



THE ROYAL BOROUGH OF
KINGSTON
UPON THAMES

2013/4 Air Quality Progress Report for *Royal Borough of Kingston upon Thames*

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

November 2014

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Report Reference number	Kingston_2014_Progress_final

Executive Summary

The Council's Air Quality Progress report updates recent air quality monitoring in the Borough and considers other local developments that might affect local air quality. If major changes are noted the Council is required to undertake a Detailed Assessment. This is in accordance with Defra LAQM guidance.

The report also considers the actions that the Council and others are undertaking in pursuit of the objectives under Part IV of the Environment Act 1995.

The report identifies that:

From the monitoring and local developments there is no need to undertake a Detailed Assessment.

For nitrogen dioxide and particles (specifically PM₁₀) the Council has previously designated an Air Quality Management Area (AQMA) across the Borough. The emission sources for these pollutants are dominated by road transport in the Borough. The findings from this report indicate that the AQMA should be maintained.

In view of the findings the Council will undertake the following actions:

1. Undertake consultation with the statutory and other consultees as required.
2. Maintain and extend the existing monitoring programme.
3. Continue to update and amend its Air Quality Action Plan in pursuit of the AQS objectives.
4. Prepare for the submission of its next Air Quality report.

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1 Introduction

1.1 Description of Local Authority Area

The Royal Borough of Kingston upon Thames is the one of the smallest of the London Boroughs geographically (covering 38.66 square kilometres). It comprises four Neighbourhood areas: Kingston Town, Surbiton, Maldens and Coombe, and South of the Borough. The 2012 total population is around 160,400 (from the Office of National Statistics (ONS)) and this figure is expected to grow further over the next decade.

The main sources of atmospheric pollutants are from road transport; the Borough is positioned with access both in and out of London to the M25, making it a good location for many commuters, visitors and shoppers. The A3 is one of the major routes into the centre of London and it runs southwest to northeast across the Borough. The Royal Borough of Kingston upon Thames is responsible for inspecting and maintaining 326km of the Borough's roads, less than 30km of which are main distributor (A) roads.

There are relatively few industrial installations in the Borough. Other sources within the Borough include boilers within commercial and domestic buildings. Air quality is also influenced by pollutants outside of the Borough boundaries, which contribute to background concentrations.

1.2 Purpose of Progress Report

This report fulfils the requirements of the Local Air Quality Management (LAQM) 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.

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

They are not intended to be as detailed as Updating and Screening Assessment Reports, or to require as much effort. However, if the Progress Report identifies the risk of exceedence of an Air Quality Objective, the Local Authority (LA) should undertake a Detailed Assessment immediately, and not wait until the next round of Review and Assessment.

1.3 Air Quality Objectives

The air quality objectives applicable to 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 $\mu\text{g m}^{-3}$ (milligrammes per cubic metre, mg m^{-3} for carbon monoxide) with the number of exceedences in each year that are permitted (where applicable).

Note – of main interest for this report are the air quality objectives for nitrogen dioxide and PM_{10} . For all other pollutants the objectives are met.

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 $\mu\text{g m}^{-3}$	Running annual mean	31.12.2003
	5.00 $\mu\text{g m}^{-3}$	Annual mean	31.12.2010
1,3-Butadiene	2.25 $\mu\text{g m}^{-3}$	Running annual mean	31.12.2003
Carbon monoxide	10 mg m^{-3}	Running 8-hour mean	31.12.2003
Lead	0.50 $\mu\text{g m}^{-3}$	Annual mean	31.12.2004
	0.25 $\mu\text{g m}^{-3}$	Annual mean	31.12.2008
Nitrogen dioxide	200 $\mu\text{g m}^{-3}$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu\text{g m}^{-3}$	Annual mean	31.12.2005
Particulate Matter (PM ₁₀) (gravimetric)	50 $\mu\text{g m}^{-3}$, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 $\mu\text{g m}^{-3}$	Annual mean	31.12.2004
Sulphur dioxide	350 $\mu\text{g m}^{-3}$, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu\text{g m}^{-3}$, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu\text{g m}^{-3}$, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

1.4 Summary of Previous Review and Assessments

The Royal Borough of Kingston upon Thames has previously completed all earlier stages of air quality review and assessment as required under the LAQM regime. As part of its earlier duties the Council completed a Detailed Assessment for nitrogen dioxide (NO₂) and particles (PM₁₀). The aim of the Council's Detailed Assessment was to determine with reasonable certainty whether or not there is a likelihood of the AQ objectives being achieved. The assumptions in the Detailed Assessment were therefore in depth and the data used were quality assured to a high standard. This allowed the Council to have confidence in reaching a decision whether to declare an Air Quality Management Area or not. When carrying out its Detailed Assessment the Council applied its best estimates to all components used to produce the estimated future concentrations.

Following this, the Royal Borough of Kingston upon Thames were satisfied that there was sufficient evidence to show that there were areas in Kingston upon Thames that would not achieve the national air quality objectives in relation to annual mean nitrogen dioxide, annual mean fine particles (as PM₁₀) and daily mean fine particles (as PM₁₀).

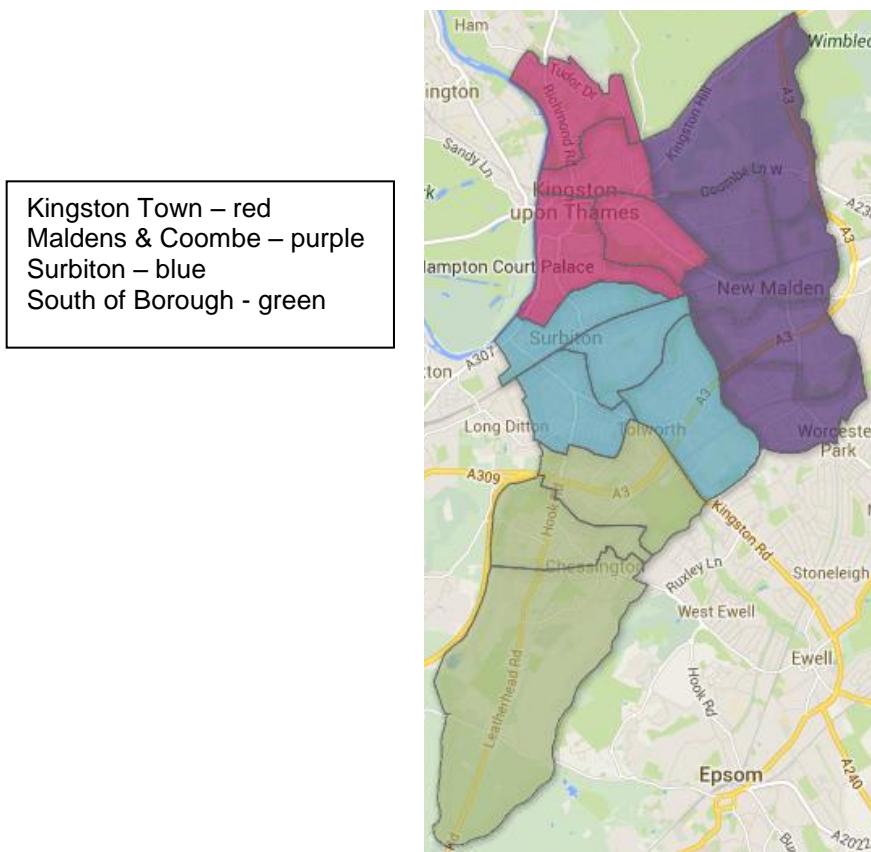
The Council declared the whole borough, by order, as an "Air Quality Management Area" in 2003, for both nitrogen dioxide and fine particles (as PM₁₀), as modelled predictions confirmed that the annual mean NO₂ and PM₁₀ objectives were exceeded. These predictions highlighted that the objectives were exceeded in areas close to busy roads and junctions throughout the Borough. Relevant public exposure was identified in these areas. A map of the Borough (and AQMA) in the context of Greater London is shown in Figure 1.1 below, with neighbourhood areas in Figure 1.2.

The Council's subsequent Updating and Screening Assessments were also completed and the findings from these were in accordance with those of the earlier Detailed Assessment.

Figure 1.1 Royal Borough of Kingston upon Thames AQMA (in yellow)



Figure 1.2 Royal Borough of Kingston upon Thames neighbourhoods



2 New Monitoring Data

2.1 Summary of Monitoring Undertaken

2.1.1 Automatic Monitoring Sites

No automatic monitoring was undertaken in the Council's area over the period of this Progress Report (2012 and 2013) and hence no results are reported.

The Council is currently installing two new continuous air quality monitoring sites, measuring NO₂ and PM₁₀. These are due to come into operation during this year (2014) for a period of 12 months. The sites are located in Kingston Town (close to the junction of Sopwith Way and Kingsgate Road) and in Surbiton (near the A3 in Tolworth). The results for these sites will be provided in subsequent Council reports.

The new sites are intended to be representative of relevant exposure and they will be part of the London Air Quality Network. As a result the standards of QA/QC will be similar to those of the government's AURN sites. Regular calibrations will be carried out, with subsequent data ratification undertaken by the ERG at King's College London. In all cases the data will be fully ratified unless reported otherwise. Once installed further details of the sites will be found at www.londonair.org.uk.

2.1.2 Non-Automatic Monitoring Sites

The Council undertook NO₂ monitoring through the use of diffusion tubes and Table 2.1 includes a list of the monitored locations in the Borough. It is important to note that there were changes in the locations of several of the sites both between the years reported and also when compared to the previous year's surveys. These changes were to investigate new areas not previously monitored.

In total 40 locations throughout the Borough were deployed for each year reported. The diffusion tubes were fixed to lampposts along both busy and quiet residential roads across the four neighbourhoods in the Borough. The sampling heights were mostly 2-3m above ground level. The diffusion tubes used were supplied by and analysed by Gradko International using a preparation method of 20% TEA in water.

For 2012, six sites were changed from the locations reported in the most recent Updating and Screening Assessment. These were mostly in the South of Borough neighbourhood as indicated in Table 2.1. Further changes were in 2013. These included changes within all four neighbourhoods as follows: Kingston – 4 sites changed; Malden and Coombes – 3 sites; South of the Borough - 3 sites; and Surbiton – 4 sites. These changes are also shown in Table 2.1. Many of the changes were as a result of residents and others concern in their areas.

Gradko participates in the Health and Safety Laboratory's (HSL) Workplace Analysis Scheme for Proficiency (WASP) programme for diffusion tubes, which provides a Quality Assurance / Quality Control (QA/QC). The scheme is an important QA/QC exercise for laboratories supplying diffusion tubes to local authorities for use in the context of Local Air Quality Management (LAQM). Between January 2012 and December 2013, Gradko achieved a satisfactory Performance Criteria Score in the laboratory performance testing rounds 116 - 123. The precision results were also good for this period.

A major disadvantage of undertaking monitoring using diffusion tubes is that the method is less precise and accurate than continuous monitoring. The recommended

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methods to reduce errors include the use of good QA/QC practices and bias adjustment factors that are derived from co-location studies between continuous analysers and diffusion tubes.

The bias adjustment factors are specific to each year, analysing laboratory, method of analysis and location. The factors are therefore also limited to the data supplied. The Review and Assessment website advises that “in many cases, using an overall correction factor derived from as many co-location studies as possible will provide the ‘best estimate’ of the ‘true’ annual mean concentration, it is important to recognise that there will still be uncertainty associated with this bias adjusted annual mean. One analysis has shown that the uncertainty for tubes bias adjusted in this way is $\pm 20\%$ (at 95% confidence level). This compares with a typical value of $\pm 10\%$ for chemiluminescence monitors subject to appropriate QA/QC procedures.”

The bias correction factor was obtained using the most recent default factor spreadsheet from Defra’s helpdesk. These default factors are based on statistical analyses of reported data provided by other local authorities.

Year	Bias Default factor
2012	0.96 (35 studies)
2013	0.95 (24 studies)

This indicates a reasonable agreement between the sets of measurements and that the diffusion tube results for the Borough slightly overestimate continuously monitored concentrations.

Table 2.1 Details of Non- Automatic Monitoring Sites

Site Name	Site Type	Easting	Northing	Years monitored			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?
				2011	2012	2013			
17-19 Penrhyn Road	Roadside	518078	168679	Y	Y	Y	Y (3)	2	Y
55 Queens Road nr Kings Road	Roadside	519233	170390	Y	Y	N	Y (7)	2	Y
41 Kingston Hill	Kerbside	519348	169921	Y	Y	Y	Y (3)	1	Y
Fire Station, Richmond Road	Roadside	517814	171445	Y	Y	N	N (12)	1	N
95 Richmond Road	Roadside	518177	170067	Y	Y	Y	Y (4)	1.5	Y
14-16 Cromwell Road	Roadside	518451	169490	Y	Y	Y	Y (2)	2	Y
Milfield Flats, Fairfield South	Roadside	518506	168987	Y	Y	N	Y (12)	1.5	Y
49 Latchmere Road	Kerbside	518403	170572	Y	Y	N	Y (5)	2	Y
Guildhall Complex	Roadside	517873	169084	Y	Y	Y	N (15)	1	N
40 Fife Road	Kerbside	518162	169446	Y	Y	Y	Y (4)	1	Y
Richmond Rd Nr Horsley Drive	Kerbside	517826	171303	N	N	Y	Y (1)	8	Y
Cambridge Rd/ Back of Pyramid Ct./Hawks Rd	Roadside	519036	169234	N	N	Y	Y (1.5)	1.5	Y
55 Cambridge Rd/Gloucester Rd	Kerbside	519406	169088	N	N	Y	Y (1)	8	Y
Queen Elizabeth Rd/London Rd	Roadside	518534	169379	N	N	Y	Y (2)	4	Y
Kingston Road	Roadside	520436	168451	Y	Y	Y	Y (15)	2	Y
248 Malden Road	Kerbside	521659	167418	Y	Y	Y	Y (12)	0.5	Y
96 Burlington Road	Kerbside	521874	168107	Y	Y	Y	Y (4)	2	Y
Beverley Way Coombe Lane West	Roadside	521740	169730	Y	Y	N	Y (>5)	>5	Y
38 Coombe Lane West	Roadside	520040	169636	Y	Y	Y	Y (3)	2	Y
240 Kingston Vale	Kerbside	521110	172036	Y	Y	Y	Y (8)	0.5	Y
6 Traps lane	Kerbside	521174	169306	Y	Y	N	Y (6)	0.5	Y

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113-115 Clarence Avenue	Roadside	520709	169266	Y	Y	Y	Y (4)	1.5	Y
Warren Oaks Warren Road	Kerbside	520250	170760	Y	Y	N	Y (>5)	>5	Y
325 South Lane	Kerbside	521260	166886	Y	Y	Y	Y (7)	2.5	Y
51 Elm Rd	Kerbside	518653	169945	N	N	Y	Y (1)	7	Y
66 New Malden High St/ HSBC	Roadside	521443	168374	N	N	Y	Y (7)	0.5	N
Coombe Hill School	Roadside	520601	169861	N	N	Y	Y (2.5)	10	Y
96 Leatherhead Road	Roadside	517747	163614	Y	Y	N	Y (8)	0.5	Y
Hunters Rd/Hook Road South*	Roadside	518096	165093	N	Y	Y	Y (4)	2	Y
56 Fullers Way North	Roadside	518511	165116	Y	Y	N	Y (10)	0.5	Y
8 Jubilee Way	Roadside	519730	165230	Y	Y	N	Y (>5)	>5	Y
Hook Rise North*	Roadside	519659	165784	N	Y	Y	Y (3)	1.5	Y
353 Leatherhead Rd Malden Rushett*	Roadside	517254	161566	N	Y	Y	Y (2)	2.5	Y
148 Leatherhead Road*	Roadside	517695	163475	N	Y	Y	Y (2)	3	Y
Hook Centre, Hook Road*	Kerbside	518009	164564	N	Y	Y	Y (0.5)	4	Y
13 Garrison Lane / Reynolds Ave	Kerbside	518215	163427	Y	Y	Y	Y (5)	0.5	Y
28 Bridge Road	Roadside	518077	164023	Y	N	N	Y (4)	2	Y
Hook Road South	Roadside	518118	165181	Y	N	N	Y (6)	1	Y
18 Cox Lane	Roadside	518619	164697	Y	N	N	Y (5)	0.5	Y
19 Gilders Road	Kerbside	519024	163918	Y	N	N	Y (8)	0.5	Y
85 Stormont Way	Kerbside	517358	164299	Y	N	N	Y (7)	0.5	Y
12 Roebuck Road / Chantry Road	Kerbside	519027	164294	Y	N	N	Y (5)	0.5	Y
297 Hook Rd, St Paul's Primary School	Roadside	518030	164770	N	N	Y	Y (2.5)	4	Y
Kingston Rd near Station	Kerbside	519870	165649	N	N	Y	Y (0.5)	14	Y
Hook Rise North/ 136 T'wth B'way/ Service Rd	Roadside	519710	165874	N	N	Y	Y (3)	5	Y
Sundial Ct. Roundabout, Tolworth*	Roadside	519806	165832	N	Y	Y	Y (1.5)	3	Y
11 Kingston Road	Kerbside	521314	168061	Y	Y	N	Y (7)	1.5	Y
Ewell Road nr jct Elgar Avenue	Roadside	519415	166237	Y	Y	Y	Y (3)	3	Y
88 Brighton Road	Kerbside	517583	167279	Y	Y	Y	Y (4)	0.5	Y
The Surbiton Flyer Victoria Road	Roadside	518018	167320	Y	Y	Y	Y (2)	0.5	Y
52 Portsmouth Road	Roadside	517578	167708	Y	Y	Y	Y (5)	2	Y
101 Chiltern Drive	Kerbside	519650	167852	Y	Y	N	Y (5)	0.5	Y

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53 Elgar Avenue	Kerbside	519659	166534	Y	Y	Y	Y (6)	0.5	Y
199 Douglas Road	Roadside	518730	165791	Y	Y	Y	Y (5)	0.5	Y
10 Woodlands Road	Roadside	517831	166276	Y	Y	N	Y (8)	0.5	Y
78 Knollmead	Roadside	520561	166197	Y	Y	N	Y (10)	0.5	Y
A240 Kingston Rd/Old Kingston Rd	Kerbside	520011	165513	N	N	Y	Y (0.5)	30	Y
Upper Brighton Rd/Langley Rd	Roadside	518326	166693	N	N	Y	Y (2.5)	15	Y
St. Mark's Hill/Ewell Rd	Roadside	518413	167596	N	N	Y	Y (2.5)	5	Y
Victoria Rd/Brighton Rd	Kerbside	517779	167150	N	N	Y	Y (1)	3	Y

2.2 Comparison of Monitoring Results with Air Quality Objectives

The monitoring reported below represents the non-continuous results for recent years' monitoring up to the end of 2013. The results are reported in accordance with the requirements of TG09.

2.2.1 Diffusion Tube Monitoring Data of NO₂

Table 2.2 provides the nitrogen dioxide monitoring results for 2012 and Table 2.3 provides the results for 2013. The results shown are the bias adjusted and annualised values for each of the diffusion tube sites. The results are compared to the 40 µg m⁻³ annual mean NO₂ objective and the annual mean concentrations that exceeded the objective are highlighted in bold. The results that exceeded 60 µg m⁻³ are also underlined to indicate that the hourly objective is potentially exceeded. Those sites that exceeded the 40 µg m⁻³ annual mean NO₂ objective are further corrected for distance to establish an estimated concentration at the nearest façade in accordance with the relevant exposure criteria as described in the TG09 guidance.

The measurement sites include areas described as roadside/ kerbside locations; these are close to both some of the busy major roads, as well as quieter minor roads across the Borough. The sites in the quietest residential areas measured the lowest concentrations and hence these sites are considered representative of background concentrations.

Data capture for 2012 at the sites was mainly good, representing 80% of the year on average. Three of the forty sites achieved only 67% data capture, whilst the rest achieved over 75%. The monitoring did not include any results for November and December 2012; this was because of staff shortages.

Data capture for 2013 at the sites was also mainly good, representing almost 82% of the year on average. One site achieved only 67% data capture, whilst the rest

achieved 75% or over. The monitoring did not include results any for January and February 2013 also due to staff shortages (as indicated for 2012 above).

In view of the slightly reduced data capture, the results for all of the sites were annualised using factors derived from nearby LAQN background sites. For 2012 the factors ranged from 1.013 to 1.055, with the majority at 1.048, indicating a small adjustment only. For 2013 the adjustment was greater and the factors ranged from 1.06 to 1.19, with the majority at 1.098. The higher figure for 2013 indicates the greater pollutant effect of the winter period at the start of 2013, compared to that at the end of 2012.

In 2012, the only neighbourhood where all sites met the $40 \mu\text{g m}^{-3}$ annual mean objective was the Maldens and Coombe neighbourhood. Two sites at Combe Lane West and Burlington Road approached the annual mean objective, with concentrations over $38 \mu\text{g m}^{-3}$, whilst two other sites had concentrations that were close to background levels in Warren Road and South Lane. The average annual mean concentration for the Maldens and Coombe neighbourhood was just over $33 \mu\text{g m}^{-3}$.

The South of Borough neighbourhood had five new monitoring sites, three of these exceeded the annual mean objective; at Hook Road, Hook Rise North and Malden Rushett. The highest of these at Hook Road was just over $49 \mu\text{g m}^{-3}$. This site is located close to a junction with bus stops, on the busy dual section of Hook Road near Chessington. Two other new sites in the neighbourhood also approached the objective, along with one original site; these recorded concentrations greater than $38 \mu\text{g m}^{-3}$. The average annual mean concentration for all the South of Borough neighbourhood sites was just over $38 \mu\text{g m}^{-3}$.

There was one new site at Sundial Court, Tolworth (in the South of Borough, close to the Surbiton neighbourhood). This has the highest concentration at $60.2 \mu\text{g m}^{-3}$ and thus it may also have exceeded the daily mean objective. The site is located close to the roundabout at the busy Tolworth interchange. Two other sites measured around the $50 \mu\text{g m}^{-3}$ level on Elgar Avenue and in the centre of Surbiton (close to the station). Four sites in the neighbourhood recorded less than $30 \mu\text{g m}^{-3}$ (including one

site in Woodlands Road recording $21 \mu\text{g m}^{-3}$; this was the lowest 2012 measurement in the Borough).

The Kingston Town neighbourhood had the highest concentrations in the Borough. The average annual mean concentration was just over $35 \mu\text{g m}^{-3}$; this excluded the site with (by far) the highest measured concentration in the Borough and included two sites with concentrations close to background levels of around $26 \mu\text{g m}^{-3}$. The site with the highest measured concentration was located close to the front façade of the houses in Cromwell Road. This site measured an extremely high concentration, with a distance correction to façade, of almost $90 \mu\text{g m}^{-3}$. This site measurement was more than double the government's annual mean objective of $40 \mu\text{g m}^{-3}$. It also indicates that the government's hourly objective, i.e. a one hour mean of $200 \mu\text{g m}^{-3}$ that does not arise more than 18 times over a calendar year, may have been exceeded. (Note – this can only be fully determined if continuous monitoring is undertaken at the site). The site is close to the Kingston bus terminal and is on the one way system in Kingston Town.

There were further site changes in 2013 in all four of the neighbourhoods. In the South of the Borough neighbourhood, all bar the site in Garrison Road exceeded the annual mean objective. These included three new sites. Four of the sites that exceeded were close to the objective, around $42 \mu\text{g m}^{-3}$. Two other sites had high concentrations that exceeded $60 \mu\text{g m}^{-3}$; indicating that the hourly objective may also have been exceeded. The average annual mean concentration for the South of the Borough neighbourhood was just over $48 \mu\text{g m}^{-3}$. This is based on the measurements from sites close to roads and corrected for distance to locations where there is relevant exposure.

The Maldens and Coombe neighbourhood monitoring sites had three changes of location. One of these measured concentrations that exceeded the annual mean objective in New Malden High Street. The existing site in Burlington Road also exceeded the objective. Both of these sites were located in local shopping areas where there is residential exposure. Two other sites were around $38 \mu\text{g m}^{-3}$ and thus approached the objective. The remaining sites recorded concentrations of around $33 \mu\text{g m}^{-3}$ and thus met the objective.

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In 2013 there were four new site changes in the Surbiton neighbourhood. Two of these recorded concentrations that met the objective and two others exceeded the objective. These were at St. Marks Hill and Victoria Road. These roads run into one another and similarly the existing site also in Victoria Road easily exceeded the objective, as did the existing site in Ewell Road. In total four of the ten sites exceeded the objective, plus one that approached the objective.

There were four site changes in the Kingston Town neighbourhood too. One of these met the annual mean objective, whereas the other three exceeded. In total seven of the sites in this neighbourhood exceeded the objective, including the one, at Cromwell Road (which exceeded $100 \mu\text{g m}^{-3}$). This site continues to represent a major challenge to the Council, as it has amongst the highest measured NO_2 concentrations in London.

The average concentration for the other six sites in the Kingston Town neighbourhood that exceeded was $46 \mu\text{g m}^{-3}$. Another site also approached the objective, with the remaining two sites recording concentrations of around $30 \mu\text{g m}^{-3}$; thus these two sites met the objective.

Averaged concentrations for those sites (in Table 2.1) which operated over the three year period (2011 to 2013 inclusive) are shown for each of the neighbourhoods in Table 2.5 below and Figure 2.1. The results are bias and distance corrected (see Tables 2.2, 2.3 and Table 2.2 from Updating and Screening Assessment 2012). These averages represent for Kingston - the mean for 5 sites; for Malden & Coombes - 7 sites; for South of the Borough -1 site and for Surbiton - 6 sites respectively. This variation in the number of sites reflects the changes in location over time at each neighbourhood; note this was most prevalent in the South of Borough. The Kingston Town neighbourhood sites also include the Cromwell Road site, which, as already mentioned above, measured extremely high concentrations.

These averaged results can only provide indicative results, due to the less accurate nature of diffusion tube monitoring and the very short period shown. The results show that in general concentrations over this short period of time have remained mainly constant, albeit with slight increases over this short period in three of the

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neighbourhoods and a slight decrease in the other one. These changes are expected mainly as the result of inter annual variations, which most typically are related to meteorology between years. Other variations, for example, due to traffic emissions, etc. may have arisen but these require further investigation which are beyond the scope of this report.

Table 2.2 Results of NO₂ Diffusion Tubes 2012

Site ID	Location	Site Type	Data Capture 2012 (Number of Months)	Data has been annualised (Y/N)	Confirm if data has been distance corrected (Y/N)	Annual mean concentration (Bias Adjustment factor = 0.96)
						2012 ($\mu\text{g m}^{-3}$)
17-19 Penrhyn Road	Kingston Town	R	10	Y	Y	41.6
55 Queens Road nr Kings Road	Kingston Town	R	10	Y	N	32.1
41Kingston Hill	Kingston Town	K	8	Y	Y	47.6
Fire Station, Richmond Road	Kingston Town	R	10	Y	N	38.1
95 Richmond Road	Kingston Town	R	10	Y	N	37.2
14-16 Cromwell Road	Kingston Town	R	9	Y	Y	89.3
Milfield Flats, Fairfield South	Kingston Town	R	10	Y	N	31.1
49 Latchmere Road	Kingston Town	K	10	Y	N	26.9
Guildhall Complex	Kingston Town	R	10	Y	N	26.1
40 Fife Road	Kingston Town	K	10	Y	N	34.9
Kingston Road	Maldens & Coombe	R	10	Y	N	35.5
248 Malden Road	Maldens & Coombe	K	9	Y	Y	34.4
96 Burlington Road	Maldens & Coombe	K	10	Y	Y	38.9
Beverley Way Coombe Lane West	Maldens & Coombe	R	10	Y	N	35.7
38 Coombe Lane West	Maldens & Coombe	R	10	Y	N	38.7
240 Kingston Vale	Maldens & Coombe	K	10	Y	Y	34.5
6 Traps lane	Maldens & Coombe	K	9	Y	N	34.1
113-115 Clarence Avenue	Maldens & Coombe	R	10	Y	N	32.8
Warren Oaks Warren Road	Maldens & Coombe	K	10	Y	N	24.2
325 South Lane	Maldens & Coombe	K	10	Y	N	27.5
96 Leatherhead Road	South of the Borough	R	10	Y	N	38.6
Hunter Rd/Hook Road South	South of the Borough	R	10	Y	Y	38.7
56 Fullers Way North	South of the Borough	R	9	Y	N	36.0

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Site ID	Location	Site Type	Data Capture 2012 (Number of Months)	Data has been annualised (Y/N)	Confirm if data has been distance corrected (Y/N)	Annual mean concentration (Bias Adjustment factor = 0.96)
						2012 ($\mu\text{g m}^{-3}$)
8 Jubilee Way	South of the Borough	R	10	Y	N	28.5
Hook Rise North	South of the Borough	R	9	Y	Y	41.2
353 Malden Rushett	South of the Borough	R	8	Y	Y	42.0
148 Leatherhead Road	South of the Borough	R	9	Y	N	39.9
Hook Centre, Hook Road	South of the Borough	K	9	Y	Y	49.3
13 Garrison Lane / Reynolds Ave	South of the Borough	K	9	Y	N	31.0
11 Kingston Road	Surbiton	K	10	Y	Y	35.6
Ewell Road nr jct Elgar Avenue	Surbiton	K	10	Y	Y	51.9
88 Brighton Road	Surbiton	K	10	Y	N	32.4
The Surbiton Flyer Victoria Road	Surbiton	R	10	Y	Y	48.0
52 Portsmouth Road	Surbiton	R	10	Y	N	35.4
101 Chiltern Drive	Surbiton	K	10	Y	N	23.3
53 Elgar Avenue	Surbiton	K	9	Y	N	32.8
199 Douglas Road	Surbiton	R	10	Y	N	27.4
10 Woodlands Road	Surbiton	R	10	Y	N	21.6
78 Knollmead	Surbiton	R	10	Y	N	27.2
Sundial Ct. Roundabout, Tolworth	Surbiton	R	8	Y	Y	<u>60.2</u>

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

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

Table 2.3 Results of NO₂ Diffusion Tubes 2013

Site ID	Location	Site Type	Data Capture 2013 (Number of Months)	Data has been annualised (Y/N)	Confirm if data has been distance corrected (Y/N)	Annual mean concentration (Bias Adjustment factor = 0.95)
						2013 ($\mu\text{g m}^{-3}$)
Guildhall Complex	Kingston Town	R	10	Y	N	28.9
Richmond Rd Nr Horsley Drive	Kingston Town	R	10	Y	Y	33.6
Cambridge Rd/ Pyramid Ct./Hawks Rd	Kingston Town	K	8	Y	Y	47.5
Richmond Rd Nr Kings Rd	Kingston Town	R	10	Y	Y	42.5
40 Fife Road area	Kingston Town	R	10	Y	N	38.8
17-19 Penrhyn Rd (Nr County Hall)	Kingston Town	R	9	Y	Y	43.8
55 Cambridge Rd/Gloucester Rd	Kingston Town	R	10	Y	Y	44.3
41 Kingston Hill nr Wolverton Ave.	Kingston Town	K	10	Y	Y	52.6
Queen Elizabeth Rd/London Rd	Kingston Town	R	10	Y	Y	48.2
14-16 Cromwell Road	Kingston Town	R	9	Y	Y	118
325 South Lane south of A3	Malden and Coombe	K	10	Y	N	29.6
51 Elm Rd	Malden and Coombe	R	9	Y	N	30.8
113-115 Clarence Avenue	Malden and Coombe	R	10	Y	N	35.4
66 New Malden High St/ HSBC	Malden and Coombe	K	10	Y	Y	42.6
Kingston Rd by Carpet Right	Malden and Coombe	R	9	Y	Y	32
Coombe Hill School	Malden and Coombe	K	10	Y	Y	37.8
38 Coombe Lane West nr A3 Jcn	Malden and Coombe	K	9	Y	Y	38.5
248 Malden Road Near A3	Malden and Coombe	R	9	Y	Y	36.7
240 Kingston Vale nr Robin Hood Lane	Malden and Coombe	R	10	Y	Y	34.1
96 Burlington Road	Malden and Coombe	K	10	Y	Y	45
Garrison Lane/Reynolds Ave	South of the Borough	K	10	Y	N	30.8
297 Hook Rd, St Paul's Primary School	South of the Borough	R	10	Y	Y	40.5
353 Malden Rushett Crossroads	South of the Borough	R	10	Y	Y	49.3

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Site ID	Location	Site Type	Data Capture 2013 (Number of Months)	Data has been annualised (Y/N)	Confirm if data has been distance corrected (Y/N)	Annual mean concentration (Bias Adjustment factor = 0.95)
						2013 ($\mu\text{g m}^{-3}$)
Hook Rise North	South of the Borough	R	10	Y	Y	42.1
Hook Rd South/Hunters Rd	South of the Borough	R	10	Y	Y	41.7
Opp 148 Leatherhead Rd/Harrow Cl	South of the Borough	R	10	Y	Y	57.1
Hook Centre Hook Rd	South of the Borough	K	10	Y	Y	44.9
Kingston Rd near Station	South of the Borough	K	10	Y	Y	41.8
136 Tolworth B'way/ Service Rd	South of the Borough	R	10	Y	Y	<u>64.3</u>
Sundial Ct. Tolworth Roundabout	South of the Borough	K	10	Y	Y	<u>77.4</u>
A240 Kingston Rd/Old Kingston Rd	Surbiton	R	8	Y	Y	28.1
199 Douglas Rd/ Thornhill Rd	Surbiton	R	10	Y	N	29.8
53 Elgar Ave (mid way along)	Surbiton	R	10	Y	N	32.6
88 Brighton Road	Surbiton	R	10	Y	N	34.6
52 Portsmouth Road	Surbiton	R	10	Y	Y	38.8
Upper Brighton Rd/Langley Rd	Surbiton	K	10	Y	Y	36
Ewell Road jcn Elgar Ave	Surbiton	K	10	Y	Y	52.8
St. Mark's Hill/Ewell Rd	Surbiton	R	10	Y	Y	42.8
Victoria Rd/Brighton Rd	Surbiton	K	10	Y	Y	40.6
Victoria Rd nr Surbiton Station	Surbiton	K	10	Y	Y	49

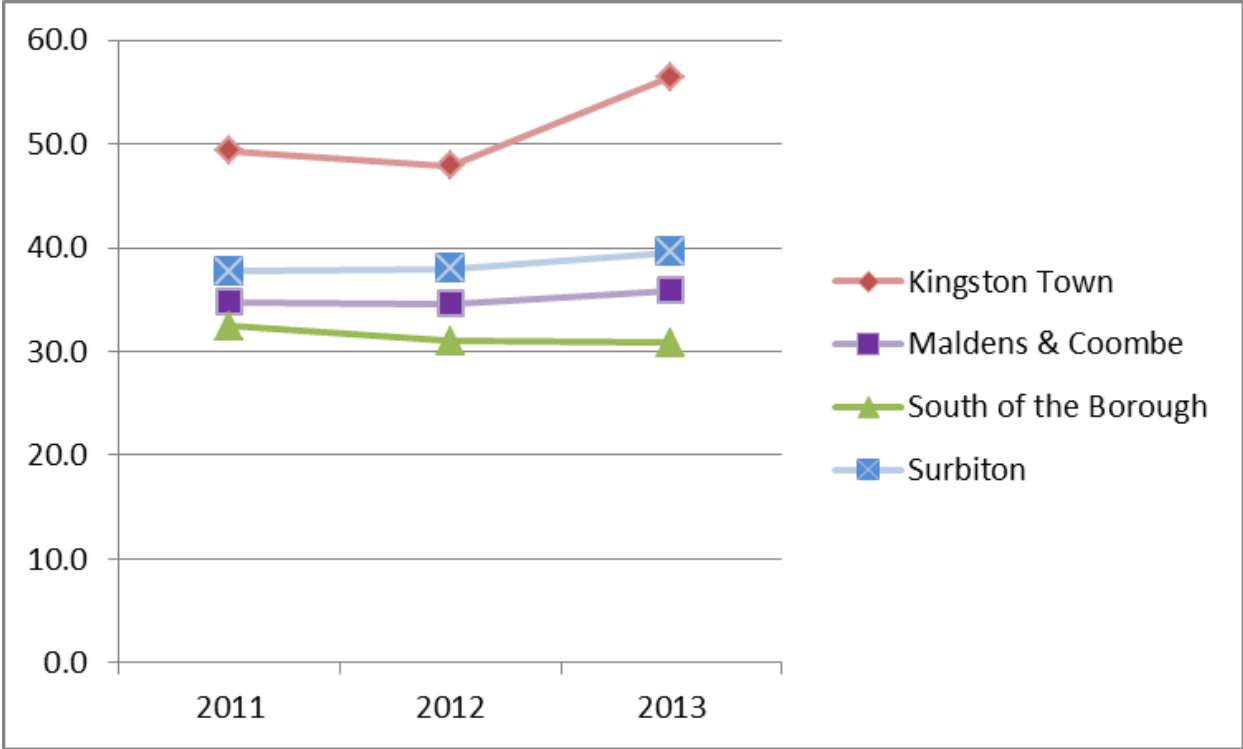
In bold, exceedence of the NO₂ annual mean AQS objective of 40 $\mu\text{g m}^{-3}$

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

Table 2.4 Results of NO₂ Diffusion Tubes (2011 to 2013) for the Kingston neighbourhoods

	2011	2012	2013
Kingston Town	49.3	47.9	56.4
Maldens & Coombe	34.7	34.6	35.9
South of the Borough	32.4	31.0	30.8
Surbiton	37.7	38.0	39.6

Figure 2.1 Trends in Annual Mean Nitrogen Dioxide Concentrations Measured at Diffusion Tube Monitoring Sites



2.2.2 Summary of Compliance with AQS Objectives

The Royal Borough of Kingston upon Thames has examined the results from monitoring in the Borough.

Concentrations within the AQMA still exceed the annual mean objective for nitrogen dioxide across the Borough and as a result the AQMA should remain.

3 New Local Developments

The Royal Borough of Kingston upon Thames confirms that there are no new or newly identified local developments which may have an impact on air quality within the Borough.

The Royal Borough of Kingston upon Thames confirms that all the following have been considered:

- **Road traffic sources**
- **Other transport sources**
- **Industrial sources**
- **Commercial and domestic sources**
- **New developments with fugitive or uncontrolled sources.**

4 Planning Applications

The Royal Borough of Kingston upon Thames Council's planning guidance consists of a series of documents that provide a positive approach to managing development by helping to assess planning applications and create a more vibrant, sustainable community to improve quality of life for all.

The introduction of the National Planning Policy Framework (NPPF) in 2012 represented a radical shake-up of the planning system including the introduction of the 'presumption in favour of sustainable development'. Policies contained within the NPPF are material considerations which must be taken into account in the preparation of local and neighbourhood plans, and in planning decisions.

The Core Strategy development plan document, adopted in April 2012, is a plan for the future of the Royal Borough of Kingston upon Thames. It sets out the key requirements and considerations that need to be made when applying for planning permission; including land use policies that form the legal basis for deciding planning applications, allocating land and encouraging investment. It guides future development in the Borough up to the year 2027 by defining where people live, work, shop, and are educated. It sets out the network of roads, schools and community centres and maps the conservation and enhancement of the environment.

The draft NPPF was published in July 2011 during the Core Strategy's Examination in Public and the Inspector that was appointed concluded that the Core Strategy in was sound (in November 2011).

Policies with regards to sustainable construction and climate change can be found in the Core Strategy. The key requirements for these can be found within:

- Policy DM1 - Sustainable Design and Construction
- Policy DM2 - Low Carbon Development
- Policy DM3 - Designing for Climate Change

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Development plan documents set out the planning policies the local authority adopts and are independently examined by planning inspectors. The Kingston Town Centre Area Action Plan sets the framework for future developments in the town centre, including shops, housing, transport, jobs and public spaces. It identifies key areas for new development and facilities and key areas for conservation and enhancement. It also highlights environment and transport improvements, to protect the town centre from inappropriate development and to preserve its character, historic environment and riverside.

Through the area action plan the Council commits to ensuring that Kingston Town Centre:

- remains a thriving metropolitan centre serving the needs of its catchment
- provides a sustainable and enhanced range of town centre services and facilities
- is a high quality environment, accessible to everyone
- provides a good quality of life, work and leisure for residents, workers, students and visitors.

Supplementary planning documents give more detail to the policies in the development plan documents. The Council has adopted the following supplementary planning documents:

- Access for All (adopted 2005)
- Shop Front and Shop Sign Design Guide (adopted 2005)
- Affordable Housing (adopted 2013)
- Sustainable Transport (adopted 2013)
- Residential Design (adopted 2013)

5 Air Quality Planning Policies

The Greater London Authority (GLA) published its Sustainable Design and Construction Supplementary Planning guidance (SPG) in April 2014. This SPG provides guidance on the implementation of London Plan and includes detailed guidance on the implementation of the “air quality neutral” provisions of the London Plan and minimum emission standards for combined heat and power (CHP) and biomass plant.

Supplementary planning guidance (SPG) on The Control of Dust and Emissions during Construction and Demolition was also produced in July 2014. This SPG provides guidance on the implementation of London Plan policy 7.14 - Improving Air Quality, as well as a range of policies that deal with environmental sustainability, health and quality of life.

To support the policies in the London Plan this SPG includes guidance on:

- The preparation of an Air Quality Statement for construction and demolition activities, including air quality (dust) risk assessments;
- The stages of development the Air Quality Statement is to cover, that is for demolition, earthwork, construction stages and trackout (vehicles leaving the site) stages of the works;
- The identification of the potential scale (large, medium, small) of dust emissions for each stage of work;
- The identification of the level of risk due to the scale of dust emissions on health, soiling (dirt) and the natural environment, depending on activities, their intensity and the sensitivity of receptors
- Best practice methods for controlling dust on-site and to prevent trackout

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- Recommendations for monitoring
- Early notification of new 2015 and 2020 standards for non-road mobile machinery

The Council will use this guidance with relevant development proposals in the Borough.

6 Local Transport Plans and Strategies

At a London wide level, the Mayor for London continues to implement an ambitious package of London wide measures including LEZ standards, retiring the oldest, most polluting taxis and cleaning up the bus fleet. Together these have reduced PM₁₀ emissions by an estimated 15%, and NOx emissions by 20%.

In February 2013 the Mayor also announced his intention to establish a new Ultra Low Emissions Zone, in central London only, from 2020 to further improve air quality in and close to central London.

The Mayor has also published changes to the Local Implementation Plan (LIP) guidance, which now highlights air quality as a key consideration in the assessment criteria (section 5.7.2 of TfL guidance (2013)).

This guidance encourages Boroughs to explore opportunities to work together to tackle sub-regional challenges and issues, thereby exploiting economies of scale, sharing of scarce resources and ensuring a joined-up approach to dealing with common issues such as air quality, encouraging cycling and tackling congestion.

This updated LIP is known as the Second Local Implementation Plan, or 'LIP2'. As well as implementing the Mayor's Transport Strategy, LIP2 is required to be consistent with the South London Sub-regional Transport Plan, and to reflect the Council's local priorities and objectives. LIP2 has also been developed as the transport strategy for the Borough.

The Royal Borough of Kingston upon Thames LIP2 was approved by the Mayor of London in October 2011 and adopted by the Council in December 2011. Achieving the vision and aspirations of LIP2 will be a challenge, but it is a challenge that the Council is eager to embrace. The Council will deliver LIP2 by working with partners to create a safe borough that is easily accessible by all transport modes; in particular the Council will work with partners to:

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- Enhance the network of safe attractive walking and cycling routes
- Maintain and enhance public transport services
- Manage and where possible reduce congestion on the Borough's roads
- Improve the accessibility of the public realm and transport network for disabled users
- Ensure the Borough continues to be one of the safest in London both in terms of accidents on the highway network and criminal offences
- Ensure residents, schools, workplaces, and other large organisations are well informed of sustainable travel options, and will have a strong understanding of the importance of using sustainable modes of transport
- Improve air quality in the Borough (particularly along busy roads), and reduce CO₂ emissions from transport.

7 Energy, Climate Change and Sustainability

The Royal Borough of Kingston upon Thames seeks to address energy reduction measures and CO₂ emission reductions through adherence to guidance provided within the London Plan and the Council's planning policies (see page 30).

Additionally it has adopted an energy strategy and undertaken many sustainability initiatives.

The Councils Energy Strategy:

"We are committed to protecting and enhancing the environment for us and future generations, with an objective in the Kingston Plan to tackle climate change.

Our Energy Strategy provides the framework to reduce the impact of climate change through energy management, behavioural change, energy efficiency measures and low-carbon energy generation. The strategy looks at the three functional roles of the Council with respect to carbon dioxide emissions reduction:

- as a community leader
- as a planning authority and
- as an asset holder and service provider

The strategy is delivered by us with our partners through a series of projects outlined in annual Energy Strategy Implementation Plans. Every year the priorities and projects are revised and the new implementation plan is adopted by the Place and Sustainability Committee."

Sustainability initiatives

Kingston Green Pledge - the Kingston Green Pledge reflects the Council's commitment to reducing environmental impact and provides guidance on how organisations and individuals can contribute. The Pledge recognises that lifestyles, attitudes and behaviour must change in order to achieve this goal. All organisations in the Borough are invited to sign up to the Pledge. These include:

- businesses of all sizes
- public bodies such as the police, NHS and education establishments
- third sector organisations such as churches, charities and community groups
- federations and associations

Keeping homes warm and getting help during cold weather - The Council offers a variety of support, information and advice programmes to residents to help improve the energy efficiency of their homes and make energy more affordable, including:

- Big London Energy Switch
- Electricity meter loan scheme
- Warm homes healthy people
- Energy efficiency measures for your home

Further tips and guidance can be found on the Council's website at http://www.kingston.gov.uk/info/200284/energy_climate_change_and_sustainability.

8 Implementation of Action Plans

The Council was required to implement an Air Quality Action Plan following its original designation of its AQMA under Part IV of the Environment Act 1995. The Action Plan produced in 2006 encompassed many Council and other measures to improve air quality in the Borough; the Action Plan was set out in pursuit of the government's air quality objectives. The Council has thus met and continues to meet its obligations.

Many of the original action plan measures however require updating and enhancing, both as a result of the completion of the original task, but also in view of the changes and ongoing air quality problems that have prevented a sufficient reduction in concentration in major cities in the UK and also Europe. This process is ongoing and the draft revised Action Plan will be produced by the end of 2014 with a view to adoption in early 2015.

Table 8.1 Action Plan Progress (greyed boxes indicate action completed)

No.	Action	Potential Air Quality Impact	Estimated Cost to RBK <i>Low <10k</i> <i>Medium 10 - 100k</i> <i>High >100k</i>	Lead Service Area	Main Partners	Target date	Progress in Last 12 Months
1	To provide information to developers, contractors and the public on the selection for planting of tree species that have a positive impact upon air quality. To use planning polices to promote such planting whenever situation and ground conditions are appropriate and adopt a proactive attitude toward air quality impact in the selection of Council tree planting schemes.	Minimal	Low	Planning and Development	Developers, Contractors and Public	December 05 followed by annual review	This is ongoing.
2	To continue to develop planning policies to protect air quality through planning process	Low	Low	Planning Policy	Developers	Ongoing/ annual review	This is ongoing. See Section 4 above
3	To support and promote the continuation of a London wide testing programme in collaboration with other authorities	Low	Medium	Environmental Health	London Councils, London Boroughs	Following completion of a review of the LW testing project no date is available for further partnership at this time.	Completed. Project funding now ceased.
4	To actively seek to raise public awareness of programme for roadside testing of vehicles and its implementation within the Borough if adopted London wide	Low	Medium	Environmental Health	London Councils, London Boroughs	To be progressed with action 3	As above

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No.	Action	Potential Air Quality Impact	Estimated Cost to RBK <i>Low <10k</i> <i>Medium 10 - 100k</i> <i>High >100k</i>	Lead Service Area	Main Partners	Target date	Progress in Last 12 Months
5	To support a London low emission zone if London as a whole decides to proceed with it	Moderate	High	Highways and Transportation	London Councils, GLA, TfL	Further consultation by GLA consultants in progress. No implementation date available.	Completed. LEZ implemented by GLA in 2008.
6	To continue to seek the use of alternatively fuelled vehicles and to minimise vehicle emissions across the fleet of vehicles being used	Moderate	Medium	Environment and Sustainability	Council Contractors	on-going/annual review	This is ongoing.
7	To use the most appropriate form of traffic calming and traffic management measures which have maximum road safety and air quality benefits with the least adverse effects on the quality of life of road users	Low	Medium	Highways and Transportation	Public consultation	on-going/annual review	This is ongoing.
8	To continue to enforce the provisions of the Environment Protection Act in relation to dust and smoke nuisance from building sites	Low	Low	Environmental Health	London Boroughs. GLA, Defra	on-going/annual review	This is ongoing.
9	To impose standard planning conditions where appropriate in relation to large scale demolition and construction sites to minimise particle and dust nuisance during and on completion of a development	Moderate	Low	Planning and Development	Environmental Health	on-going/annual review	This is ongoing.

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No.	Action	Potential Air Quality Impact	Estimated Cost to RBK <i>Low <10k</i> <i>Medium 10 - 100k</i> <i>High >100k</i>	Lead Service Area	Main Partners	Target date	Progress in Last 12 Months
10	To continue to regularly inspect or cause to be inspected all part B industrial processes and vapour recovery systems in petrol stations	Low	Low	Environmental Health	Environment Agency Defra	on-going/annual review	This is ongoing.
11	To continue to work in partnership with London Buses and Surrey County Council for better services and provide bus priority whenever possible on highways	Moderate	Medium	Environment and Sustainability	Surrey CC, London Buses	on-going/annual review	This is ongoing.
12	To implement the Cycling Strategy for the Royal Borough of Kingston	Low	High	Environment and Sustainability	London Cycling Network	on-going/annual review	Completed.
13	To approve and adopt the walking strategy by Spring 2006	Low	Low	Environment and Sustainability	TfL	Spring 2006	Completed.
14	To implement Walking Bus programmes where appropriate and to continue to participate in the Safer Routes to School project	low	Medium	Environment and Sustainability	TfL, local schools	on-going/annual review	Completed.
15	To continue to promote green travel plans with a wide range of organisations across the Borough	Moderate	Low	Environment and Sustainability	Kingston Travel Plan Network	on-going/annual review	This is ongoing.
16	To promote car sharing to businesses, schools and other organisations in Kingston upon Thames as part of their travel plans	Low	Low	Environment and Sustainability	Kingston Travel Plan Network, Sweltrac	on-going/annual review	This is ongoing.
17	To continue to promote healthy living in partnership with the Kingston Primary Trust through such initiatives such as Walking for Health	Low	Low	Environment and Sustainability	Kingston Primary Care Trust	on-going/annual review	Completed. Note Public Health transferred to local authorities since 2013.

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No.	Action	Potential Air Quality Impact	Estimated Cost to RBK <i>Low <10k</i> <i>Medium 10 - 100k</i> <i>High >100k</i>	Lead Service Area	Main Partners	Target date	Progress in Last 12 Months
18	Establish an officer working to compile the annual review and monitor Corporate implementation of the AQAP and performance against action targets.	N/A	Low	Environment and Sustainability	All RBK Directorates	Dec 2005 and quarterly thereafter	Completed.

9 Conclusions and Proposed Actions

9.1 Conclusions from New Monitoring Data

The monitoring results within the Borough confirmed that the annual mean nitrogen dioxide objective continues to be exceeded at roadside and nearby locations. The sites monitored are considered to represent relevant exposure. The modelled predictions for the Borough (presented in the 2012 Updating and Screening Assessment) also confirmed that the annual mean nitrogen dioxide objective continues to be exceeded at roadside and background locations. The results further indicate that the hourly objective is potentially exceeded however at some sites, most notably along Cromwell road, within Kingston Town.

The modelled predictions for the Borough for PM₁₀ monitoring (presented in the 2012 Updating and Screening Assessment – see Appendix A) indicated that the daily mean objective has been exceeded recently within the Borough at roadside locations. Other sites within the Borough have met the objectives. A separate analysis of trends in London (KCL, 2012) confirmed that concentrations do not appear to be reducing.

Based on these findings, the Council does not need to undertake a Detailed Assessment, as no new potential or actual exceedences at relevant locations were established. The Council previously designated the whole Borough as an Air Quality Management Area for NO₂ and PM₁₀.

9.2 Conclusions relating to New Local Developments

The Council has assessed local developments of road transport, other transport, industrial processes, commercial/domestic, fugitive emissions, plus residential and commercial sources. The findings for these have indicated that there are no new changes that require the Council to undertake a Detailed Assessment.

9.3 Other Conclusions

The measures outlined in the Council's Action Plan are either completed or continuing as ongoing commitments. The Council is also seeking to work with partners across London on air quality improvement projects and continuing to seek funding to optimise and focus further air quality actions.

9.4 Proposed Actions

This report follows the technical guidance (TG09) and fulfils this part of the continuing LAQM process.

The findings from following this methodology are that the Council has not identified a need to amend air quality boundaries and thus need not proceed to a Detailed Assessment. The findings also indicate that the AQMA should be maintained.

The Council will therefore undertake the following actions:

1. Undertake consultation on the findings arising from this report with the statutory and other consultees as required.
2. Maintain and extend the existing monitoring programme so far as reasonably practicable.
3. Continue with to update and amend its Air Quality Action Plan in pursuit of the AQS objectives.
4. Prepare for the submission of its next Air Quality report.

10 References

Defra, 2007. Air Quality Strategy for England, Scotland, Wales and Northern Ireland (Volume 1). Defra, London. Cm 7169.

Defra, 2009a. Local Air Quality Management, Technical guidance LAQM.TG09. Defra, London.

KCL, 2012. Air Quality in London GLA Health and Environment briefing note. KCL July 2012.

Royal Borough of Kingston upon Thames (2014). Local Air Quality Management – Updating and Screening Assessment 2012.

Transport for London (2013) Local Implementation Plan (LIP) 2014/15 to 2016/17 Guidance, TfL 2013

Appendices

Appendix A: Modelled predictions for Kingston upon Thames from 2012 Updating and Screening Assessment.

Figure 1 Annual mean NO₂ concentrations ($\mu\text{g m}^{-3}$) for 2015

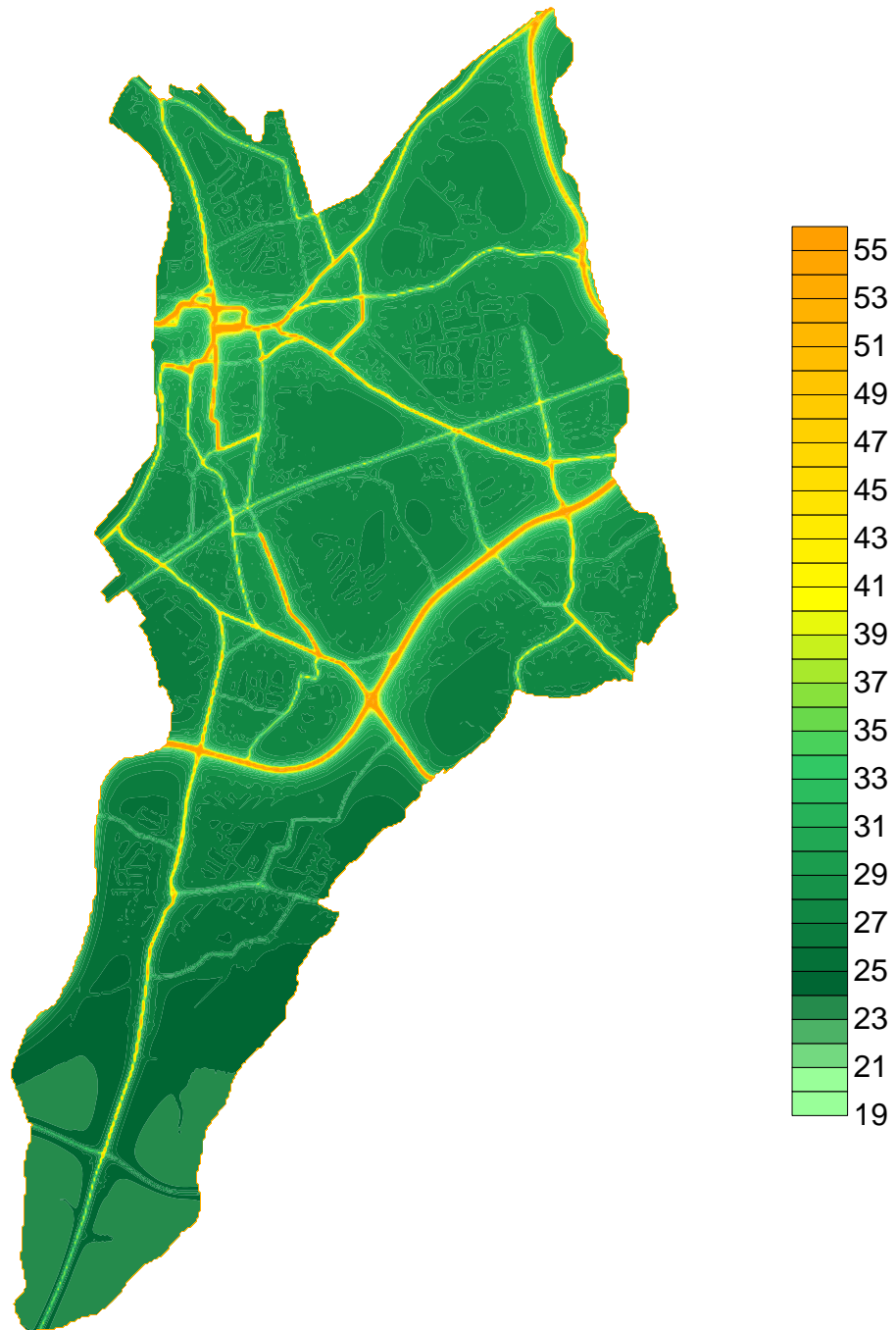
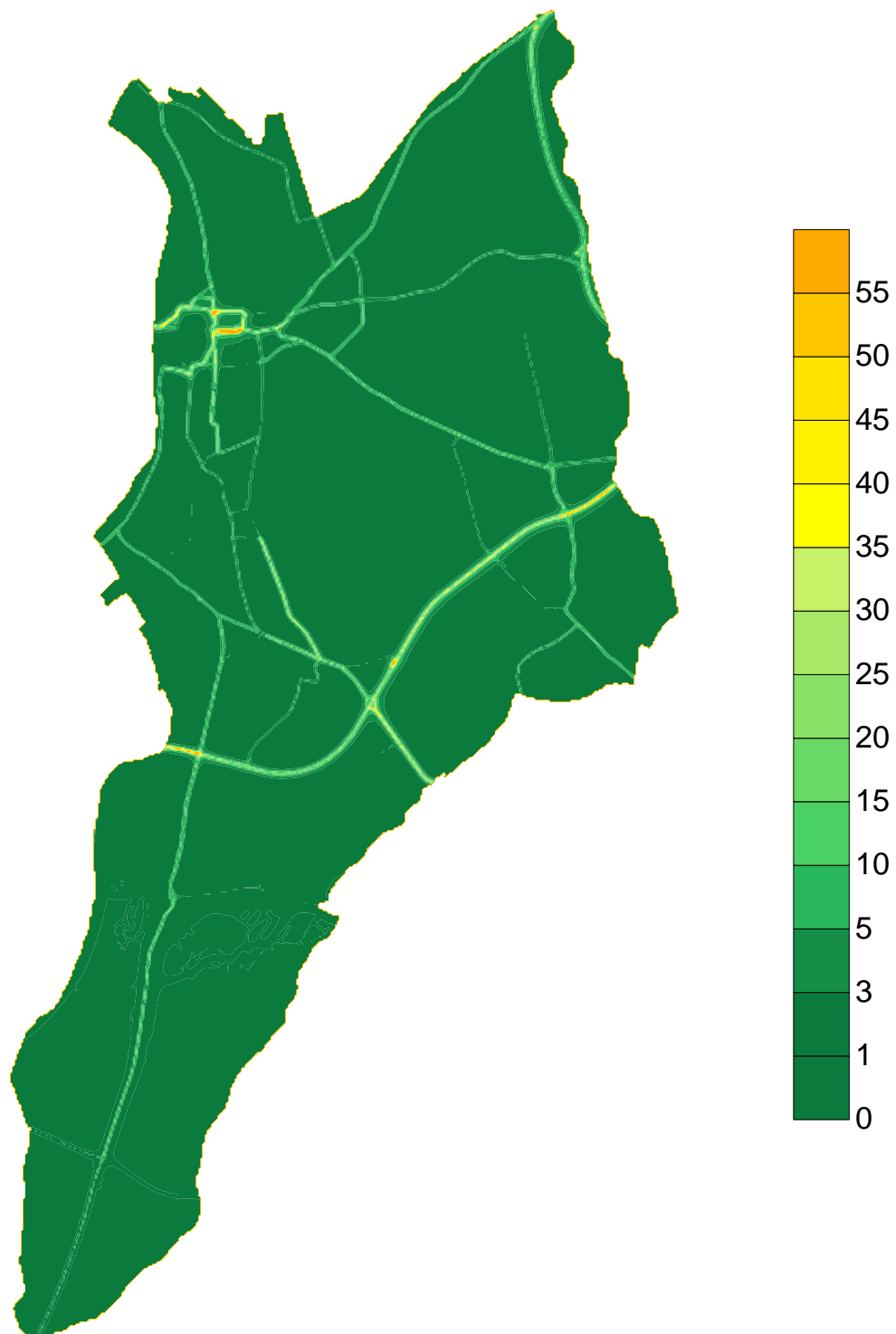


Figure 2 Daily mean PM₁₀ (number of days exceeding 50µg m⁻³) for 2015



Appendix B: Part B installations in Kingston

Table 1 List of Part B processes in the Council's area

Ref.	Name	Type of Process
PPC21	Wedd & White (Coachworks) Ltd, 11-14 Wellington Crescent, New Malden, Kingston Upon Thames, KT3 3NE	Respraying of road vehicles
PPC20	London Concrete Limited, Tolworth Station Road, Kingston Road, Tolworth KT5 9NU	Cement batching
PPC16	Braye Demolition & Plant Services Ltd, 36 North Parade, Chessington KT9 1QF	Mobile crushing and screening

Table 2 List of permitted petrol stations in the Council's area

Ref.	Name	Address
PPC01	BP Filling Station	Rushett Filling Station, 411 Leatherhead Road, Chessington, KT9 2NQ
PPC10	Chessington Service Station	248 Hook Road, Chessington, KT9 1PL
PPC08	Total Service Station	187-201 London Road, Kingston Upon Thames, KT2 6PQ
PPC02	Shell Kingstonian Petrol Station	164 Richmond Road, Kingston Upon Thames, KT2 5HD
PPC09	Murco Rose Cottage Service Station	159 Kingston Road, New Malden, KT3 3NS
PPC06	Tesco Express Tolworth	1a Tolworth Broadway, Tolworth, KT6 7DQ
PPC03	Shell Ace of Spades	211 Hook Rise North, Surbiton, KT6 5AT
PPC04	Shell Coombe Road	Coombe Road Service Station, Coombe Road, New Malden, KT3 4QN
PPC07	Total Service Station Surbiton	90-100 Brighton Road, Surbiton, KT6 5PP
PPC05	Esso	North Service Station, Robin Hood Way, Kingston Vale, SW20 0AB

Table 3 List of permitted dry cleaners in the Council's area

Ref	Name	Address
PPC34	Supreme Dry Cleaners	73 Crescent Road, Kingston Upon Thames, KT2 7RE
PPC46	Surbiton Dry Cleaners	21 Brighton Road, Surbiton, KT6 5LR
PPC33	Bourjois	22 Coombe Road, Kingston Upon Thames, KT2 7AG
PPC30	Rapido dry cleaners	66 Fife Road, Kingston Upon Thames, KT1 1SP
PPC43	Hudsons Dry Cleaners	2 Arcade Parade, Elm Road, Chessington, Kingston Upon Thames, KT9 1AB
PPC46	Lucy White Cleaners	173 Kings Road, Kingston Upon Thames, KT2 5JG
PPC39	Berrylands Dry Cleaners	82 Alexandra Drive, Surbiton, KT5 9AG
PPC32	Classic Cleaners	1 Park Road, Kingston Upon Thames, KT2 6BX
PPC41	Du Cane Dry Cleaners	4 Surbiton Parade, St Marks Hill, Surbiton, KT6 4RB
PPC36	Crystal Professional Dry Clean	103 High Street, New Malden, KT3 4BP
PPC44	First Impressions	2 Vale Parade, Kingston Vale, SW15 3PS
PPC35	Total Clean	115 Kingston Road, New Malden, KT3 3NX
PPC42	State Express	108 Tolworth Broadway, Tolworth, KT6 7HT
PPC40	Roberts	16-18 Claremont Road, Surbiton, KT6 4QU
PPC31	Chic Dry Cleaners	6 The Triangle, Kingston, KT1 3RU
PPC47	Concorde Dry Cleaners	115 High Street, New Malden, KT3 4BP
PPC37	Premier Dry Cleaners	400 Ewell Road, Surbiton, KT6 7HF
PPC48	Metro Dry Cleaning	122 High Street, New Malden KT3 4EY

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Appendix C: Environment Agency permitted waste installations in Kingston upon Thames

Company Name	Site Address
Thames Water Utilities Limited	Hogsmill Sewage Treatment Works, Lower Marsh Lane, Kingston upon Thames
R. B of Kingston upon Thames	Civic Amenities site, Chapel Mill Road, Kingston upon Thames
Viridor Waste Management Ltd	Kingston Waste Transfer Station, Chapel Mill Road, Kingston upon Thames
B L Penwarden Haulage & Demolition Contractors Ltd	Chessington Equestrian Centre, Clayton Road, Chessington
Genuine Solutions Group PLC	Solutions House, Hook Rise South, Surbiton
Kingston Hospital	Galsworthy Road, Kingston upon Thames