

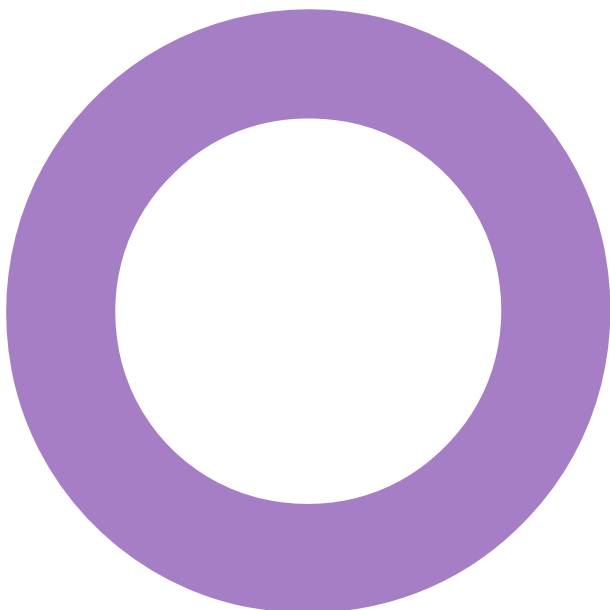
# Mayfield, MSCP. Manchester.

U+i.

## MEP ENGINEERING

### VENTILATION & EXTRACTION STATEMENT

REVISION P01 – 19 MAY 2023



## Audit sheet.

| Rev. | Date       | Description of change / purpose of issue | Prepared | Reviewed | Authorised |
|------|------------|------------------------------------------|----------|----------|------------|
| P01  | 19/05/2023 | For Review                               | LW       | EG       | RCM        |
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Project number: 04/06177

Document reference: REP-0406177-08-LW-20230519-Ventilation Planning Statement-P01.docx

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## 1. Introduction

### 1.1 Background

This ventilation statement has been produced to support the planning application for Mayfield MSCP, Manchester. It provides description of the supply and extract ventilations strategies employed throughout the internal areas within the proposed building, as well as the air intake and discharge strategies to external.

### 1.2 Development Overview

#### 1.2.1 Existing Site

The building will be constructed on the Mayfield site located in Manchester City Centre, currently home to Mayfield Park and 'Depot'. The Carpark will be constructed to facilitate necessary transport infrastructure for the wider site development.

#### 1.2.2 Proposed Development

The proposed development consists of a newly constructed 10-storey carpark development, complete with ground floor and basement retail space as well as basement cycle storage and shower facilities.

Ventilation plant space has been provided within the basement and ground floor, each connecting to the ground floor façade via ductwork distribution.

## 2. Ventilation Strategy

### 2.1 Basement Venue

The basement venue shall be provided with outside air mechanical supply and extract ventilation to meet the employer's ventilation requirements and building regulations Part F.

Central air handling units (AHUs) will be provided to deliver the ventilation requirements to the space. The provided AHUs will also be utilised remove vitiated air from the occupied zone. Air will be distributed to and from the AHU via ductwork to louvres within the ground floor façade.

Heat recovery devices will be present within the AHUs to allow heat recovery required to meet Building Regulations Part L requirements. Air volumes extracted from the venue will be variable, tracking the supply air rate to allow for a balanced system, therefore maximising heat recovery between the extract and supply air streams.

All air handling units will be provided with intake, discharge, supply, and extract attenuation with anti-vibration mounts as required to meet the requirements of the acoustic report.

### 2.2 Landlord Basement Areas

The basement plant rooms/stores consisting of the following areas will be provided with general extract ventilation, with mechanical supply 'make-up' air to allow sufficient air turnover to avoid overheating/humid environments:

- Sprinkler tank room
- Domestic water tank room
- Bike store

In addition, a separate central AHU located within the basement shall provide supply and extract ventilation to the local shower block and lift lobbies.

The smoke vent systems provided at basement level shall be capable of operating in fire conditions, providing sufficient smoke clearance ventilation for compliance with Building Regulations Part B. The intake and exhaust louvres for these systems is within the ground floor façade.

### 2.3 Ground Floor Retail Unit

Local heat recovery units (HRUs) will be provided to a number of zones, each connecting to flexible band high level louvres within the ground floor façade to intake and discharge air. These systems will be introduced as part of the retail tenant fit out.

All HRUs will be provided with intake, discharge, supply and extract attenuation with anti-vibration mounts as required to meet the requirements of the acoustic report.

The entrance area will be passively ventilated via the entrance doors which shall introduce air due to frequent usage during occupied hours.

A kitchen extract riser has been provided between ground floor and roof level, to enable future installation of kitchen extract system if required by a food and banquet tenant. Kitchen extract fan will be located at roof level where the system shall exhaust. Make-up air will be drawn in from the local façade in the event that kitchen extract is introduced.

### 2.4 Ground Floor Back of House (BoH) Areas

Plantrooms located along the façade are proposed to be naturally ventilated via external louvres.

The bin store will be naturally ventilated via external louvres, with mechanical assistance from an extract fan serving the deeper portion of the space, unreachable by natural air movement.

Plantrooms located internally are to be provided with mechanical ventilation and/or refrigerant cooling systems to mitigate risk of overheating.

## 2.5 Exhaust emissions

The building will employ diesel powered life-safety generators and 1No. sprinkler pump set, which will be operated for short periods monthly to ensure correct operation of the systems.

Flues will be routed to terminate 1M above roof level, with sufficient distance provided between the exhaust flue outlets and ventilation intakes to mitigate risk of exhaust fume circulation.



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