

ULEZ Expansion would be UZELESS!

The proposal to extend London's Ultra Low Emission Zone (ULEZ) to the whole of Greater London will cost a lot of money, cause hardship to very many residents, and yet deliver effectively zero benefit.

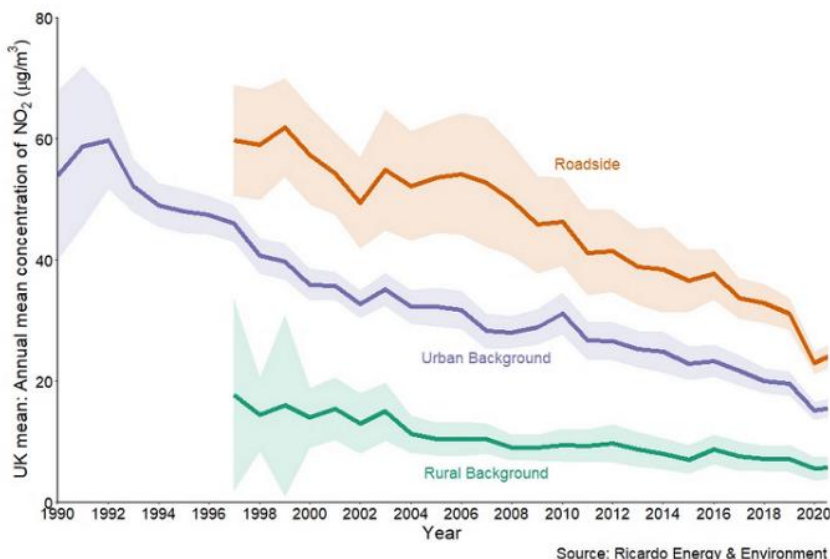
This might be justified if air quality were to be improved significantly, but there is much evidence showing that will **NOT** be the case, and that any benefit will be marginal, while the Mayor of London has failed to offer any proper evidence to support his proposal, beyond broad, non-specific and unquantified generalisations about the evils of pollution.

We will be specific. We will consider mainly the nitrogen dioxide (NO₂) pollutant as this is an exhaust-pipe emission. The fine particulate (PM_{2.5}) emissions come mainly (two thirds) from brake and road surface wear, thus largely from all vehicles, and will be little reduced anyway – as confirmed on p.3 below.

1. NO₂ Levels are falling across the nation anyway

The main reasons for this are the increasingly strict emission standards imposed, quite correctly, on vehicle manufacturers. As older vehicles reach the end of their life, they are replaced by newer cleaner vehicles, including electric ones. Nothing to do with ULEZ, it is happening anyway. The graphs below are from <https://www.gov.uk/government/statistics/air-quality-statistics/nitrogen-dioxide> (DEFRA) and are for the whole UK, not just London.

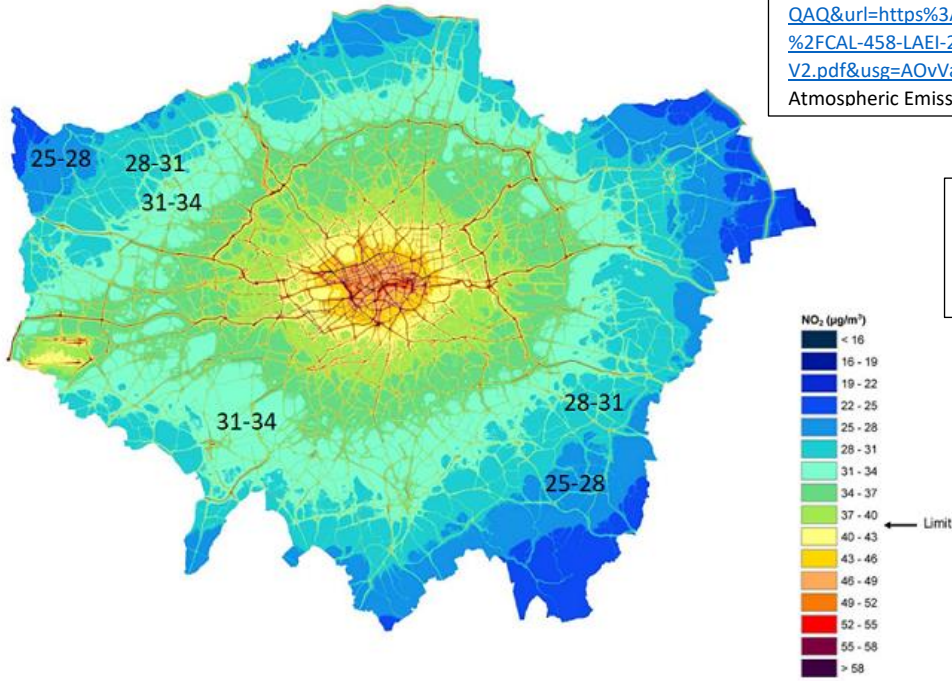
Figure 1: Annual mean concentrations of NO₂ in the UK, 1990 to 2021



Between 2005 and 2019 (just before the lockdowns) the concentration curves approximate to a straight line, with a slope, or rate of reduction of NO₂, of **1.54 µg / m³** per year for the roadside case, and **0.86 µg / m³** per year for the urban background case.

NO₂ levels are also falling across London, as shown in the maps below, at a rate of **1.7 µg / m³** per year in Outer London between the measured (before any ULEZ) levels in 2016 and the projected without-ULEZ levels in 2023.

NO₂ Concentrations 2016

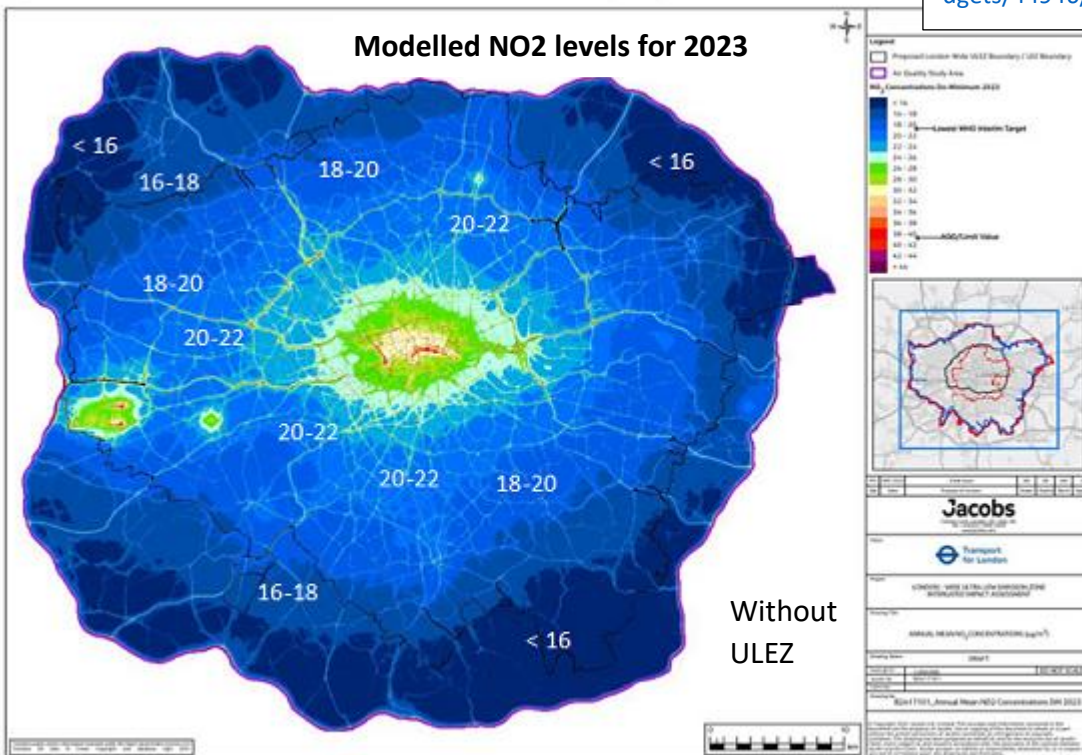


Source

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewiKl8OPm7_8AhWTi_OHHfJSAppQFnoECAsQAQ&url=https%3A%2F%2Fcleanair.london%2Fapp%2Fuploads%2FCAL-458-LAEI-2019-Summary-Note-FINAL-V2.pdf&usg=AOvVaw2zCYm3BRHPWtlyxxG0qVna (London Atmospheric Emissions Inventory 2019)

NO₂ concentrations in µg^m-³ have been superimposed on maps according to the colour key given.

Figure 5-2. Modelled 2023 Annual Mean NO₂ Concentrations within Air Quality Study Area 'without' Proposed Scheme



Source: Report downloadable from <https://haveyoursay.tfl.gov.uk/15619/widgets/44946/documents/27025>

SOURCE: Modelled annual mean NO₂ concentrations at 20m resolution produced by Imperial College London and provided by TfL.

Note that the existing legal upper limit is 40 µg / m³, and the new WHO-based interim advisory limit is 20 µg / m³, this projection shows Outer London (Heathrow area excepted) to meet this lower limit by 2023, and certainly by 2024, without any ULEZ expansion.

2. Comparison with the official Jacobs Integrated Impact Assessment estimates:

The Jacobs Assessment (downloadable from <https://haveyoursay.tfl.gov.uk/15619/widgets/44946/documents/27025>) was commissioned by TfL to assess the effects of implementing the ULEZ expansion. We reproduce below an image of a relevant table from page 47 of that report:

Table 5-5. Estimated 2023 population weighted NO₂ and PM_{2.5} concentrations within central, inner, outer and Greater London and relevant non-Greater London local authorities

Area	Population weighted 2023 annual mean concentration in µg/m ³				Change in µg/m ³ (and % change 'with' Proposed Scheme vs. 'without' Proposed Scheme)	
	Without Proposed Scheme		With Proposed Scheme		NO ₂	PM _{2.5}
	NO ₂	PM _{2.5}	NO ₂	PM _{2.5}		
Central London	30.8	12.0	30.6	12.0	-0.2 (-0.7%)	>-0.1 (-0.1%)
Inner London	24.4	10.5	24.2	10.5	-0.2 (-1.0%)	>-0.1 (-0.1%)
Outer London	20.2	9.6	19.9	9.6	-0.3 (-1.4%)	>-0.1 (-0.1%)
Greater London	22.2	10.1	22.0	10.1	-0.3 (-1.3%)	>-0.1 (-0.1%)
Non-Greater London ^a	17.3	8.9	17.1	8.9	-0.2 (-1.1%)	>-0.1 (-0.1%)

SOURCE: Population weighted 2023 annual mean concentrations for central, inner, outer and Greater London were provided by TfL, whilst values for non-Greater London were calculated by Jacobs using output area average pollutant concentrations and population data provided by TfL.

Note: Concentrations presented above are rounded to one decimal place, however, the percentages presented have been calculated using non-rounded values.

^a Based on spatial extents of relevant local authority areas covered by the LAEI, which is in some cases limited.

The results in Table 5-5 indicate that the Proposed Scheme is modelled to result in a minor reduction (-1.3 per cent) in the average exposure of the population of Greater London to NO₂ and negligible reductions (-

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These projections show **NO EFFECT** on PM_{2.5} particulate levels, and a tiny reduction of just **0.3 µg / m³**, or **-1.4%**, on NO₂ levels in Outer London and in Greater London as a whole.

Since the ongoing (non-ULEZ) reductions in NO₂ levels as shown on pp 1 and 2 lie between 0.86 and 1.7 µg / m³ each year, the one-off extra 0.3 µg / m³ estimated as the benefit from ULEZ expansion would simply advance the ongoing NO₂ reductions, which are steadily happening anyway, without ULEZ, by between just **8 and 16 weeks!** A negligible effect.

The fact is the problem of pollution by NO₂ is already being resolved by existing legislation applying to vehicle manufacture, making ULEZ expansion an expensive but superfluous irrelevance. Or perhaps a vanity project raising funds from the pockets of Londoners.....

On any sort of cost / benefit analysis, and especially in view of the significant hardship it would cause to the citizens and small businesses of Outer London, the proposed policy is unviable, illogical, and irrational.

Michael Simons, January 2023