AS2

THE OXFORDSHIRE COUNTY COUNCIL (DIDCOT GARDEN TOWN HIGHWAYS INFRASTRUCTURE – A4130 IMPROVEMENT (MILTON GATE TO COLLETT ROUNDABOUT), A4197 DIDCOT TO CULHAM LINK ROAD, AND A415 CLIFTON HAMPDEN BYPASS) COMPULSORY PURCHASE ORDER 2022

THE OXFORDSHIRE COUNTY COUNCIL (DIDCOT TO CULHAM THAMES BRIDGE) SCHEME 2022

THE OXFORDSHIRE COUNTY COUNCIL (DIDCOT GARDEN TOWN HIGHWAYS INFRASTRUCTURE – A4130 IMPROVEMENT (MILTON GATE TO COLLETT ROUNDABOUT), A4197 DIDCOT TO CULHAM LINK ROAD, AND A415 CLIFTON HAMPDEN BYPASS) (SIDE ROADS) ORDER 2022

THE CALLED-IN PLANNING APPLICATION BY OXFORDSHIRE COUNTY COUNCIL FOR THE DUALLING OF THE A4130 CARRIAGEWAY, CONSTRUCTION OF THE DIDCOT SCIENCE BRIDGE, ROAD BRIDGE OVER THE APPLEFORD RAILWAY SIDINGS AND ROAD BRIDGE OVER THE RIVER THAMES, AND ASSOCIATED WORKS BETWEEN THE A34 MILTON INTERCHANGE AND THE B4015 NORTH OF CLIFTON HAMPDEN, OXFORDSHIRE (APPLICATION NO: R3.0138/21

PLANNING INSPECTORATE REFERENCE:

APP/U3100/V/23/3326625 and NATTRAN/SE/HAO/286 (DPI/U3100/23/12)

Appendix to the proof of evidence of

ANNA MARY SAVAGE

(Air Quality)

Appendix AS2 – Extract from SODC and VOWHDC 2023 Annual Status Report

Front cover of SODC and VOWHDC 2023 ASR

South Oxfordshire District Council

Listening Learning Leading

Vale of White Horse District Council

2023 Air Quality Annual Status Report (ASR)

In fulfilment of Part IV of the Environment Act 1995 Local Air Quality Management, as amended by the Environment Act 2021

Date: June 2023

P29

Exceedances of the NO2 national objectives in South Oxfordshire in 2022

No exceedances of either the annual mean or 1-hour objective were recorded in South Oxfordshire in 2022, with levels remaining well below the objectives as in 2021.

P30

In other towns in South Oxfordshire where levels are monitored by means of an extensive network of passive monitoring stations, like **Didcot, Thame and Chinnor**, nitrogen dioxide levels remain well below the national objectives (see figures A.6 – A.8).

Levels recorded in 2022 by the remaining monitoring sites, located in **Whitchurch, Horspath, Wheatley, Clifton Hampden, Little Milton, Stadhampton and Adwell** (see Figure A.9) continue to be below the national objectives like they were in previous years.

Monitoring data gathered in 2022 in these locations also supports the 5-year decreasing trend in nitrogen dioxide levels identified in previous years.

Exceedances of the NO2 national objective in Vale of White Horse in 2022

In 2022, all monitoring sites in **Abingdon** recorded, for the third consecutive year, levels below the national objectives both within and outside of the AQMA (as shown on Figures A.10 and A.11).

Most of the monitoring sites in Abingdon recorded slightly higher levels in 2022 than they did in 2021. The largest increase in concentration was only 3µg NO_2/m^3 (at VNWCS4, where levels recorded in 2022 were 22 µg NO_2/m^3).

Despite the increases recorded at some sites ,2022 monitoring data supports the 5-year decreasing trend in nitrogen dioxide levels in Abingdon identified in previous years.

P24

$PM_{2.5}$ – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG22 (Chapter 8), local authorities are expected to work towards reducing emissions and/or concentrations of $PM_{2.5}$ (particulate matter with an aerodynamic diameter of 2.5µm or less). There is clear evidence that $PM_{2.5}$ has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

Regarding particulate matter levels in the districts, examples from councils across the country who have traffic related AQMA's highlight that where NO_2 levels are typically around 60-70 µg/m^3, measured particulate matter (PM_{10}) levels at the same location remain below 25 µg/m^3, which is well below the national objective level of 40 µg/m^3.

Although there are both primary and secondary traffic related PM_{10} sources, the majority of the PM_{10} and $PM_{2.5}$ fraction in our Districts is made up from background sources. No other significant PM sources have been identified in the districts (see below Appendix F) and therefore the DEFRA background mappings of PM are believed to be accurate putting $PM_{2.5}$ levels below 10.89 µg/m^3 in South Oxfordshire and Vale of White Horse in 2022 (please see Figure 3 below for an illustration of Defra's $PM_{2.5}$ modelled levels in the districts), which is just half that of the national objective level.

In 2022 Vale of White Horse District Council commissioned a PM_{10} and $PM_{2.5}$ survey in Packhorse Lane, within Marcham AQMA. The data obtained during this survey, by means of a Praxis Urban sensor, is shown in Table 3 below. and support the idea of particulate matter concentrations falling below national objective levels at all locations throughout the district.

Table 3 Particulate matter monitoring data recorded in Marcham in 2022

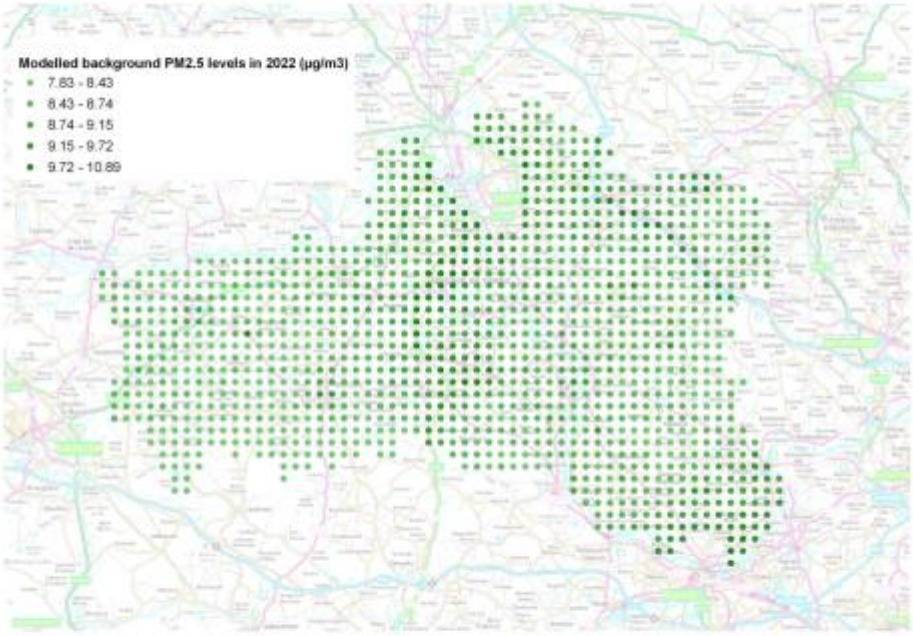
Pollutant		Monthly averages									Annual average
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
$PM_{2.5}$	hourly mean (µg/m3)	9.7	5.1	11.2	7.6	8.0	5.1	4.1	4.8	4.8	7
	Data capture	100%	100%	100%	100%	70%	50%	100%	100%	100%	93%
PM_{10}	hourly mean (µg/m^3)	16.0	10.3	17.5	13.0	12.9	10.8	9.6	9.8	14.9	12
	Data capture	100%	100%	100%	100%	70%	50%	100%	100%	100%	93%

P25

However, despite current particulate matter levels meeting the national objective, particulate matter has an impact on the health of South Oxfordshire and Vale of Horse's residents. The Public Health Outcomes Framework sets out a vision for public health, that is to improve and protect the nation's health, and improve the health of the poorest fastest. They have developed a set of supporting indicators that help focus our understanding of how well we are doing, one of them being the fraction of mortality attributable to particulate air pollution.

Indicator D.01 represents the fraction of annual all-cause adult mortality attributable to human-made particulate air pollution ($PM_{2.5}$).

Figure 3 Defra's background maps modelled $PM_{2.5}$ levels in 2022



The Public Health Outcomes Framework research has determined that the percentage of deaths from all causes in those aged 30 years plus are attributable to long-term exposure to $PM_{2.5}$ is 5.4% South Oxfordshire and Vale of White Horse. Oxfordshire level data on the number of deaths attributable to $PM_{2.5}$ can be found on the Oxfordshire Joint Strategic Needs Assessment on Air Quality.

This figure puts the districts just below both the national and county average fractions of mortality attributable to $PM_{2.5}$ (as shown on Table 4 below).