

Technical Note

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Air Quality Statement: Temporary car parking for 729 vehicles at land to the northeast of Enterprise Way, bounded by Roxholme Walk & Dentdale Walk

This technical note is to support the planning application to bring back into use a 29-space surface car park. The site is located to the northeast of Enterprise Way and bounded by Roxholme Walk and Dentdale Walk.

An Air Quality Impact Assessment was undertaken in August 2019 for a temporary 729 space car park at the same site (document reference: 60612080 – AQ01). It considered the baseline year as 2017 and it was intended for the construction of an 832-space surface car park. NO₂, PM₁₀ and PM_{2.5} concentrations from Manchester City Council's monitoring station, Manchester Sharston, were used to determine a 2021 baseline and it was estimated that in 2021, the addition of the development would increase the annual average daily total (AADT) traffic flow by 44172 within the modelled area. That traffic flow data was converted into an emission rate (g/km/s) using version 9 Emissions Factor Toolkit which was available from DEFRA in 2019. The subsequent dispersion model output showed a maximum increase of no more than 5% from baseline values for NO₂, PM₁₀ and PM_{2.5} annual mean concentrations at sensitive receptor locations in 2021. Therefore, this concluded that there would be no significant effect on local air quality from the impacts of the proposed development.

For local air quality, baseline conditions have improved across the study area, from the conditions previously reported in the previous 2019 assessment. Between 2019 and 2022, the annual mean concentrations of pollutants at Manchester Sharston have decreased from 22.3 µg/m³ to 15 µg/m³ for NO₂, and from 13.6 µg/m³ to 13 µg/m³ and 8.2 µg/m³ to 7 µg/m³ respectively for PM₁₀ and PM_{2.5}.

The current version Emissions Factor Toolkit is version 12. Taking Ringway Road West as an example road link, the absolute emissions rate value for 2022 are equivalent (to up to 2 decimal places) to the previous estimates for 2021 (using v9 of the EFT), with values of 0.06 g/km/s, 0.02 g/km/s and 0.01 g/km/s for NO₂, PM₁₀ and PM_{2.5} respectively. The change in emission rate due to the increased traffic (44171 AADT) was also consistent with the previous results, up to three decimal places. This confirms that the 2019 assessment methods and results can be considered relevant and not to be outdated. With the proposed scheme generating fewer traffic movements than the previously assessed development and the general improvement in measured air quality, it can be concluded with confidence that the impacts of the proposed development would be less than those for the scheme approved in 2019, without the need to prepare a new dispersion modelling study.

The proposed use of the site as a temporary car park for 729 vehicles, would not worsen baseline air quality at any sensitive receptor location, including the nearby air quality management area. Air quality would remain at a good standard with or without the proposed development and the effect is considered to be not significant.