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Air Quality Mitigation For Discharge of Conditions 4a and 4b

Planning Application Ref: 131047/FO/2021

Site Address: 35 Liverpool Road, Manchester, M3 4NQ

Conditions: 4(a) and 4(b) – Air Quality Mitigation (Pre-Commencement and Operational Phases).

Date: 20 June 2025

Submission to Discharge Conditions 4(a) and 4(b): Air Quality Mitigation Measures

This document has been prepared in response to Condition 4 of planning permission 131047/FO/2021, which requires submission and implementation of measures to mitigate local air pollution during and after construction.

It addresses both parts of the condition:

- **Condition 4(a):** Pre-commencement submission of construction-phase mitigation measures.
- **Condition 4(b):** Implementation and verification of agreed measures prior to occupation.

This submission is intended to fully discharge **Condition 4(a)**, and to provide a clear framework for discharging **Condition 4(b)** at a later stage, once physical works and operational systems (e.g. MVHR) have been installed and verified.

Construction Phase Air Quality Mitigation (Condition 4a)

1. Dust Control

- Any minor demolition or cutting works will be carried out internally or with damping to suppress dust.
- No significant stockpiling; dusty materials will be bagged or sheet-covered.
- Skip collections will be scheduled to minimise waiting and idling on the street.

2. Vehicle and Machinery Use

- Only small-scale tools and machinery will be used appropriate to the site.
- All engines will be switched off when stationary; no diesel generators will be used.

3. Concrete Works

- Limited to a single external pour using ready-mix concrete within the site boundary.
- No dry cement mixing or concrete cutting is anticipated.
- Any minor works will be damped to avoid dust generation.

4. Brick Slips and Lime Mortar

- Brick slips will be applied over insulation and pointed using wet-mixed lime mortar.
- No mechanical cutting or grinding is expected.
- Mortar will be mixed wet, with no dry handling in open air.

5. Façade Cleaning to Liverpool Road

- The front façade will be cleaned using low-toxicity, non-solvent-based products applied by hand or low-pressure spray.
- Containment sheeting will prevent mist or drift beyond the site.
- No strong acids or alkalis will be used.
- All runoff will be collected and safely disposed of.

6. Rebuilding Rear Brick Façade

- Demolition will be damped to control dust.
- Any brick cutting will use dust-suppressed techniques (e.g. water-assisted).
- Mortar will be wet-mixed on site with no open-air dry material handling.

7. Dry Ice Blasting of Internal Timber Floors

- CO₂ pellet blasting will be carried out internally with no solvents or airborne emissions.
- Sublimation on contact leaves no residue.
- Dislodged debris will be vacuum-extracted; no material will leave the building.

8. Internal Lime Plastering

- Internal lime plastering will be carried out using traditional wet-mix methods applied by hand.
- No dry lime will be handled in open air, and no mechanical sanding or spraying is involved.

- Works will be fully contained within the building and pose no risk to external air quality.

9. Good Housekeeping

- The site will be kept tidy and regularly cleaned to prevent any dust or debris escaping the boundary.
- Contractors will receive induction covering air quality measures and compliance.

Operational Phase Air Quality Mitigation (Condition 4b)

In addition to the construction-phase controls, the development incorporates long-term measures to safeguard air quality for occupants, in accordance with Condition 4(b). These measures respond to the site's location on Liverpool Road — a busy inner-city street with exposure to elevated levels of NO₂ and fine particulates (PM_{2.5}) from road traffic.

Airtightness Strategy

- A continuous airtightness membrane is integrated into the building envelope to significantly reduce uncontrolled air infiltration from the external environment.
- This helps minimise ingress of polluted air, smoke, and particulates through cracks, gaps, or unsealed joints in the fabric.
- The airtightness layer has been detailed to maintain continuity around penetrations, junctions, and structural transitions.
- The completed building shall achieve an airtightness of ≤ 1.0 air changes per hour at 50 Pascals (ACH₅₀), as measured by a blower door test. All penetrations, joints, and junctions in the building fabric will be sealed in accordance with best practice to ensure this level of performance is consistently achieved. The airtightness standard forms a contractual requirement for the contractor and is integral to the

development's long-term air quality mitigation strategy.

Mechanical Ventilation with Heat Recovery (MVHR)

- A whole-house MVHR system has been specified to provide controlled mechanical supply and extract ventilation.
- The system includes **high-performance filtration** to remove NO₂ and fine particles from incoming air.
- This enables all habitable spaces to be ventilated with **filtered fresh air** without needing to open windows facing the street.
- The system is designed in accordance with current best practice (e.g. BRE and CIBSE guidance), with attention to flow rate, noise levels, and maintenance access.

Maintenance Commitment

- The system will be maintained in accordance with manufacturer guidance, including regular replacement of filters.
- The airtightness strategy and ventilation design will remain in place for the life of the development, as required by the condition.

These measures form an integral part of the development's overall approach to protecting occupants from long-term exposure to air pollution and satisfy the post-construction objectives of Condition 4(b).

Closing Paragraph

Given the internalised nature of the site, the limited construction footprint, and the combination of both construction-phase and operational-phase mitigation strategies outlined above, we request confirmation that this submission satisfies the requirements of both Condition 4(a) and Condition 4(b) of planning permission 131047/FO/2021.