

Project	Proposed Residential Development – Parkhill Avenue, Crumpsall
Client	Great Places Housing Group
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Introduction

This Air Quality Note (Note) has been prepared to consider the requirement for an air quality assessment to support the proposed residential development (Proposed Development) located at Land Bounded by Parkhill Avenue, Cleveland Road and Delaunays Road, Manchester, M8 4QZ (the Site). This Note provides a review of local air quality conditions, the proximity to designated Air Quality Management Areas (AQMAs), existing monitoring data, anticipated traffic movements associated with the Proposed Development, and planned mitigation and sustainability measures. The purpose of this Note is to determine whether the scale and nature of the Proposed Development warrants further detailed assessment.

Baseline Conditions

The closest AQMA is the Greater Manchester Combined Authority (GMCA) AQMA, which, at its closest point, is located approximately 500 metres east-northeast of the Site. This separation distance indicates the Site is not within or immediately adjacent to a designated area of concern for air quality.

The two nearest air quality monitoring locations are the MA102 and MA100 roadside diffusion tubes located approximately 820 metres east-northeast and 1,330 metres west-southwest from the Site respectively. In 2023, the monitored nitrogen dioxide (NO₂) concentrations at both diffusion tubes were below the annual mean NO₂ UK Air Quality Objective (AQO) of 40µg/m³ (MA102 - 30.6µg/m³ and MA100 – 32.2 µg/m³). Furthermore, both the MA102 and MA100 diffusion tubes are located off major A-Roads which are likely to be subject to higher pollution levels than the Site, which is located off less heavily trafficked roads.

In addition to the monitoring undertaken by GMCA, background concentrations of NO_x, NO₂, PM₁₀ and PM_{2.5} are available from the Defra Air Quality Archive for 1 x 1km grid squares. Table 1 summarises the DEFRA-mapped background concentrations for the grid square covering the Site.

Table 1. Estimated DEFRA Annual Mean Background Pollutant Concentrations (µg/m³)

Year	NO ₂	NO _x	PM ₁₀	PM _{2.5}
2021	22.89	16.54	12.72	7.76
2022	22.03	15.99	12.67	7.70
2023	21.17	15.45	12.62	7.64
2024	20.26	14.86	12.57	7.58
AQO	40	-	40	20

As displayed in Table 1, the predicted background concentrations at the Site are predicted to be significantly below the AQO’s for NO₂, PM₁₀ and PM_{2.5}. Additionally, the PM_{2.5} concentrations are below the UK Government’s interim PM_{2.5} target

of 12 $\mu\text{g}/\text{m}^3$ by 2028 and target of 10 $\mu\text{g}/\text{m}^3$ by 2040, as set out in the Environmental Targets (fine particulate matter) (England) Regulations 2023.

Operational Proposed Development

Traffic associated with the Proposed Development is forecast to be low, with an estimated 11 vehicle movements during the AM peak hour and 10 during the PM peak hour, equating to approximately 148 Annual Average Daily Traffic (AADT). The change in vehicle movements is below the Environmental Protection UK and Institute of Air Quality Management (EPUK/IAQM) screening criteria for developments outside an AQMA. Moreover, by the time the Proposed Development traffic reaches the GMCA AQMA, it will have dispersed across the wider road network, reducing the likelihood of any localised impact and remaining below EPUK/IAQM screening thresholds applicable within AQMAs.

The Proposed Development includes a number of features designed to encourage sustainable travel and reduce emissions. These include the provision of electric vehicle charging points, and a location that offers good accessibility to local amenities and public transport options. These characteristics are expected to support active and low-emission travel behaviour among future occupants. Additionally, the Proposed Development is to be installed with all electric heating systems and therefore will not result in any emissions associated with gas boilers.

The MA102 and MA100 roadside diffusion tubes, located closest to the Site are considered a conservative representation of annual mean NO_2 concentrations at the Site. The DEFRA background maps were considered representative of PM_{10} and $\text{PM}_{2.5}$ concentrations at the Site.

Based on the pollutant concentrations shown in the Baseline Conditions section above, on-site concentrations are not likely to exceed relevant AQO's, and future occupants are not expected to be subject to poor air quality.

Conclusion

In conclusion, based on local monitoring, low background pollution levels, the Proposed Development's location relative to the GMCA AQMA, low predicted traffic generation, and incorporation of sustainability measures, it is considered that the Proposed Development would not result in a significant air quality impact. Furthermore, the Site itself is not expected to be exposed to poor air quality. Therefore, a detailed air quality assessment is not required for the Proposed Development.

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