



April 2017

**Circle Square (Former BBC Site) Buildings 5 and 6
Planning Submission
Ventilation Strategy Statement Revision 3**

Introduction

This statement has been prepared to provide outline details of the ventilation proposals for Buildings 5 and 6 as part of the Circle Square (Former BBC Site) development in Manchester.

The development consists of a residential apartment building which incorporates 'Affinity Living amenity' facilities and retail units.

The proposed development includes the following uses:

- Residential apartments.
- Amenity areas including gym, media rooms, lounges and private dining facilities.
- Retail, potentially including food and beverage and convenience store uses.

The design and installation of ventilation systems will be developed in line with the following:

- Current Building Regulations Approved Documents.
- CIBSE Guidebooks.
- Health and Safety at Work Act.
- Manchester City Council planning conditions and requirements.
- BREEAM 'Very Good'.
- All relevant British Standards and Codes of Practices.

This statement shall be read in conjunction with the following drawings:

- 1275-SK05-Revision P2.
- 1275-SK06-Revision P2.
- 1275-SK07-Revision P2.
- 1275-SK08-Revision P2.
- 1275-SK09-Revision P2.
- 1275-SK10-Revision P2.
- 1275-SK11-Revision P2.
- 1275-SK12-Revision P2.

It should be noted that the air quality report produced by RPS indicates that there is poor air quality at the lower levels of the building. The implications of this are that mitigation measures are required to the background (not purge) ventilation to the apartments only. The mitigation measures selected are identified in this ventilation strategy document.



Retail Units

Retail Units heating and cooling to be tenant's fit out with the following strategy:

- Via air source heat pumps (VRV/VRF) or similar with remote plant with space allocation at strategic locations in fully louvered plantrooms at the lower levels of the building.
- Ventilation air from high level louvres at the ground floor facade.
- All ventilation systems will be specified to meet the acoustic requirements set out in the Fisher Acoustics guidance for the development.

Residential Units

An independent supply and extract system shall be provided to serve all the bathroom and kitchen areas within each apartment. The system shall be a continuous mechanical balanced ventilation system complete with heat recovery (MVHR) and shall be designed and installed in compliance with Building Regulations Approved Document F.

The apartments shall also incorporate manually opening vents to provide natural ventilation and purge ventilation.

All ventilation systems will be specified to meet the acoustic requirements set out in the Fisher Acoustics guidance for the development.

Filtration will be added to the MVHR systems installed in the apartments on the four lowest levels as a mitigation measure for the excessive Nitrous Oxide levels in the local area.

Landlord Sanitary and Plant Facilities

The Circle Square (Former BBC Site) Buildings 5 and 6 Affinity Living amenity areas will be provided with WC facilities, temporary waste stores (for use between waste collections) and basement plant and cycle storage areas which will need to be adequately ventilated to prevent any build-up of smells, combustible gasses, mould and mildew whilst controlling the humidity of the air.

The sanitary facilities within each core will be provided with extract ventilation at rates which exceed the minimum requirements of Part F whilst remaining energy efficient. In order to do this, demand control systems will be used.

The demand control systems will be based on occupancy within the WCs and humidity within the shower facilities. These systems will be linked to highly efficient modulating controls and motor drives.

Where basement areas require ventilation for smoke extract purposes, bifurcated, fire rated fan systems will be used in order to avoid the need for a commercial level of sprinkler system and the onerous maintenance requirements associated with such systems.



All ventilation systems will be specified to meet the acoustic requirements set out in the Fisher Acoustics guidance for the development.

Café / Restaurant Areas

Retail units 1, 3 and 5 have been identified as having the potential to accommodate kitchen facilities. Dedicated riser space has been identified for the kitchen extract taking the kitchen extract systems to roof level. Additionally plant space at roof level has been allocated for the associated plant. The supporting drawings indicate the route for the extract ductwork and plant space allowance at roof level.

The kitchen extract systems will be designed to meet the various criteria in the Chartered Institute of Building Services Engineers, DW172 and DEFRA design guidance and would form part of each Tenant's fit out installation.

It should be noted that the kitchen extract exhaust will be located at least 1m above the roof level of the respective buildings.

All ventilation systems will be specified to meet the acoustic requirements set out in the Fisher Acoustics guidance for the development.

Fire Engineering Services

It is proposed that the scheme will include the following mechanical services installations to support the fire engineering strategy for the development:

- Sprinkler coverage to a domestic level for the residential spaces including the Affinity Living amenity areas.
- Smoke control to corridors/stairwells.
- Ventilation of refuse stores, plant areas and bicycle stores.
- Dry and Wet Riser installations.



Appendix – Drawings 1275 SK05 – SK012