South of the Borough Neighbourhood Conversation

Air Quality

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Kingston & Sutton Shared Environment Service
Overview

- Air Quality Management Area – 2003
  - Nitrogen Dioxide (NO$_2$)
  - Particulate Matter (PM$_{10}$)
- Road transport is primary source
- Imported pollution from outside the borough sources also contribute
- Other minor sources will include Domestic & Commercial boilers
### Air Quality Objectives

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Objective</th>
<th>Measured as</th>
</tr>
</thead>
</table>
| **Nitrogen Dioxide**  
(NO₂) | 200 μg m⁻³ not to be exceeded more than 18 times a year  
40 μg m⁻³ | 1 hour mean |
| **Particles**  
(PM₁₀) | 50 μg m⁻³ not to be exceeded more than 35 times a year  
40 μg m⁻³ | 24 hour mean |
|                  | Annual Mean                                                              |                   |
Assessing Air Quality

- Modelling
  *Predicting pollutant levels using on known data sources (i.e. traffic volumes, meteorological data etc)*

- Monitoring
  *Measuring the pollutants in the air*
Modelling

In 2015 the Council engaged the Environmental Research Group at Kings College London to model air pollution in the Borough:
Annual mean NO$_2$ (µg m$^{-3}$)
NO$_2$

Tolworth

Annual mean NO$_2$ ($\mu$g m$^{-3}$)
Daily mean PM$_{10}$ (number of days > 50µg m$^{-3}$)
Monitoring

Diffusion Tubes

- Nitrogen Dioxide (NO$_2$)
- Tubes exposed for 4-5 weeks then analysed in laboratory
- Results averaged out over 12 months gives indication of compliance with Annual Mean Objective
South of the Borough

- Service Rd/136 Tolworth Broadway
- Tolworth Roundabout (Sundial Court)
- Kingston Rd (nr Station)
- Hook Rd S/Hunters Rd
- Hook Rd (St Paul's Primary)
- Hook Centre
- Hook Rise North / Tolworth Rec. Centre
- Malden Rushett crossroads
- Leatherhead Rd/Harrow Cl
- Hook Rise N / Rec.Centre
Diffusion Tube Results

Trends in Annual Mean Nitrogen Dioxide (NO2) @ all monitoring locations measured in the South of the Borough
Continuous Monitoring

- Two continuous Air Quality Monitoring Stations, measuring NO2 and PM10
  - Sopwith Way / Kingsgate Road – decommissioned in July 2016
  - Tolworth Roundabout – funding secured to June 2017
Sopwith Way
Tolworth
# Data from Sopwith Way

## Air Quality Objective values

<table>
<thead>
<tr>
<th>Objective</th>
<th>Result</th>
<th>Objective Achieved?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nitrogen Dioxide</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200 ug/m³ as a 1 hour mean, not to be exceeded more than 18 times a year</td>
<td>0</td>
<td>YES</td>
</tr>
<tr>
<td>40 ug/m³ as an annual mean</td>
<td>53</td>
<td>NO</td>
</tr>
<tr>
<td><strong>PM10 Particulate</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 ug/m³ as an annual mean</td>
<td>21</td>
<td>YES</td>
</tr>
<tr>
<td>50 ug/m³ as a 24 hour mean, not to be exceeded more than 35 times a year</td>
<td>5</td>
<td>YES</td>
</tr>
</tbody>
</table>

## Capture Rates

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Valid Data</th>
<th>&gt;75% Threshold?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen Dioxide</td>
<td>84 %</td>
<td>YES</td>
</tr>
<tr>
<td>PM10 Particulate</td>
<td>94 %</td>
<td>YES</td>
</tr>
</tbody>
</table>
### Data from Tolworth

#### Air Quality Objective values

<table>
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<td><strong>Nitrogen Dioxide</strong></td>
<td></td>
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<tr>
<td>200 ug/m³ as a 1 hour mean, not to be exceeded more than 18 times a year</td>
<td>1</td>
<td>YES</td>
</tr>
<tr>
<td>40 ug/m³ as an annual mean</td>
<td>51</td>
<td>NO</td>
</tr>
<tr>
<td><strong>PM10 Particulate</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 ug/m³ as an annual mean</td>
<td>23</td>
<td>YES</td>
</tr>
<tr>
<td>50 ug/m³ as a 24 hour mean, not to be exceeded more than 35 times a year</td>
<td>5</td>
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<tr>
<td>Nitrogen Dioxide</td>
<td>92 %</td>
<td>YES</td>
</tr>
<tr>
<td>PM10 Particulate</td>
<td>95 %</td>
<td>YES</td>
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</tbody>
</table>
New Sites

Capital funding has been secured for 2 new, permanent Air Quality Monitoring Stations

Shortlist of 3 sites agreed by Committee:
- Cromwell Road, Kingston
- A3 / A308 (Robin Hood), New Malden
- Ewell Road / South Bank, Surbiton
Air Quality Action Plan

- New AQAP agreed by Adults & Children’s Committee on 21 June 2016
- Covers period 2016 to 2021
- Sets out the steps we will take to improve air quality
- Difficult to have an action that provides a significant immediate impact
- Series of smaller steps that together will have a cumulative impact
Air Quality Action Plan – 10 Themes

- Public Transport
- Roads
- Cars
- Freight
- Cycling & Go Cycle
- Walking pedestrians
- Travel Plans
- Development Control
- Partnerships
- Monitoring
Example Actions

- Lobby for low emission buses
- Discuss extension of LEZ with TfL
- Air Quality to be a consideration of other Council Policies
- Promote Low Emission Vehicles & provide infrastructure
- Deter engine idling
Example Actions

- Expand cycle-hire schemes
- Improve strategic walking network
- Work with schools on travel plans
- Controls & improvements through planning conditions
- Work with Public Health on campaigns
- Continue monitoring
Air Quality Action Plan

To be published online in the next few weeks

Copies available on request from ehadmin@kingston.gov.uk
Useful Contacts

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