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Circle Square Buildings 7&8

Residential Odour and Fumes Extraction Statement

The following pack outlines the strategy for the extraction of odours and fumes from the residential areas of buildings 7 & 8 within the Circle Square development. This pack includes;

- Apartment Ventilation Layouts
- Corridor Ventilation Layouts
- Amenity Area Ventilation Layouts
- Bin Store Ventilation Layouts
- Plantroom drawings

Apartments

The extraction from apartment spaces is to be performed by the individual apartment Heat Recovery Units (MVHR units), which will extract odours and fumes from within the apartment to the external and supply tempered fresh air from the external. These MVHR units also serve as cooking extract units with a boost setting, and as such are situated above the stoves within apartments.

Apartments are also supplied with manual opening windows to provide further natural ventilation and purge ventilation should this be required.

Amenities Areas

Within Amenities spaces, this duty will be performed by the centralised HRUs for these areas which will extract odours and fumes from the spaces they serve to the external, and supply tempered fresh air to the back of fan coil units for further circulation within these spaces. The kitchen extract within these spaces is provided by standalone re-circulation hoods above stoves, which will filter grease and odours before returning air to the space.

Standalone Extract Systems

Individual extract systems for foul air removal are provided to toilets not served by the MVHR systems such as those on the Building 6 mezzanine, and building 6 Level 35, via stand alone extract fans serving these spaces. All areas containing sanitary facilities are to be provided with a minimum of extract ventilation to achieve the requirements the standards set out within Building regulations part F.

Plantrooms

Gas Meter locations are ventilated via high and low level ducted passive ventilation systems to comply with the requirements within BS6400-1.

The Boilers and CHPs within the level 15 plantrooms are of the low NO_x type, and are provided with flues which rise to roof level and terminate 2000mm above roof level.

Bin Store Extract

The bin stores and chutes are ventilated to reduce odours and prevent the build-up of toxic and explosive gasses within the rooms.

Each bin store utilises a fan at the top of the bin chute which discharges to atmosphere through the roof to ventilate the refuse store.

Residential Corridor Smoke Ventilation

Each stair core is ventilated by a 1.5 m² automatic stairwell ventilator (AOV) at the head of the stairs. There is a manual override at the bottom of each stair core to allow the fire brigade to alter the operation of the AOV.

The corridor smoke extract is served by mechanical smoke extract shaft with suitably sized OVs (openable ventilators) to the smoke shaft with a fire brigade override adjacent the OV at each floor.

Air inlet is provided by an AOV located on the façade to outside at each level. The mechanical smoke extract system is fully automatic in operation and be linked via a Fire Alarm interface to operate if a fire signal has been received.

The mechanical smoke extract system (utilising additional general extract fans) is also utilised to overcome overheating within the corridors.