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New Cross, Manchester
Oldham Road,
Ventilation Statement

QA

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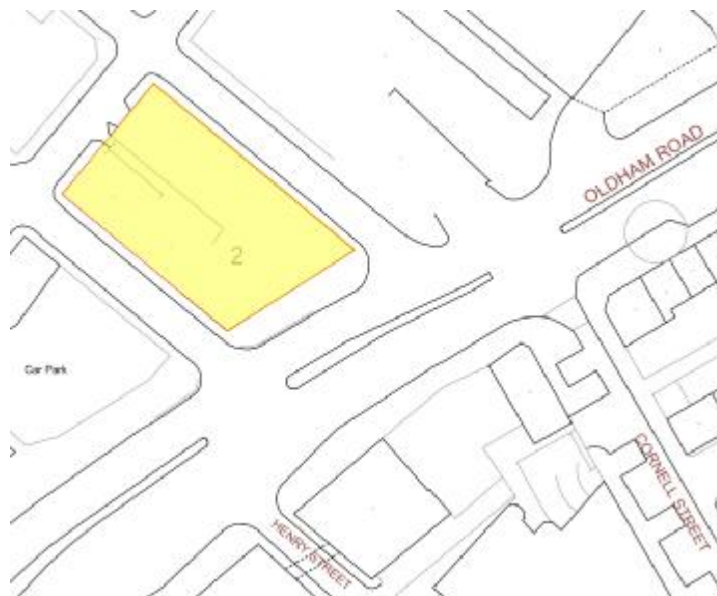
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Section 1 - Introduction

Futureserv Ltd have been appointed by Mulbury Homes Ltd to produce a Ventilation Statement in support of a planning application for the construction of a high-quality new build apartment development at Oldham Road, Manchester. The proposed development shall consist of 144 residential apartments with a mixture of 1Bed, 2Bed and 3Bed accommodation.

This report relates to Oldham Road. Reports in relation to Bendix Street and Goulden Street are submitted separately in support of the relevant planning applications.

The building will also incorporate an element of commercial unit (Class A1/A2/A3/ and B1), front of house reception, plant and refuse areas, cycle spaces and parking at basement floor level.



This Ventilation Statement has been prepared to illustrate the proposed ventilation designs. The Statement addresses the building regulation requirements described within Approved Document Part F, 2010 for ventilation to the various facets of the proposed development, namely, apartments and car park ventilation.

Futureserv Consulting Engineers have collaborated with the design team in order to provide a holistic solution for the building that will provide an efficient envelope and contain intelligent building services reducing the environmental impact of the development whilst providing comfortable living accommodation.

The site is brownfield in nature and will be developed following the demolition of the existing commercial unit and car parking illustrated in the below image.

The site is bound by Oldham Road, Marshall Street, Addington Street and Chadderton Street.



Section 2 - Ventilation Strategy

2.1 - Basis of Design

The ventilation strategy has been designed to comply with the Building Regulations approved document Part F Means of Ventilation, 2010 with 2013 amendments.

This ventilation statement describes the basis of the design and outline scope of ventilation works for the various parts of the proposed development on Thompson Street.

Table 5.1a Extract ventilation rates			
Room	Intermittent extract	Continuous extract	
	Minimum rate	Minimum high rate	Minimum low rate
Kitchen	30 l/s adjacent to hob; or 60 l/s elsewhere	13 l/s	Total extract rate should be at least the <i>whole dwelling ventilation</i> rate given in Table 5.1b
Utility room	30 l/s	8 l/s	
Bathroom	15 l/s	8 l/s	
Sanitary accommodation	6 l/s	6 l/s	

Table 5.1b Whole dwelling ventilation rates					
	Number of bedrooms in dwelling				
	1	2	3	4	5
Whole dwelling ventilation rate ^{a, b} (l/s)	13	17	21	25	29
Notes:					
a. In addition, the minimum ventilation rate should be not less than 0.3 l/s per m ² of internal floor area. (This includes all floors, e.g. for a two-storey building add the ground and first floor areas.)					
b. This is based on two occupants in the main bedroom and a single occupant in all other bedrooms. This should be used as the default value. If a greater level of occupancy is expected add 4 l/s per occupant.					

Abstract from Approved Document Part 'F'

2.2 - Apartments

The apartment ventilation systems will be designed to operate continuously at low speed air volumes created by energy efficient fans. This will allow the construction of a tightly sealed and correctly ventilated environment reducing thermal heat loss through reduced infiltration, whilst at the same time improving air quality and reducing the occurrence of moisture and mould.

To provide fresh air into the apartments each dwelling will be provided with a whole house mechanical ventilation heat recovery (MVHR) system. This system comprises of a continuous mechanical supply and extract ventilation unit located within a service cupboard within each apartment.

The unit will be provided with a high level of heat recovery efficiency designed to aid part L compliance of the Building Regulations as detailed within the energy statement associated with this planning application. The air volumes will be determined to satisfy the requirements of the Approved Document Part F of the Building Regulations (see table opposite).



Each unit will intake fresh air and discharge extract air through each apartment façade. The intake and exhaust louvres/ air bricks will be located a suitable distance apart to prevent cross contamination.

Please note due to exceedance of the annual mean objective for nitrogen dioxide is predicted at the ground floor level of the building, the ground floor apartments intake and exhaust louvres/ air bricks shall be elevated to avoid the pollutants.

An intake supply filter inside the unit will be provided to remove incoming particulate and pollen matter.

The ventilation unit will remove air from the bathrooms and kitchens and provide air to the habitable rooms; namely the bedrooms and the living room, this will be via a rigid flat ductwork system with supply and extract air grilles located in the ceilings.

The ventilation systems will be designed in rooms to meet the noise levels stated within the Residential Planning Noise Report. These figures apply for all supply and extract systems.

Please note due to exceedance of the annual mean objective for nitrogen dioxide is predicted at the ground floor level of the building, the ground floor apartments

Windows will remain of the openable type to provide the apartments with purge ventilation, giving the occupant final control over their environment, but without the need to rely on opening windows for day to day ventilation. Glazing to be specified to meet acoustic requirements.

2.3 - Car Park Ventilation

The parking spaces at basement level will utilise mechanical extract for fume dispersion and make up air will be via the shutters; the roller shutter will be of a perforated design to allow adequate make up air.

2.4 – Residential Entrance and Communal Areas

Common landlord areas will be naturally ventilated where possible with supplementary ventilation provided via local mechanical fans as required.

Any ventilation unit connections to intake and exhaust louvres will be in the façade or at roof level and arranged to avoid re-circulation.

Bin stores will be provided with mechanical extract ventilation connected to an appropriate section of the high-level louvre within the façade. Fresh air shall be provided via louvred doors.

Cleaner's cupboards shall be provided with local mechanical extract to the external façade.

2.5 – Commercial Unit

The commercial unit will be designed to a shell and core standard. It shall be the tenant's responsibility for design, approval and installation of the required ventilation systems. The future tenant will provide scheme designs to the landlord and the local planning authority for approval prior to commencement of any fit out works.

Ventilation systems will be designed in accordance with the Building Regulations approved document Part F and all relevant guidance documentation.

Provision shall be made within the building for the tenants to install a general supply and extract ventilation system with a designated area with appropriate high-level louvres within the façade. A service riser to the roof level shall be also be included for any future tenant cooking extract ventilation.

The tenants will be responsible for ensuring that the intake and discharge positions are arranged to avoid re-circulation, and for providing necessary noise

attenuation.

The tenant will also be responsible for installing required toilet extract systems in accordance with relevant guidance.

Section 3 – Conclusion

The ventilation strategy improves on the fundamental principles of the Building Regulations and will make a contribution to reducing the annual CO₂ emissions of the proposed development.

The proposed development will incorporate energy reduction measures in the ventilation systems to reduce the carbon footprint of the site using heat recovery devices and energy efficient fan selections.

Waste heat from the apartments will be recovered by the mechanical ventilation heat recovery (MVHR) systems. This type of ventilation will help to reduce heat demand and provide filtered air to the apartments thus promoting healthy living conditions for the occupants. All fans and motors shall be specified to incorporate ECA accredited technology and appropriate controls.