102 MARKET STREET, MANCHESTER

Design Appraisal

July 2026

Site Context

The Site was formally occupied by EE as a mobile phone shop, however the Site is currently vacant and boarded up.

Planning permission is sought for the installation of louvres to the shopfront and associated works. Wasabi's occupation of the store requires the installation of additional louvres, in order to allow kitchen operations to be carried out at the site.

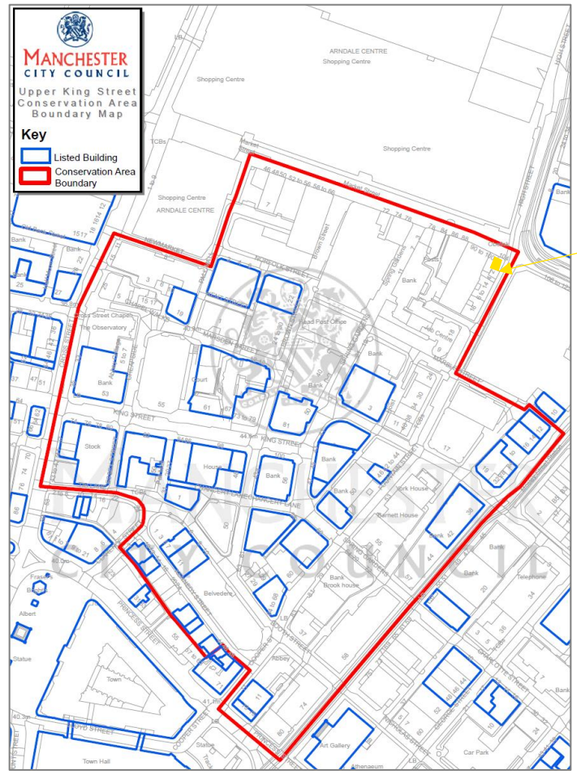
The site is located in the Upper King Street Conservation Area, however the site itself is not listed. The Grade II Listed Rylands Building forms the closest Listed Building, located at 109–127 Market Street.



Fountain Street Elevation



Site Elevation



Upper King Street Conservation are and Listed Building Map. The Site shown in yellow.

Ventilation Strategy

The proposed ventilation strategy has been developed following a review of the available building constraints, landlord requirements, proposed restaurant use, and the mechanical ventilation requirements for the Wasabi fit-out at 102 Market Street, Manchester. The development requires ventilation provision for fresh air intake, general extract, toilet extract, kitchen extract/recirculation support, and condenser heat rejection airflows. These systems are shown on the Spiritus proposed HVAC layout.

Why Roof or Internal Lightwell Ventilation Is Not Feasible

A roof-level discharge or intake strategy has been considered; however, it is not technically or commercially viable for this building. Furthermore, Wasabi will only occupy the ground and basement floors of the building, their lease demise does not include the upper floors and they have no means to access or use either the upper floors or roof.

The building does not contain an internal lightwell suitable for mechanical ventilation termination. There is therefore no concealed internal route available to discharge or intake ventilation air without introducing new vertical duct routes through the building.

A roof-based strategy would require new vertical service risers from the ground floor retail unit to roof level. This would involve routing kitchen extract, fresh air, toilet extract, and condenser ventilation ductwork through the upper floors. The landlord has confirmed that roof plant space and internal riser space will not be made available, as the upper floors are being developed separately and there is no area available for alternative ventilation services.

The absence of a dedicated riser or lightwell means any roof option would require intrusive new builders' work through multiple floors, coordination with the upper floor development, and the loss of commercially usable floor space. It would also introduce additional fire compartment penetrations and would require a substantially more complex fire-stopping, fire damper, access, and maintenance strategy.

For these reasons, the use of the available external elevation is the only practical ventilation route for the ground floor unit.

Benefits of the Elevation Louvre Strategy Compared with Roof or Lightwell Options

Locating the ventilation louvres on the external elevation provides several advantages over the roof or internal lightwell strategy, given the specific constraints of this building.

Firstly, it avoids any loss of upper-floor lettable area as no service riser is required through the upper floors.

Secondly, it reduces fire strategy complexity. A roof-level duct route would require ductwork to pass through multiple floors and potentially multiple fire compartments. By retaining the ventilation strategy at ground floor/elevation level, the extent of compartment penetrations is significantly reduced, lowering the risk of fire and smoke spread through the building and reducing the reliance on multiple fire dampers, fire-stopping interfaces, and access panels.

Thirdly, it reduces installation complexity and cost. Running ductwork from the ground floor to roof level would require significant builders' work, long duct runs, access through other demise areas, additional supports, fire-rated ductwork or fire dampers where required, and out-of-hours coordination. The elevation louvre option avoids these works and therefore provides a materially lower-cost and lower-risk installation.

Finally, the elevation louvre arrangement reduces fan energy use and associated carbon emissions. Shorter duct runs and lower system pressure drops allow fans to operate at lower resistance and reduced speed. This reduces electrical running costs and improves the operational carbon position of the installation compared with a high-resistance roof discharge system.

Ventilation Strategy

Louvres Size Justification

The louvres have been sized based on the total air volume required for the mechanical systems, including extract air, fresh air, and air movement associated with the AC condenser heat rejection. The design intent is to keep the face velocity through the louvre to approximately 2.0m/s. This is a practical design velocity that helps to:

- reduce aerodynamic noise from the louvre;
- reduce pressure drop through the external louvre;
- limit fan energy use;
- reduce the risk of rain ingress compared with higher velocity selections; and
- provide a more robust arrangement for combined intake/exhaust/plant ventilation airflow requirements.

The louvre area is therefore not selected arbitrarily. It is derived from the required air volume and the target velocity:

Required free area = Air volume ÷ Design velocity

Where the total combined airflow is approximately 6.1m^3/s, and the target louvre velocity is 2.0m/s, the required effective free area is:

6.1m^3/s ÷ 2.0m/s = 3.05m^2 free area

As external weather louvres do not provide 100% free area, the physical louvre opening must be larger than the calculated free area. The drawing proposal therefore shows the louvre arrangement as required.

Rationale for One Single Louvre

A single consolidated large louvre is preferred over multiple smaller louvres for technical, architectural, and maintenance reasons.

Multiple small louvres would require several separate external façade penetrations, increased builders' work, more complex internal ductwork distribution, and potentially greater visual clutter across the shopfront. Multiple smaller louvres would also increase the number of pressure losses, transitions, plenum connections, and acoustic weak points.

By consolidating the airflow into one principal louvre zone, the design can:

- simplify ductwork routing within the ground floor ceiling and plant zone;
- reduce the number of façade penetrations;
- provide a cleaner architectural treatment;
- allow the louvre to be visually integrated into a single vertical design feature;
- reduce system resistance compared with multiple smaller louvres;
- provide better maintenance access and simpler future replacement;
- improve acoustic control by allowing attenuation and airflow distribution to be managed in a single coordinated plant arrangement.

Louvres Design Cues

There are several examples within the Upper King Street Conservation Area of louvres that have a range of designs, locations, and architectural styles. These demonstrate a variation in scale, material finish, and placement. Examples of this are shown below.

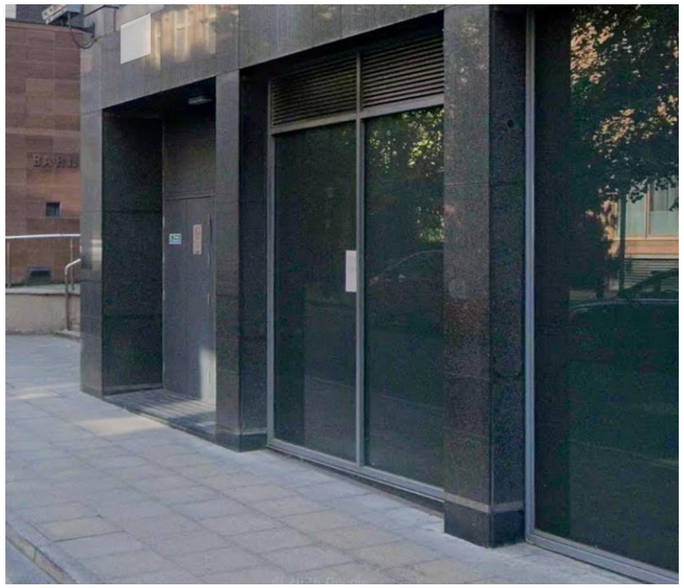
Moose Coffee, Fountain Street

- Approx. 140m to the south of the site.



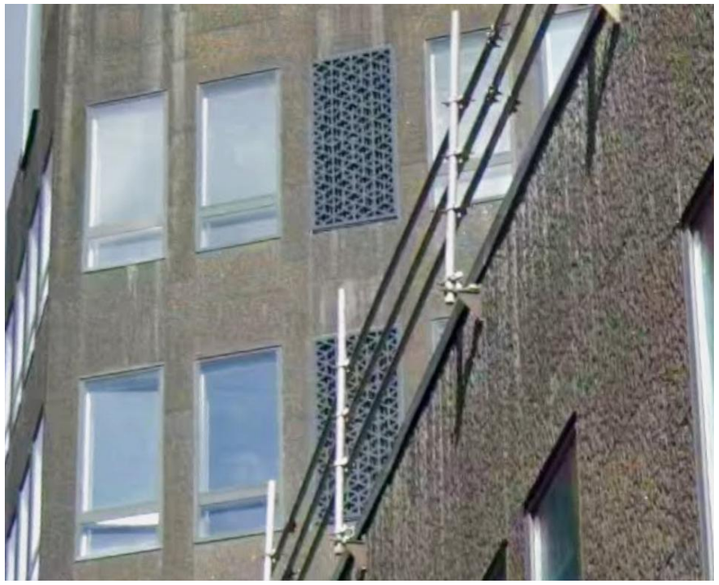
Adj. Barnett House, Fountain Street

- Approx. 200m to the south of the site



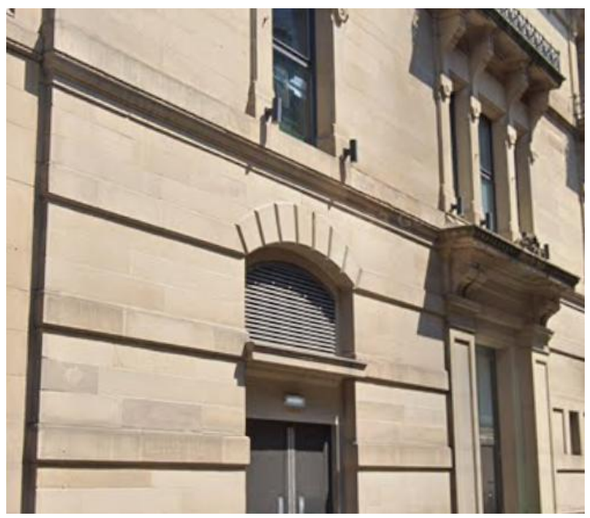
55 King Street

- Approx. 260m to the southwest of the site.



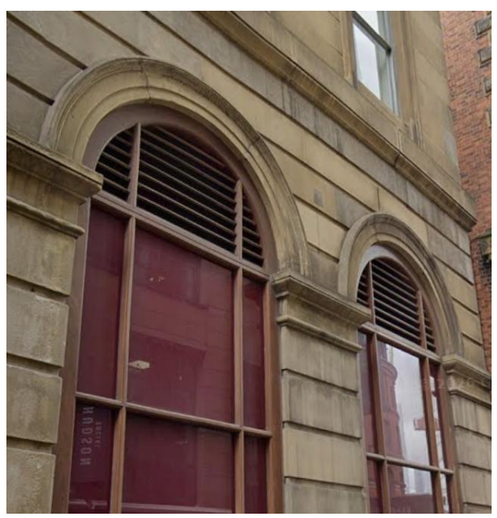
7-11 Kennedy Street

- Approx. 140m to the south of the site.



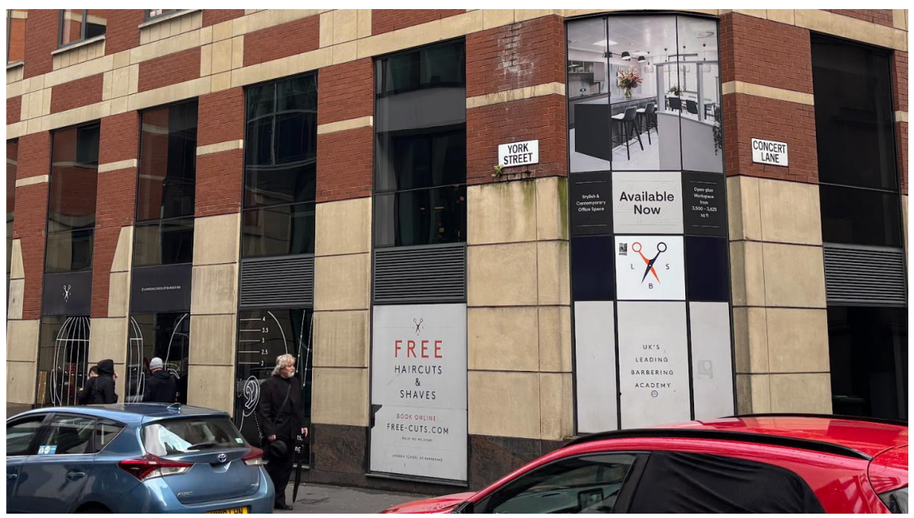
Pizza Express, King Street

- Approx. 140m to the south of the site.



York Street / Concert Lane

- Approx. 140m to the south of the site.



Elevation treatment - As Existing



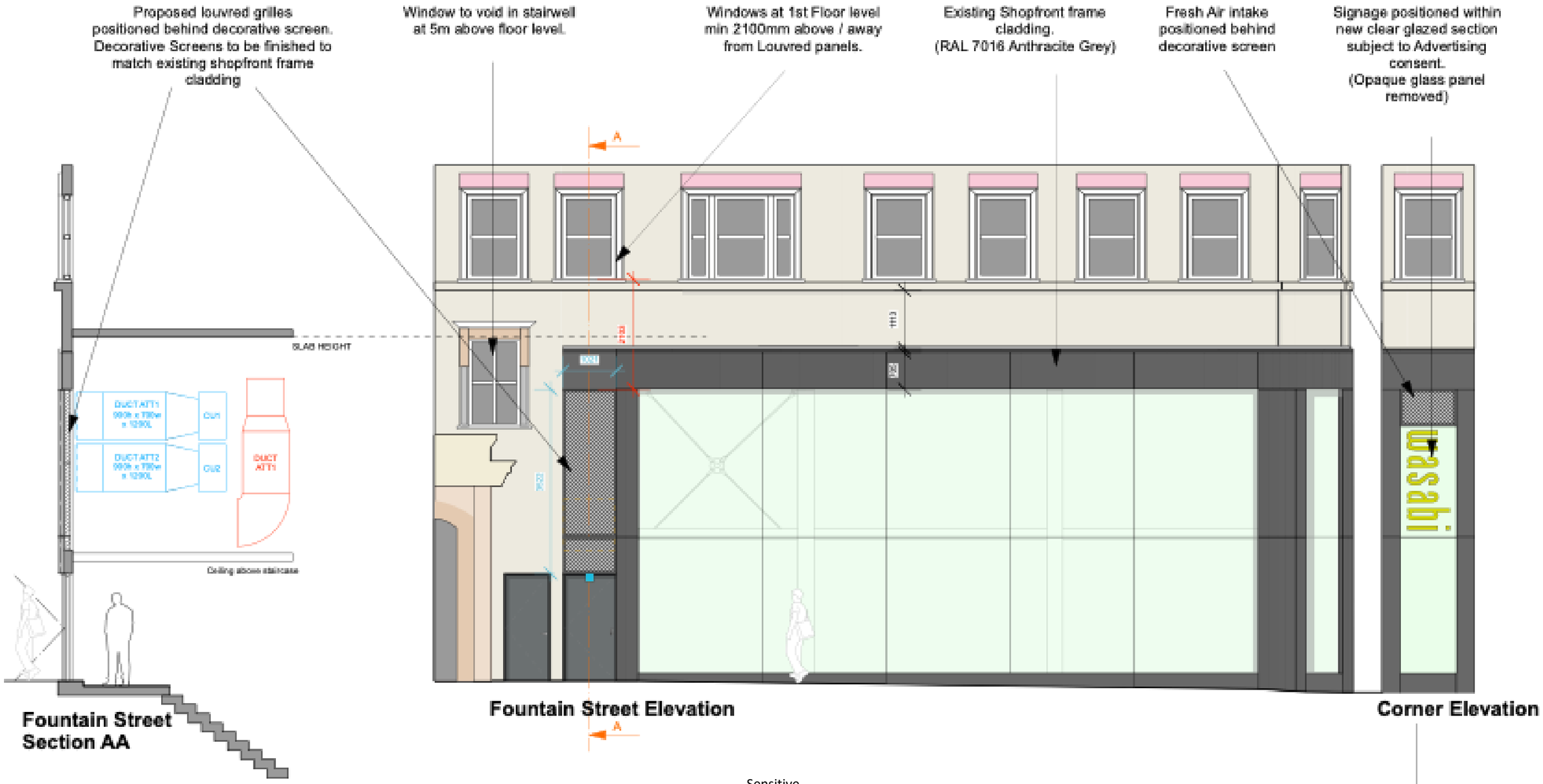
Elevational Treatment – New Proposal

Fountain Street:

- Contain Louvred / decorative grilles to single vertical line as an extension of existing Metal cladding in the same colour. Glazing remains intact.
- Grilles are positioned above existing fire exit

Corner façade

- Replace top glazing panel with Louvred / decorative grille 700mm high for fresh air intake. Clear glass panel positioned under grille with Illuminated signage (Signage position TBC and subject to separate advertisement application)



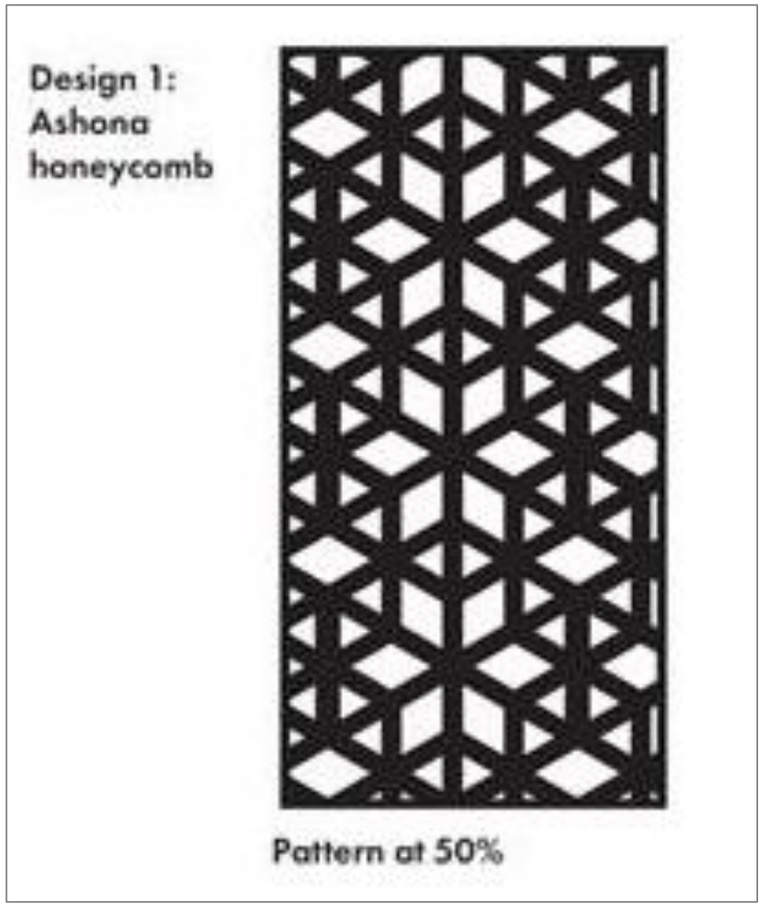
Louvre Design - Decorative Screen

Fountain Street

To minimise projection from the wall, a slatted, angled louvre providing 50% airflow will be installed. A decorative screen will be added to the louvre to provide a higher-quality visual finish. The panel sizes will follow the heights of the existing adjacent shopfront frame and glazing lines so that the new addition is seamlessly integrated.

The decorative screen will be colour matched to the existing shopfront frame (RAL 7016 Anthracite Grey)

The design reflects similar detailing and treatment already present elsewhere within the vicinity of the site.



Corner Facade

Existing opaque glass panel will be removed and replaced with a slatted, angled louvre providing 50% airflow will be installed in the top 25% . A decorative screen will be added to the louvre to provide a higher-quality visual finish. The decorative screen will be colour matched to the existing shopfront frame (RAL 7016 Anthracite Grey)

The remaining 75% will be a new clear glass panel

Summary

After the previous planning application refusal, the design team have conducted a detailed architectural and technical review of the ventilation strategy which include the following attributes:

1. Design and Visual Integration- Fountain Street

- The existing curtain glazed and metal frame engineered system on Market Street is not affected and therefore the contemporary clean shopfront aesthetic remains intact when viewed from Market Street's busy thoroughfare.
- The principle of the design is to marry the new louvres and existing Fire Exit door with the existing Shopfront frame engineered system so there is a continuation of the shopfront framework.
- Positioning the louvres / decorative screens above the existing Fire Exit and colour matching it to the existing shopfront frame cladding creates a harmonious visual design on the Fountain Street elevation.
- The height of the louvres / decorative screens is to match the existing glass panels so there is synergy and rhythm with the existing curtain glazed system.

2. Enhanced Shopfront Activation and Integrated Ventilation Strategy - Corner Façade

- Existing top glazing panel is opaque. In making this 75% transparent, this will still facilitate active views into the unit.
- This is considered the least visually obtrusive ventilation strategy and we have minimised the size of the grille to optimise visibility into the unit.
- The louvre / decorative screen will be colour matched to the existing dark grey metal frame so that it feels integrated into the curtain glazed system.

3. Ventilation Louvre Strategy

- From a ventilation strategy perspective, the proposed louvre strategy is a direct response to the physical and landlord constraints of the building. There is no usable internal lightwell, no available service riser, and no landlord-approved roof plant route. The upper floors are being developed separately and the landlord is not able to give up lettable area for ground floor ventilation services.

- The external elevation louvre solution is therefore the only technically viable route for the required mechanical ventilation and condenser airflow. The size of the louvre is governed by the required air volume and a sensible design velocity of approximately 2.0m/s. The single consolidated louvre arrangement provides the most efficient, least intrusive, and most coordinated solution while reducing internal ductwork complexity, fire risk, fan energy, installation cost, and impact on the landlord's upper-floor demise.

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