

Receptor	Floor	Without Scheme	With Scheme	Change
R89	G	6	6	<1
R90	G	1	1	<1
R91	G	2	2	<1
R92	G	2	2	<1

*A different adjustment factor was applied to modelled concentrations at these receptors.

The selected receptors cover a relatively wide geographical area between Shepard's Bush and Brentford and there is therefore a range in concentrations with much higher values closer to main roads and lower concentrations which are just above the background levels in the more residential areas, further from roads.

In 2016, the annual mean annual mean NO₂ objective value of 40 µg/m³ is exceeded at a large number of receptors close to main roads with the highest concentrations at receptors near the A4 (e.g. R17, R18), M4 and roundabout with Hogarth Lane including receptors R22, R44 and R64. There are also high concentrations close to other busy roads such as Goldhawk Road (e.g. R51), Chiswick High Road (e.g. R61, R58) and Warwick Road (R81). A number of these receptors have annual mean NO₂ concentrations above 60 µg/m³ which suggests that the hourly objective may be exceeded. There are no predicted exceedances of the objective values for PM₁₀ and PM_{2.5} at the selected receptors.

By the scheme opening year of 2021, concentrations are lower due to improvements in background pollution and lower emissions from newer vehicle fleet. There are still exceedances of the annual mean NO₂ objective value closer to the main roads both with and without the proposed scheme in the locations above. The highest NO₂ concentration is just over 60 µg/m³ at R22 (A4 Hogarth Lane) which suggests the hourly objective may be exceeded.

With the proposed scheme in place, there are imperceptible or very small changes predicted at the majority of the 92 selected receptors, particularly those closer to minor roads and away from the cycle superhighway route. There are small improvements in concentrations of 2 µg/m³ or lower along the length of the cycle superhighway scheme itself including at R25 (Kew Bridge Road), R27 (Kensington High Street) R37 (Wellesley Road), R56 (Chiswick High Road) and R69 (Lionel Road). These improvements are due to overall traffic flow reductions and the introduction of segregated cycle lanes along the CS9 route that means the vehicular traffic is further away from the building façades. At R37 (Wellesley Road), R40 (Stile Hall Gardens) and R56 (Chiswick High Road) there are reductions of over 1 µg/m³ as the scheme prevents vehicle access to the South Circular from Wellesley Road and Stile Hall Gardens, thereby substantially reducing overall traffic flow on these roads.

Conversely, there are small increases of 2 µg/m³ or less in annual mean NO₂ concentrations at receptors along the A4/M4 corridor or on minor roads close to the main corridor, including R44 (Devonshire Road), R48 (Falcon Close), R60 (Ellesmere Road) and R64 (Chiswick Square). These increases are due to predicted increases in traffic flows and associated lower speeds with the proposed scheme. The greatest increases of just over 2 µg/m³ are also at receptors close to the A4 at R22 (Hogarth Lane) and R48 (Falcon Close). Traffic flows on the Hogarth Lane section of the A4 to the west of Hogarth Roundabout are predicted to increase by 5% as a result of the proposed scheme resulting in more than 5,000 vehicles using this section of road per day.

There are some small increases of 1 µg/m³ or lower at receptors to the north east of the scheme in the boroughs of Hammersmith and Kensington and Chelsea, such as R14 (Blythe Road), R32 (Holland Road), R33 (Airdale Avenue), R51 (Goldhawk Road) and R57 (Hammersmith Road). The reason for the increases at these receptors is due to predicted increases in traffic by 9% as a result of the proposed scheme along A219 Shepherds Bush Road and a 3% increase in vehicles using A3220 Holland Road with the proposed scheme. The change in road layout, removal of a bus lane and decrease in predicted average speeds from 23 km/h to 6 km/h at R57 (Hammersmith Road) offsets the predicted reduction in traffic at this location.

Concentrations of PM₁₀ and PM_{2.5} are both below their respective annual mean objective values of 40 µg/m³ and 25 µg/m³ with and without the proposed scheme and there are no exceedances of the 24-hour mean objective for PM₁₀ in 2021. As there is a high contribution from background sources,