



CWC

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consulting

8 & 8a, St John Street

Ventilation Statement

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1.0 Introduction

This Ventilation Statement has been prepared by Crookes Walker Consulting (CWC) to support the application for the approval of the proposed residential development in Manchester (8 & 8a St John Street), for Planning Permission.

The proposed development is a new two-storey dwelling to the rear of the site fronting onto Artillery Street and Longworth Street and a change of use to No.8/8a St John Street from office to two number residential dwellings along with a 3 storey extension to the rear of the listed property.

The proposal for the new dwelling will be constructed to the rear of the existing property with the main entrance to the dwelling located off Artillery Street and a secondary entrance accessing the rear garden yard directly off Longworth Street.

The proposed dwelling will contain a single four-bedroom dwelling with living and dining spaces at the ground floor and bedrooms/offices on first floor. The dwelling will contain an internal garage space large enough for a single car located adjacent to the entrance and located directly from Artillery Street.



Figure 1 - Site Location in Manchester

2.0 Ventilation Strategy

The proposed ventilation strategies adopted will provide the recommended ventilation rates and energy conservation measures to comply with the 2021 editions of Approved Document Part L and Part F Volume 1 and Volume 2.

In addition, the ventilation strategy and controls strategy will aim to enhance the energy conservation requirements where economically feasible, to minimise carbon emissions associated with ventilating the building.

The ventilation systems will be designed in line with good practice for the avoidance of nuisance noise and enhancement of air quality, for both the comfort and well-being of the building occupants and residents.

2.1 Air Quality

The development mandates a comprehensive air quality assessment to ensure the well-being of its occupants. Recognizing the importance of maintaining a healthy indoor environment, potential filtration measures for contaminants such as carbon and other pollutants may be implemented based on the assessment results. By prioritizing air quality, this specification aims to create a living space that promotes the health and comfort of residents, demonstrating a commitment to their overall well-being.

2.2 Noise Impact Assessment

In addition, the project requires the necessity of a thorough noise impact assessment to address potential environmental noise concerns. After the assessment, strategic measures will be implemented to ensure the interior of the residential units remains a tranquil and comfortable space for occupants. This commitment to noise mitigation reflects our dedication to creating a serene living environment, enhancing the overall quality of life for residents within the residential block.

2.3 Overheating Assessment

The dwellings will be designed in compliance with 'Approved Document 'O' Overheating Mitigation' to reduce the risk of overheating. The assessment will be undertaken using a dynamic thermal model and the analysis will follow the methodology described within Approved Document 'O'.

3.0 Residential Apartments

The apartments will be ventilated in accordance with Approved Document Part F (2021) Volume 1.

It is proposed that each apartment will be provided with 'whole house' mechanical ventilation with heat recovery (MVHR) to extract air from the kitchen, and bathroom(s) and provide fresh air to the living areas and bedrooms.

In addition to mechanical ventilation, openable windows may be required during peak summer periods as part of the ventilation strategy to assist with the avoidance of overheating and purge ventilation.

The MVHR will operate continuously to provide background ventilation with a boost facility operated by a switch located in the kitchen. In addition, the MVHR will automatically boost based on sensing high levels of humidity using an integral humidity sensor.

MVHR air intake and exhaust ventilation will terminate outside via intake and exhaust through the roof for each apartment.

It is proposed purge ventilation for Part F compliance to each room will be provided through the use of openable windows sized at a minimum of 1/20th of the floor area and with a minimum 30-degree opening.

Ventilation for overheating shall be achieved with the operation of MVHR or MEV systems and openable windows. The strategy is that the overheating will be dealt with mainly via mechanical ventilation and that openable windows will be available to be used by the occupants in peak conditions of overheating.

The overheating assessment shall consider the effects of acoustics and the potential impact on residents in line with ANC Acoustic Ventilation and Overheating: Residential Design Guide.

Kitchen hobs to include domestic cooker hoods, which will be the recirculation type to include grease panel filters for capture of oil and grease within the air. The MVHR / MEV extract systems will provide extract air to kitchens in line with Part F requirements.