*Our Ref: 3156/100630/DS1*

**Design and Access Statement**

**THE HATTON**
**51-53 HATTON GARDEN**
**LONDON, EC1N**

## PROPOSED REPLACEMENT OF AIR CONDITIONING EQUIPMENT ON ROOF

### Description of the Proposed Works - Heat Pump Replacement System

The new air conditioning plant will be located on the 6th floor roof of the building as shown on the supporting plans and sketches.

The proposed equipment will comprise two Heat Pump Outdoor Units and centrally located on the roof and supported by the existing structure.
The new plant will be 700mm higher than the existing plant.

The noise survey and resulting calculation has established that the noise level at 1.0metre to the nearest sensitive façade of the adjacent property between the hours of 7am to 11pm is 40.4dBA which is in line with the Camden Council Environmental Policy, SD7b (Noise Pollution) of the Replacement UDP 2006.

The requirement for the replacement of the existing plant has been reviewed in the context of the following factors:-

- Existing plant is time served circa 1998 and continual maintenance issues with defective parts and sytem under performance in not providing comfortable conditions within the office space.
- Limited controls as the system only provides localised room temperature controls and centralised time clock.
- Inefficient system as compared to current equipment in the market which is more efficient, quieter and will provide extended life of the building systems.

In consideration of the above factors an assessment of the various air conditioning systems it was agreed with the building owner that a full replacement of the existing system will be undertaken which satisfies the following criteria:-

- New “Colt Caloris” Heat Pump system will provide life expectancy of 15-20 years subject to recommended maintenance being followed to manufacturer’s recommendations.
- Increased efficiencies relative to the existing plant. New Colt system provides an expected COP of 4.0 as compared to the existing system with COP of 2.0. Coefficient of Performance (COP) relates to amount of electrical energy into the system being converted to a proportional output of heat where in this case the new system is increased by 100%.
- This then contributes to lower CO2 emissions and additionally allows the boiler to be derated by 50% during winter operation.

- The plant will have enhanced temperature controls and system monitoring to a centralised controller which allows the individual space to be closely monitored and controlled; allowing the building operator to switch the plant on/off as required to suit the occupancy times. This is an enehancement over the existing basic controls so will further optimise the usage of the sysetm operation and contributing to lower energy demand and carbon emissions of the building.

Access

Accessibility to the roof is as existing and via the metal stairs off the 6th floor restaurant.