



**St John St,
Manchester**

Ventilation Statement



4 Jordan Street

Manchester

M15 4PY

Tel: 0161 667 0990

Web: www.zerum.co.uk

Submitted and Prepared by: Andrew Keeling

Project number:3257

Issue: P1

Issue	Date	Purpose	Author
P1	26.08.20	Planning Issue	Andrew Keeling

Document History

Approvals

This document requires the following approvals.

Signed approval forms are filed in the Management section of the project files.

Name	Signature	Title	Date of Issue	Version
Andrew Keeling	AK	Director	26.08.20	P1

Distribution

Name	Organisation	Role
Jason Brown	Tim Groom Architects	Architect
Jenny Fryer	Turley	Planning Consultant

Contents Page

CONTENTS

1.0	Introduction	1
2.0	Development Overview	2
3.0	Ventilation Strategy	3
4.0	Conclusions	5

1.0 Introduction

The project is the development of the site and area around 8a/8b St John's Street within Manchester City Council. The proposals are split into two phases; Phase 1 includes the removal of the existing trees to the rear of the site and the proposal for a new two storey dwelling. Phase 2 involves work to the existing house along St John Street which includes a change of use from offices to dwelling, re-configuring internal layouts, reinstating internal period features and a proposed new 3 storey extension to the rear.

Working with the planning consultant, Turley; Zerum MEP are appointed to draft the Ventilation Statement for inclusion within the suite of planning application documents.

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 (incorporating 2013 amendments) for ventilation to the dwellings.

Project 23 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.

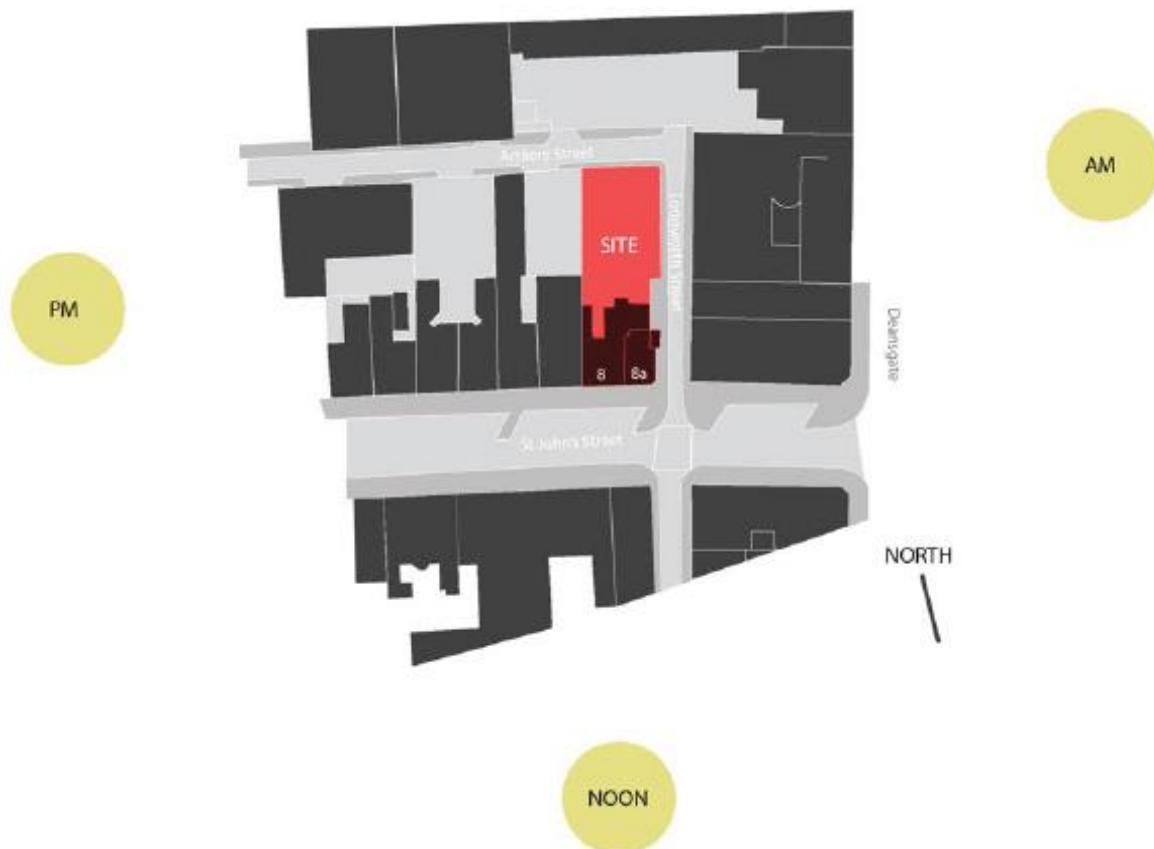
The ventilation statement includes requirements within the Acoustic Planning report and Air Quality assessment, these documents also being included with the suite of planning documents.

2.0 Development Overview

The site for the proposed development is 8/8a St John's Street which is located just off Deansgate in central Manchester. The site sits on a corner plot fronting onto St John Street to the south, Longworth Street along its eastern boundary and Artillery Street to the north.

The existing building along St John Street is three storeys + basement and forms the end of a row of Georgian terraces. It is currently used as two office demises. The properties along St John street including 8/8a are listed and fall within the St John's Conservation Area.

The rear of the site contains an overgrown yard. Historically a row of poorly built terrace houses existed in this location with the last of these being demolished circa. 1970 and replaced with the large trees now present to the rear.



3.0 Ventilation Strategy

Basis of Design

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

This ventilation statement describes the basis of the design and outline scope of ventilation works for the various parts of the 8/8a St John's Street development.

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 whole dwelling ventilation 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.					

New Build and Existing

Mechanical ventilation is required so that occupants do not have to rely on openable windows or trickle ventilation for background ventilation purposes.

The new build and existing dwelling 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 properties, the dwellings will be provided with a whole house mechanical ventilation heat recovery (MVHR) systems. This system comprises of a continuous mechanical supply and extract ventilation unit located within a service cupboards of each dwelling.

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 above).

The unit will intake fresh air and discharge extract air through the roof. The intake and exhaust terminals will be located a suitable distance apart to prevent cross contamination.

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.

4.0 Conclusions

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 development.

The 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 new dwelling 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 thus promoting healthy living conditions for the occupants. All fans and motors shall be specified to incorporate ECA accredited technology and appropriate controls.