

Date: 12/10/2022

RE: NEW VICTORIA PLANNING CONDITION 21

HE Simm are designing and installing the ventilation systems for the New Victoria residential development in compliance with the Arup Building Services Employees Requirements (Rev P07) as summarised below:

Residential ventilation systems (Blocks 01 and 02 Level 01 – 25):

Continuous mechanical supply and extract ventilation incorporating heat recovery (MVHR) is provided in all apartments in accordance with the following:

- Building Regulations Approved Document Part B (2010)
- Building Regulations Approved Documents Part F (2010)
- Building Regulations Approved Document Part L (2013).
- Building Regulations Domestic Building Services Compliance Guide (2013)

Apartments are provided with openable windows to provide purge ventilation. Minimum openable free areas are provided to achieve purge requirements in conjunction with the MVHR.

MVHR units are installed in the apartment utility cupboards. Supply ventilation is provided to the following rooms:

- Lounge
- Bedrooms

Extract ventilation is provided to the following rooms:

- Bathrooms
- Kitchens

Under normal operation, the unit shall provide continuous background supply and extract ventilation in accordance with Part F (2010). The MVHR boost shall be activated when either the bathroom light is switched on or a dedicated soft switch within the kitchen area is switched on. The boost setting shall increase the total volume extracted by the system to meet the requirements of Building Regulations Part F.

MVHR connections to atmosphere are installed in the external elevations provided above the façade mounted perforated panel. Sufficient separation is provided between intake and discharge positions to ensure that recirculation does not occur

Landlord and Amenity Areas (Block 01 and 02 Lower & Upper Ground Floor & Link Bridge)

Local heat ceiling void mounted recovery units are provided in staff and residential amenity areas on the lower and upper ground floor and link bridge.

Extract only ventilation is provided to staff WC and welfare facilities located on lower ground floor and upper ground floor and link bridge.

The Refuse Stores on lower ground floor of blocks 01 and 02 have a mechanical extract system for odour control. The extract fans operate to achieve a ventilation rate of 6 ACH (air changes per hour) from each refuse store for odour extract under normal

operation.

MVHR and Extract ductwork connections to atmosphere are installed in the external elevations. Sufficient separation is provided between intake and discharge positions to ensure that recirculation does not occur

Retail Unit Ventilation Systems (Block 02 Upper Ground Floor)

No mechanical ventilation systems are to be installed in the retail units under the contracted works. Space for louvred openings are provided at high level in the façade to allow the tenants to fit out local ventilation systems

Smoke Ventilation of common corridors on residential levels (Extracted from the Arup Fire Strategy Report Revision E 10th August 2022 and HE Simm are installing in line with)

Smoke ventilation provisions are required to all sections of the residential corridors. The mechanical smoke control system is to be provided in accordance with BS EN 12101-3:2015 guidance with AOVs included in accordance with BS EN 12101-2:2003 guidance. The detailed performance requirements have been demonstrated as adequate in Arup's CFD study, recorded in the 'New Victoria CFD Report' (Issue 4 dated 02 August 2022).

One mechanical extract shaft of 1.0m² geometric internal free area, located at each end of the residential corridor, are to be provided. The shafts are to be formed of 120 minute (EI) fire-resisting construction.

The shafts are to be provided with an extract fan; the volume extraction rate is to be 4.0m³/s from the corridor. The extract fan is to be fire rated to achieve operation at 300°C for 60 minutes with components that have a melting point exceeding 800°C. An AOV shall be provided on each storey from the extract shaft to allow smoke in the corridor to flow into the smoke extract shaft. The minimum size of the AOV required is 0.8m².

The openings to the extract shaft on each level must be provided with smoke control dampers that achieve minimum 60 minutes (E) fire resisting performance from both sides and 120 minutes (S) smoke resisting performance tested to BS EN 1366-10:2015 and classified to BS EN 13501-3:2005 for fire resistance.

Two AOV's (windows) actuated by common corridor detectors are provided on each storey to allow additional make-up air to flow into the corridor directly from outside. The combined geometric free area of the two AOV's on each level is approximately 1.0m² (0.5m² each).

A mechanical supply shaft shall be located within the lobby area of each residential floor. The size of the shaft to be 0.8m² geometric internal free area. The supply shaft is to be provided with a supply fan; the volume supply rate to be 2.5m³/s to the corridor. An AOV shall be provided on each storey from the lobby supply shaft; the minimum permitted size of the AOV to the shaft based on Arup's modelling is 0.48m².

An AOV having a minimum free area of 1.0m² at the top of the staircase shall be operable at fire and rescue service access level allowing the fire service to open or close the vent.

A physical smoke resisting downstand to 2.1m above floor level is provided at both areas of the central corridor zone to obstruct and slow smoke flow into the lift landing area at high level.