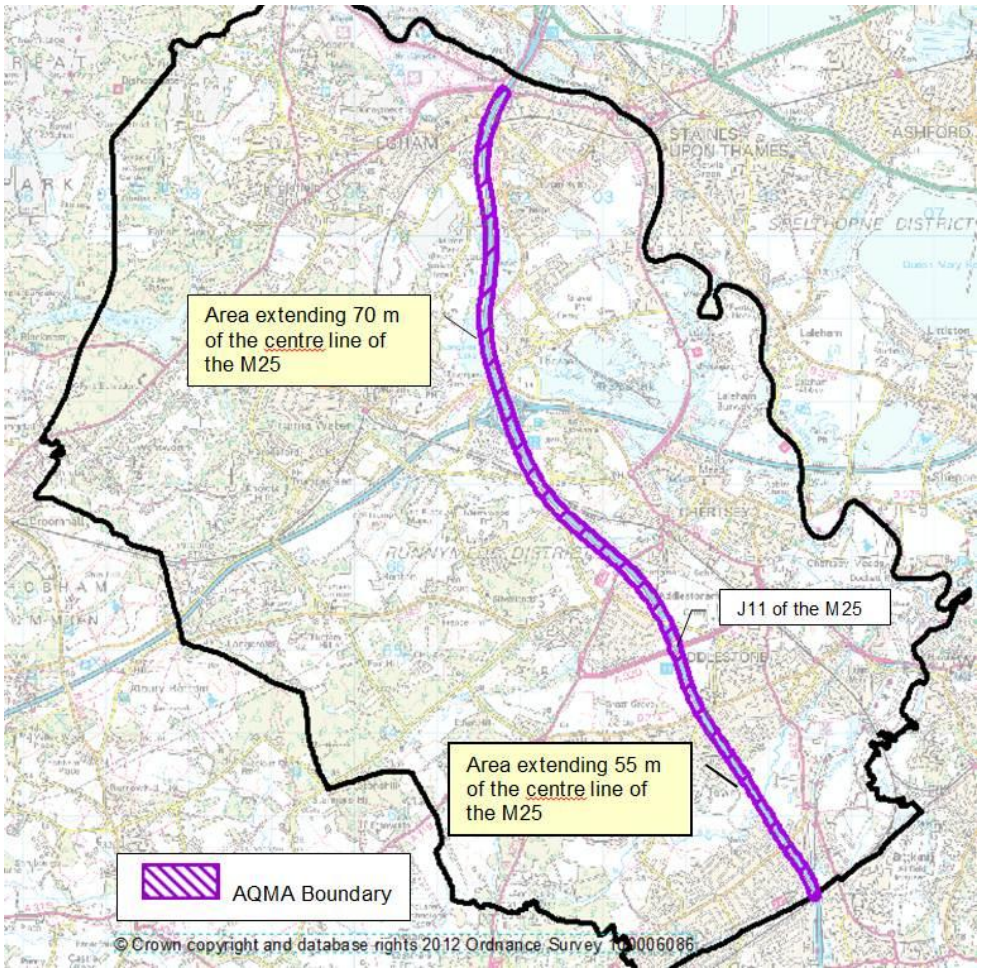

Figure C 2 Photos of M25 AQMA

Figure C 3 Boundaries of Addlestone AQMA (declared in July 2008)

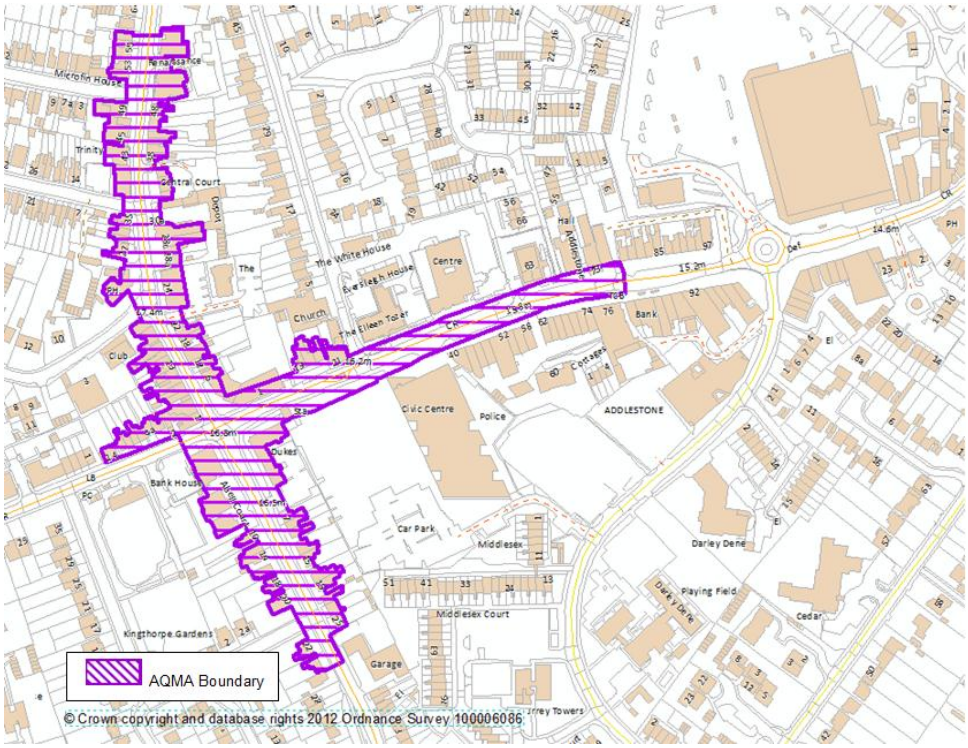

Figure C 4 Photos of Addlestone AQMA (Station Road)

Runnymede Borough Council – England