



# WINDSOR TOWN FORUM

WEDNESDAY, 27TH NOVEMBER, 2019

At 6.30 pm

in the

CONFERENCE ROOM - YORK HOUSE,

## SUPPLEMENTARY AGENDA

### PART I

<u>ITEM</u>	<u>SUBJECT</u>	<u>PAGE NO</u>
8.	<u>AIR POLLUTION</u>  To receive an update on air pollution reduction methods employed in Windsor.	3 - 8

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Report Title:	<b>Windsor Air Quality – Report for the Windsor Town Forum</b>
Officer reporting:	Chris Nash - Community Protection Principal
Meeting and Date:	Windsor Town Forum - 27 November 2019
Responsible Officer(s):	Chris Nash, Community Protection Principal Feliciano Cirimele – Environmental Protection Officer

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## SUMMARY

The air quality in Windsor is generally good and is improving. Roadside nitrogen dioxide is monitored by the Royal Borough's Environmental Protection Team; with trends over the past 5 years showing pollution levels across the Borough reducing by about 20%.

This reduction follows a regional trend observed - with modern vehicles being less polluting because of more stringent emission standards. Changes in vehicle fleet composition, with an increasing number of cleaner vehicles on the road, is contributing in reducing levels of nitrogen dioxide.

In Windsor, the majority of monitoring locations (in 2018) remained below the national objective ( $40 \mu\text{g}/\text{m}^3$ ); with only three locations being marginally above at three monitoring sites - one in Arthur Road and two at the junction of Imperial Road and St Leonards Road. These exceedances are confined close to the roadside, so that when the distance from roadside to neighbouring property is taken into account the pollutant exposure falls below the annual mean target in real terms (with the latest results showing compliance at Arthur Road and compliance at Imperial/St Leonards road since 2016).

There are no exceedances of the one hour target for  $\text{NO}_2$  reported ( $200 \mu\text{g}/\text{m}^3$ ), nor for particulates.

Nonetheless, further measures to reduce congestion and improve air quality are planned over the next two years under the Highways Capital Programme – details of these schemes are set out within this report.

## **1 Air Quality Monitoring (as of 2018)**

- 1.1. Road traffic is the main source of pollution in the UK (principally Nitrogen dioxide -  $\text{NO}_2$ ), with the government placing a statutory duty on Local Authorities to monitor air quality at the roadside and report its findings to DEFRA.
- 1.2. Continuous automatic monitoring of  $\text{NO}_2$  was undertaken at three sites during 2018, Frascati Way, Aldebury Road (Maidenhead) and at the Clarence Road roundabout in Windsor. The annual means at these sites were 36.4, 17.5 and  $34.3 \mu\text{g}/\text{m}^3$

respectively; all below the national objective of 40 µg/m<sup>3</sup>. Automatic monitoring for particulates (PM<sub>10</sub>) was also undertaken at the Frascati Way site; which returned an annual mean result of 22.8 µg/m<sup>3</sup>, also below the air quality objective of 40µg/m<sup>3</sup>.

- 1.3. In addition to continuous monitoring, the Royal Borough has an extensive diffusion tube network, commonly affixed to lampposts and other street furniture. These tubes are collected monthly and analysed to form our annual mean data for pollutant levels.
- 1.4. In Windsor, the national objective for NO<sub>2</sub> was exceeded at one diffusion tube site in Arthur Road and at two sites at Imperial Road/St Leonards Road junction. The annual means at these sites were 44.8, 44.3 and 46.7 µg/m<sup>3</sup> respectively.
- 1.5. In order to analyse these initial readings in real terms, a correction factor is applied to account for the distance between the road side diffusion tube and the nearest residential dwelling. Once this factor was applied; levels reduced to 38.8, 35.7 and 34.6 µg/m<sup>3</sup> respectively.
- 1.6. As a result, the Royal Borough has confirmed with DEFRA that the national air quality objective has been fully achieved when the corresponding levels at the nearest residential receptor are taken account of - with relevant exposure remaining below 36 µg/m<sup>3</sup> for three consecutive years.
- 1.7. Trends in annual mean nitrogen dioxide concentrations at diffusion tube roadside sites are shown in Appendix 1. Furthermore, a table of the results from all monitoring sites in Windsor is included in Appendix 2. Maps of the relevant AQMAs are included within Appendix 3.

## **2. Highways Measures & Improvements**

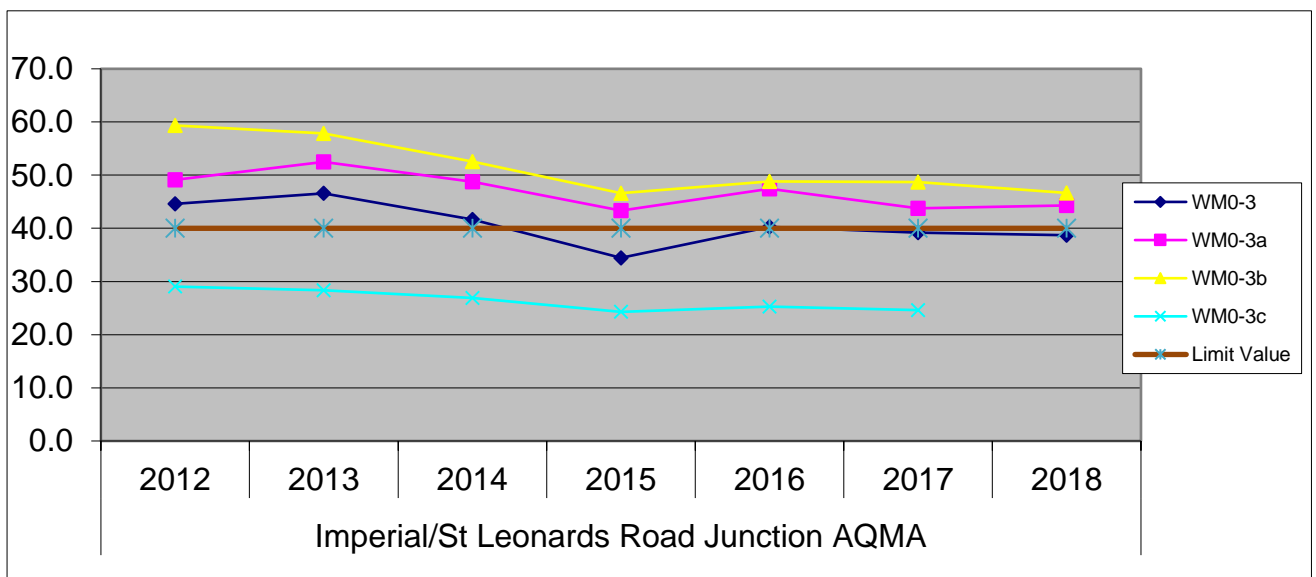
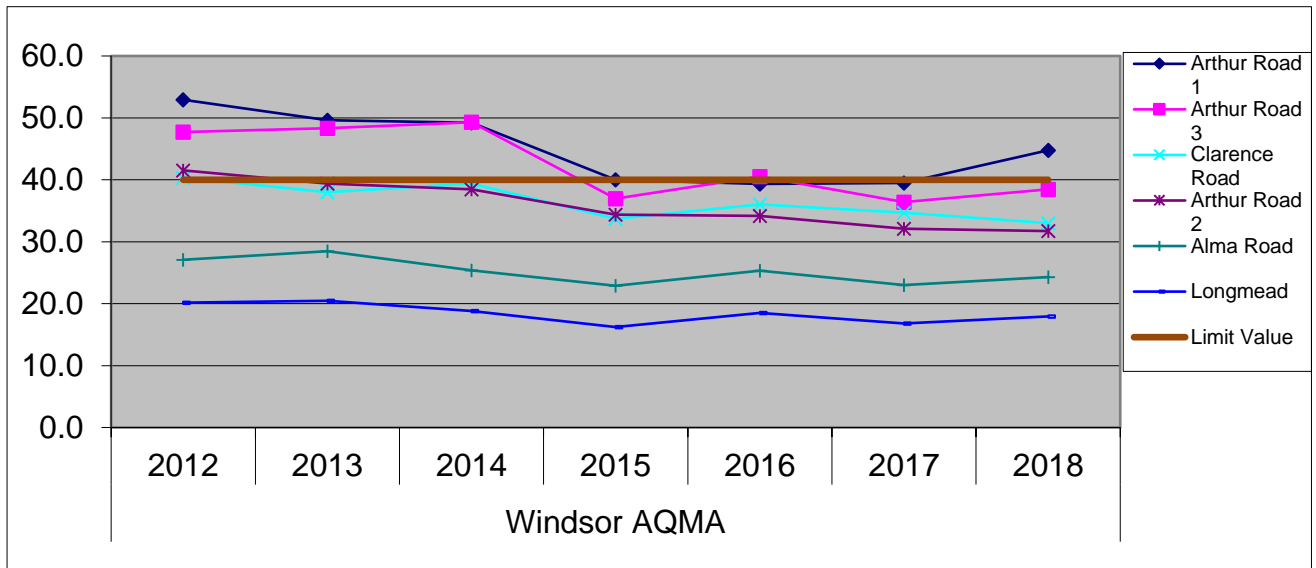
- 2.1. The Council has an active programme of measures in place to reduce the impact of traffic emissions on local air quality. These form an integral part of the Local Transport Plan (LTP) which informs the Highways Capital Programme with the impact on air quality considered as part of the Council's wider strategy.
- 2.2. Ongoing, implemented and proposed measures include:
  - 2.1.1 A trial of new smart/connected electric vehicle charge points in Alma Road, including stand-alone units and units integrated into street furniture. Furthermore, the Council is looking to submit a funding bid to the Office for Low Emission Vehicles to roll out more charge points in several new locations across parts of Maidenhead and Windsor. These are mostly on Victorian-era streets with terraced housing where residents do not have access to off-street parking and therefore would struggle to charge an electric vehicle.
  - 2.1.2 Cycling schemes: links between Dedworth and Windsor Town Centre have been improved including the A308 / Barry Avenue cycle route. There is also a new cycle parking facility in Thames Street. Furthermore, the feasibility of a

new cycle route between West Windsor and Windsor Town Centre is being considered; avoiding the busy Clarence Road roundabout.

- 2.1.3 The Maidenhead Road/Stovell Road junction traffic signals have been replaced with a roundabout to improve traffic flow.
  - 2.1.4 The Arthur Road/Alma Road junction has a remaining restriction, whereby coaches are banned from turning right onto Arthur Road when leaving the coach park.
  - 2.1.5 Changes to the operation of the traffic signals at the Imperial Road/St Leonards Road and Clewer Hill Road / Winkfield Road junctions were completed in July 2016. The changes have reduced journey times and improved traffic flow at this bottleneck.
  - 2.1.6 A traffic management scheme has been completed at the Dedworth Road / Clarence Road / Parsonage Lane / Hatch Lane junction; where a double mini-roundabout has replaced the previous traffic signals. This helps to keep traffic flowing and minimise congestion.
  - 2.1.7 LEGOLAND travel plan and traffic signage: The Borough has secured a travel plan from this location in order to manage staff, hotel guests and day visitors travel to and from the resort. Improved traffic signage has been introduced to encourage visitors to use alternative routes that avoid congested junctions. Work continues on this theme.
- 2.2 Longer term; the forthcoming Windsor Town Centre vision, as approved by cabinet in October 2019, will also consider aspects such as public realm, access, parking and transport. Work on these themes to be considered in further detail over the next 12 months.

**Appendix 1**

**Trends in Annual Mean NO2 Concentrations Measured at Diffusion Tubes Sites**



**Appendix 2: Windsor and Eton Roadside Monitoring Results 2014 to 2018**

Site ID	Location	NO <sub>2</sub> Annual Mean Concentration (µg/m <sup>3</sup> ) <sup>(3)</sup>				
		2014	2015	2016	2017	2018
MW2	Clarence Road roundabout	<b>42.8</b>	36.4	39	34.5	34.3
WM1	Longmead	18.82	16.2	18.5	16.8	17.9
WM9	Alma Road	25.37	22.9	25.3	23.0	24.3
WM10	Imperial Road	37.26	32.5	37.1	33.3	35.4
WM18	Clarence Road roundabout	39.21	34	35.7	35.1	34.3
WM19	Clarence Road roundabout	39.88	33.7	36.4	34.6	32.9
WM20	Clarence Road roundabout	39.15	33.3	36	34.5	32.5
WM28	Keate's Lane - Eton	35.26	28.4	34.3	30.2	31.2
WM28a	Eton Wick Road	-	26.8	35.5	34.3	32.6
WM31	Arthur Road	<b>49.2</b>	<b>40</b>	39.3	39.5	<b>44.8</b>
WM32	Arthur Road	38.44	34.4	34.2	32.1	31.7
WM33	Arthur Road	<b>49.3</b>	37	<b>40.6</b>	36.4	38.5
WM03	St Leonards Road	<b>41.65</b>	34.4	<b>40.3</b>	39.2	38.7
WM03a	St Leonards Road	<b>48.75</b>	<b>43.3</b>	<b>47.4</b>	<b>43.8</b>	<b>44.3</b>
WM03b	St Leonards Road	<b>52.53</b>	<b>46.6</b>	<b>48.8</b>	<b>48.7</b>	<b>46.7</b>
WM03d	Hermitage Lane	-	-	-	-	21.5
WM04	Osborne Road	34.73	30.9	34.8	29.4	31.5
WM04a	Osborne Road	-	-	-	-	34.8

# Appendix 3 – AQMA Maps

