

Technical Note – One City Road, Manchester

From: Cundall Air Quality Team

Date: 03/02/2023

To: Miranda Bell, Planning Manager, Commercial Development Projects Ltd

cc:

Subject: 1027521 – One City Road, Manchester

Air Quality Mitigation Technical Note Prepared by Cundall (February 2023)

1. Introduction

Subject to planning permission being granted for One City Road, Manchester (Manchester City Council Reference 128002/FO/2020)¹, Cundall were asked to specifically provide input to discharge condition 21, which states that:

'Prior to commencement of development, mitigation measures to safeguard local air quality shall be submitted to and agreed in writing by the City Council as local planning authority. Any agreed mitigation measures shall be implemented in full before first occupation of the development and shall remain in situ whilst the use or development is in operation.'

This Technical Note provides a response to the comment above and an update on the Air Quality mitigation measures set out for the Proposed Development. The document focuses specifically on mitigation measures which will be adopted during the operation phase. Any measures to be adopted during the construction phase are being addressed by the construction contractor as part of the discharge of Planning Condition 8.

2. Parking and Transport

Proposed mitigation measures relating to parking and transport were provided in the Transport Statement² and Interim Travel Plan³ for the Proposed Development. Mitigation measures which will specifically reduce individual vehicle emissions by encouraging alternative travel modes such as walking, cycling and use of public transport are set out below:

- The Proposed Development will replace ten existing pay and display car parking spaces located on the south side of the City Road East carriageway, by delivering 12 on-street car parking spaces and 1 additional club car bay; this will also provide two additional disabled parking bays.
- The car park located within the site boundary, which contained 87 spaces, will be removed. As such there will be a net decrease in available car parking spaces.
- Shortcroft Street will be widened to 4m. This will improve the pedestrian experience, as well as providing additional space for refuse vehicles.
- Facilities will be provided to encourage higher levels of cycling. There will be a high level of cycle parking (519 spaces in total) in cycle stores, exceeding Manchester City Council's requirement for 1 space per 200m² of Gross Floor Area (GFA) for office uses. Lockers, showers and drying rooms will be located next to the cycle stores, and a cycle workshop area within both cycle stores will also be implemented.

¹ One City Road Air Quality Assessment prepared by Cundall, Doc Ref 1027521-RPT-AQ-001, dated 26 August 2020

² Curtins (2020) One City Road Transport Statement, Ref: 76657-CUR-00-XX-RP-TP-001, Rev V02, dated 26 August 2020

³ Curtins (2020) One City Road Interim Travel Plan, Ref: 76657-CUR-00-XX-RP-TP-002, Rev V02, dated 26 August 2020

- A car club bay will be provided adjacent to the northern portion of the site.

3. Heating, cooling and ventilation

The Proposed Development has been designed to minimise the incorporation of traditional combustion plant including gas fired boilers, thereby reducing site related emissions of nitrogen dioxide (NO₂) and particulate matter (PM₁₀, PM_{2.5}). The heating and cooling strategy for the Proposed Development is provided in the Energy & Environmental Standards Statement⁴ and is summarised below:

- The development will employ a combination of variant refrigerant flow (VRF) Air Source Heat Pumps and direct acting electric panel heaters and electric water heaters for the heating, cooling and hot water needs.
- VRF Air Source Heat Pumps are highly efficient and classified as a Low Carbon Technology.
- The electric panel heater and water heater systems have a 100% delivery efficiency.
- VRF air source heat pumps will provide heating to all office and commercial unit spaces, with roof mounted plant.
- Highly efficient Mechanical Ventilation Heat Recovery (MVHR) units will be implemented, with a heat recovery efficiency of 75%.
- A centralised MVHR system will be utilised for the main offices, commercial unit and reception/shared workspace areas.
- The MVHR system will extract warm, stale air from within the building while drawing in cooler fresh air from outside. Heat is exchanged without mixing the air, allowing fresh, warm air to be vented into the building. Inclusion of particulate filters can be used to minimise internal concentrations of PM₁₀ and PM_{2.5}.

4. Additional Operation Phase Mitigation Measures

- Footways across the site perimeter will be resurfaced, providing a 2m width throughout.
- There will be a public realm / winter garden bisecting the plots, providing a through route for pedestrians.
- There are plans to enhance the public realm surrounding the site by improving paving, lighting, public seating and landscape features to promote ease of access and improve pedestrian amenity.
- Alternative methods of commuting to the site, including walking, cycling and public transport will be promoted to all employees through welcome packs. These will include information on local schemes and initiatives, as well as highlighting health benefits.
- The on-site management team will coordinate waste collection to reduce the number of individual vehicles accessing the site and reduce the time that bins will await collection along the public realm.
- A total of 36 new trees have been proposed to mitigate the loss of 32 during the demolition & construction phases of the buildings⁵.

5. Conclusion

Plans for the Proposed Development include several mitigation measures that will benefit air quality for the site and local area. A net reduction in site parking and provision of cycle stores will reduce the number of vehicles on site and promote alternative methods of transport. The heating, cooling and ventilation strategy negates the need for combustion plant, limiting adverse effects on local air quality. The mitigation measures set out for the Proposed

⁴ Novo (2020) One City Road Manchester Energy & Environmental Standards Statement, Ref: P1370-ES-001, Rev B, dated September 2020

⁵ Jon Matthews Architects (2020) One City Road Design & Access Statement, Issue No.01, dated 11th September 2020

Development will meet the needs of regional and local planning in reducing negative air quality impacts, and on this basis, it is proposed that Planning Condition 21 can be discharged.