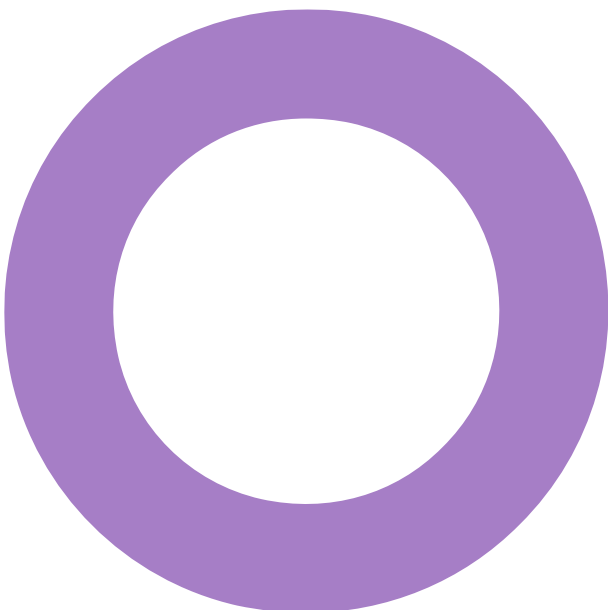


**SMP Huyton - Council HQ.
Huyton.**
**Genr8 Kajima Regeneration
(Huyton) Limited.**

MEP ENGINEERING

VENTILATION AND EXTRACTION STATEMENT

REVISION P01 – 30 JUNE 2025



Audit sheet.

Rev.	Date	Description of change / purpose of issue	Prepared	Reviewed	Authorised
P01	30/06/2025	First Issue – For Comment	LT	EJG	EJG

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Project number: 04/06319

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1. Executive summary

1.1 Background

This ventilation statement has been produced to support the hybrid planning application for St Michael's Place, Huyton and is specifically concerned with the Council HQ Building. It provides description of the supply and extract ventilation 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

SMP Huyton-Council HQ is an office building with the Ground floor made up of a large foyer and council use spaces including democratic and conference centre with 4 further storeys of office space. A small lower ground level has been allocated to include a bike store and associated showers.

All areas are proposed to be served by central mechanical plant located predominantly at roof level.

2. Ventilation Strategy

2.1 Office Floor Plates

Ground to level 04 floor plates shall be provided with fresh air from 2no central air handling units (AHU), located at roof level each serving approximately half of each floorplate. The variable air volume (VAV) system shall provide sufficient outside air to avoid exceedance of maximum CO2 levels within the occupied zones.

The provided AHUs will also be utilised remove vitiated air from each office zone. Air will be distributed to and from the office floor plates via ductwork located in risers within the central cores.

Fresh air intakes and exhaust discharge ductwork are to be located within the external plant compound at roof level, ensuring sufficient separation to minimise recirculation.

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 office zones will be variable, tracking the outside air rate to allow for a balanced system, therefore maximising heat recovery between the extract and supply air streams.

Supply and extract ductwork will extend down the building from roof level to ground through dedicated ventilation risers for the east and west floor plates.

Supply air ductwork will be distributed at high level to the rear of each FCU. Extract ductwork will be extended into the floor plate at high level with bell mouths to remove stale air. Ductwork will be installed tight to the soffit and drop locally to the FCUs, to aid coordination. Cross-talk attenuators will be installed in the ductwork and in partitions of sensitive areas and meeting rooms, to provide an air path to the main extract points.

2.2 Core Areas

The landlord core areas, consisting of lift lobbies, WC, cleaners stores and adjacent circulation will be provided with 2no central balanced Air Handling Units serving either the east or west cores from ground to level 04.

The provided AHUs will contain a plate heat exchanger device, therefore mitigating the risk of cross contamination between extract and supply air streams.

Fresh air intakes and exhaust discharge ductwork are to be located within the external plant compound at roof level, ensuring sufficient separation to minimise recirculation.

Supply and extract ductwork will extend down the building from roof level to ground through dedicated ventilation risers for the east and west cores.

Supply air will be provided to the lobbies of the toilets, and air extracted directly via the WCs. The core toilet AHU system will be designed to ensure a negative pressure within the WCs and stores, to control the spread of contaminants and odours. Supply air will be provided to lift lobbies in line with Approved Doc Part F. Toilets and changing rooms, ventilation will be provided via grilles/diffusers.

2.3 Lower Ground

A Local Heat Recovery Unit (HRU) will be located at high level within the lower ground floor to serve the WCs and showers. Fresh air intakes and exhaust discharge ductwork will connect to wall mounted louvres coordinated with the architect, ensuring sufficient separation to minimise recirculation

2.4 Internal Plant Areas

The internal plantrooms will be located at ground floor and will be ventilated naturally, by means of high and low level louvres on the external facade which will supply cooling air to the space. The water cistern plantroom will also be naturally ventilated via motorised dampers to louvres, which will allow heat gains from the booster pumps to be removed in summer, whilst limiting the ingress of cold air in winter, helping to maintain an acceptable cold water temperature.

2.5 Bin Stores

The bin store is located at ground floor level and will be ventilated naturally, direct to outside, through louvred doors.

2.6 Exhaust Emissions

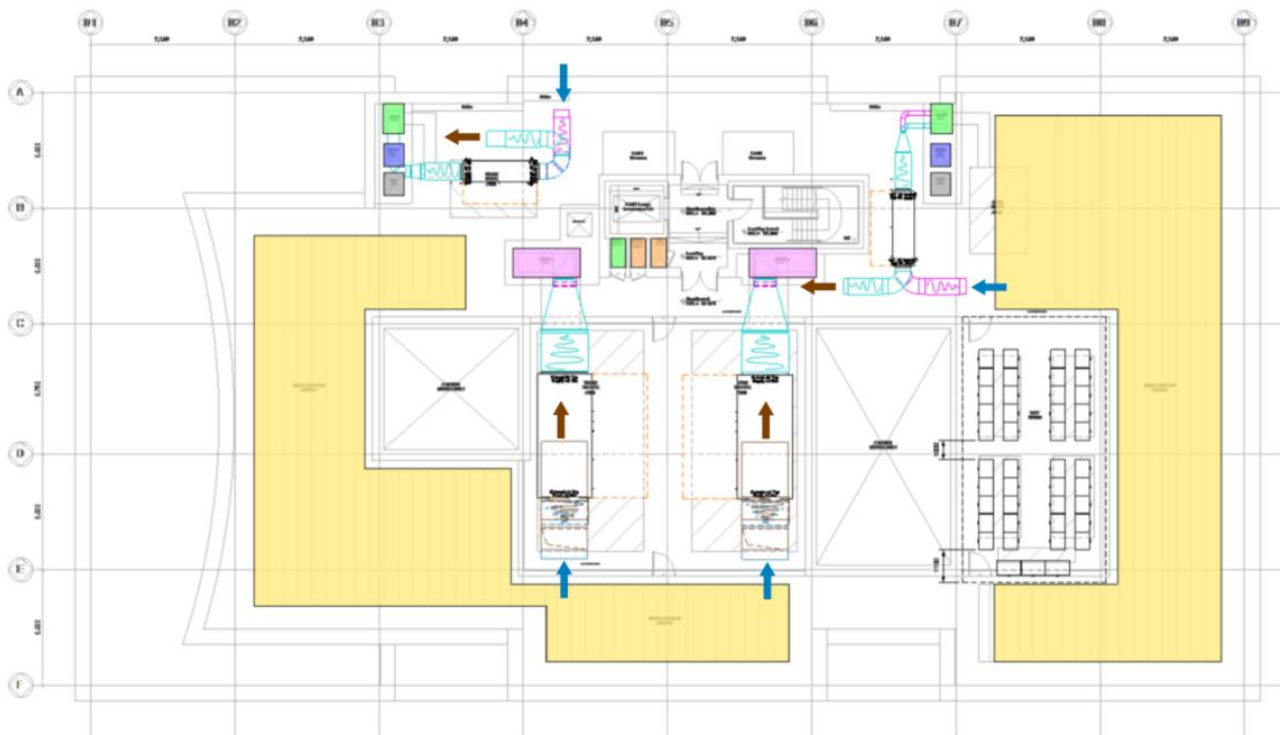
The building will be supplied with a diesel-powered life-safety generator located at ground level which will be operated for short periods monthly to ensure correct operation of the system. This generator will be housed in an acoustic enclosure located away from the proposed office building but within the site boundary

The exhaust flue will pass through acoustic attenuators and will rise above the enclosure fence and terminate 3m above the fence level, with sufficient distance provided between the exhaust flue outlets and ventilation intakes to mitigate risk of exhaust fume circulation.

3. Roof Plant

The image below shows the roof plant proposal.

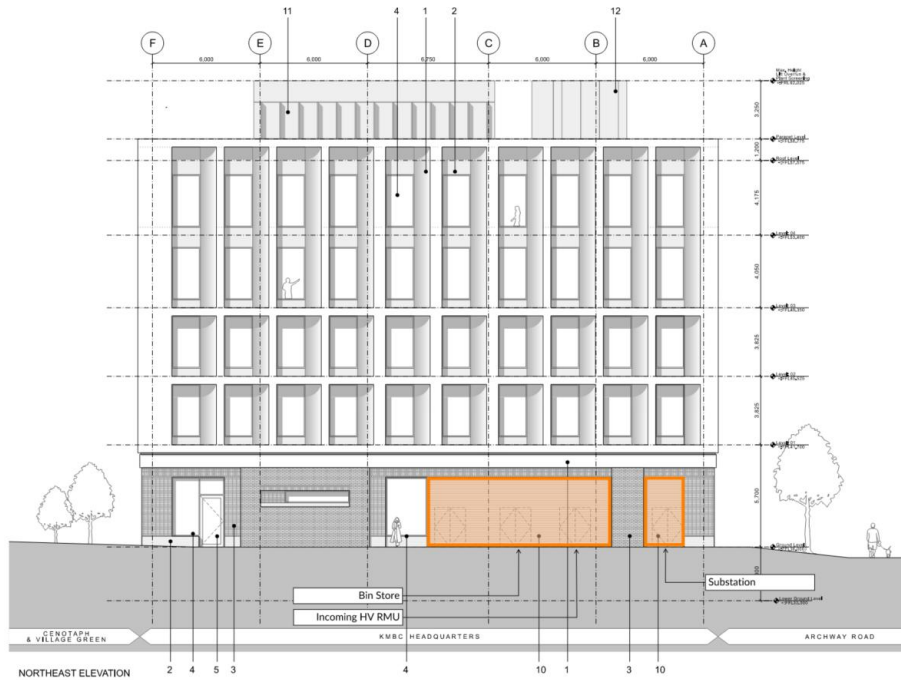
- Blue arrows indicate intake
- Brown arrows indicate exhaust



4. Façade Louvre Locations

Louvred areas of the façade have been highlighted on the elevations below.

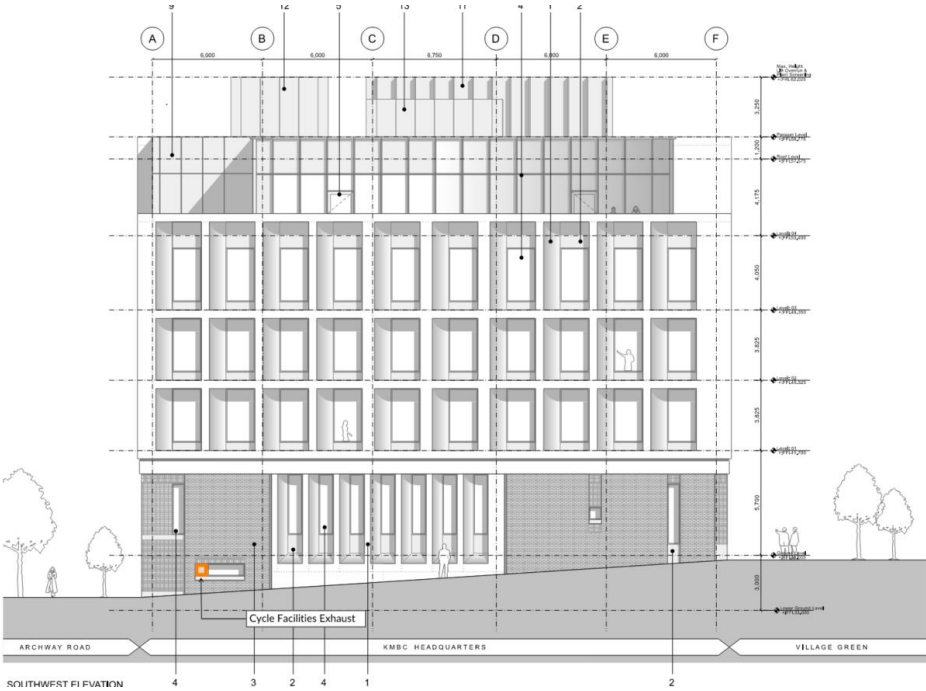
4.1 Northeast Elevation



4.2 Southeast Elevation



4.3 Southwest Elevation





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