

27 Hampstead High Street, London, NW3 1QA

Ref: 2021/5723/P & 2022/0036/L

## **Cooling Hierarchy Statement**

### **Description of the Proposal:**

Installation of external air conditioning unit and associated acoustic enclosure.

### **The Cooling Hierarchy:**

#### **Minimise Internal Heat Generation Through Energy Efficient Design:**

The application is for air conditioning only and does not include for any other external works or alterations to the existing building. New light fittings throughout will use low energy LED lamps.

#### **Reduce the Amount of Heat Entering a Building In The Summer Through Orientation, Shading, Albedo, Fenestration, Insulation and Green Roofs and Walls:**

The building is existing and located within the Heath Street/High Street sub area of the Hampstead Conservation Area. Consequently, limited opportunity for external alterations or building fabric upgrades exist due to its location. The air conditioning will be used both for cooling (during the summer months) and heating (during the winter months), subsequently removing the need for a gas or electric central heating system. The air conditioning will also only be used during opening hours limiting its overall usage.

#### **Manage The Heat Within The Building Through Exposed Internal Thermal Mass & High Ceilings:**

The building is existing and as such doesn't allow for alterations to create higher ceilings or thermal mass elements. That being said, to the rear of the ground floor a small mezzanine area opens up and rises from the ground floor to create a floor to ceiling height of 3.8 metres.

#### **Passive Ventilation:**

The building in its current form includes a number of passive ventilation elements which can be used. At lower ground floor level there is a pair of large opening doors which open up onto the rear courtyard. At ground floor level there is a louvred glass fan light to the shopfront and at upper ground floor/mezzanine level there are a number of openable windows which face the rear courtyard.

**Mechanical Ventilation:**

The building currently contains minimum ventilation and as such a new small installation is proposed utilising the existing vents/grilles. The mechanical ventilation will not provide the building with the required cooling and heating.

**Active Cooling:**

An active cooling system would not be the most efficient means of cooling the space due to the size of the required external units and the limited reduction in air temperature they create. The proposed air conditioning units provide the most efficient means of heating and cooling the space using smaller external units. An active cooling system would also not provide the necessary heating during the colder periods.