



---

Please ask for: **Graham Rosser**  
Direct Dial: **01525 217904**

Our Ref: **RM / 13 / 139**  
Email: **graham@rmac.design**

Your Ref:

---

17 August 2022

## **Planning Statement Cooling Hierarchy**

**Address:** 21 Cressy Road, Hampstead, London. NW3 2NB.

**Proposal:** Installation of two external air-conditioning condenser units (retrospective) and erection of a replacement purpose-built acoustic enclosure around them.

### **Previous refusal.**

Application 2020/4238/P was refused due to insufficient information to demonstrate that the proposed plant would operate in accordance with the Council's minimum noise and vibration standards and that the plant, when operating at full capacity, would be capable of doing so without causing noise disturbance and harm to the local residential environment, contrary to policies A1 and A4 of the Local Plan.

Further information and reports were submitted with application 2022/1237/P which satisfied this reason for refusal.

The second reason for refusal of application 2020/4238/P was that in the absence of dynamic thermal modelling to demonstrate the need for active cooling equipment, the Council could not be satisfied that the proposed works were necessary and that appropriate climate adaptation measures to reduce the impact of urban and dwelling overheating could not be achieved by other preferred measures as set out in the cooling hierarchy, contrary to policy CC2 of the Local Plan.

This reason for refusal remained the only reason for refusal with application 2022/1237/P.

### **This application.**

This application seeks to justify retention of the air-conditioning units along with the proposed acoustic shelter, through the submission of a cooling hierarchy assessment and supporting dynamic thermal model.



Director: Graham Rosser BSc (Hons), MRICS, C.Build E, MCABE

VAT registration number 174 2169 08



## Introduction.

The condenser units were relocated to the ground floor from the previous first floor position by the developer (Mr C Lay, CRL Asset Finance Ltd.) in 2017 following enforcement notice EN17/0257.

The property was then sold in May 2018 to the current owners, Mr Paul Norman & Mrs Courtney Natoli and it was understood at the time that planning permission was not required following the closure of enforcement notice EN17/0257.

A further enforcement notice EN20/0530 was subsequently issued by the Council and this remains outstanding.

## The occupants.

Both Mr Norman and Mrs Natoli are construction professionals, Mr Norman is a main board director of a construction company (8build Limited), Mrs Natoli is a Partner at a property consultancy (Gardiner & Theobald). Both work from home between 2-4 days a week and rely heavily on video conferencing for meetings which can often last 2 hours plus, to various business stakeholders, lawyers and clients. In their role it is essential they are fully focused on their meetings and the environment they work in plays a huge part of this.

## Existing property.

The property was originally two houses, later converted to four flats which fell almost derelict before being converted back to two dwellings. The main structure is two-storey with a converted loft space and solid brick external walls, concrete ground-floor, timber first-floor and double glazed window & doors. The conversion works included all thermal upgrades required by building regulations current at the time. The rear of the property faces due West.

## Cooling Hierarchy.

The air conditioning installation pre-dates the current 2017 Camden Local Plan but it is this plan which has been referred to by the planning department and the following assessment lists the preferred order of cooling methods from design and specification through to passive and mechanical ventilation and if all else fails, air conditioning.

### *1. Minimise internal heat generation through energy efficient design.*

The property was provided with a modern heating system which complied with Part L of the Building Regulations, and a mechanical ventilation system which complied with Part F. The system provides automatic energy reduction when the outside temperature does not require the property's system to provide any additional warmth. External weather compensation is also provided to the main heating system along with room zoning for individual control.

### *2. Reduce the amount of heat entering a building through orientation, shading, high albedo materials, fenestration, insulation and the provision of green infrastructure.*

As noted above, the property was already existing and therefore the orientation, shading, green infrastructure, etc. was fixed and could not be materially changed. The walls and roof were thermally lined internally and the fenestration was replaced with compliant units.

### *3. Manage the heat within the building through exposed internal thermal mass and high ceilings.*

As noted above, the property is existing and therefore the ceiling heights and internal thermal mass can not be changed.



Director: Graham Rosser BSc (Hons), MRICS, C.Build E, MCABE

VAT registration number 174 2169 08



#### 4. *Passive ventilation.*

Ventilation is provided by the openable windows, however again as it is an existing building, dimensionally it does not achieve the requirements for Passive Haus or other passive only ventilation strategies.

#### 5. *Mechanical ventilation.*

Energy efficient mechanical extract fans have been fitted to the ground-floor w.c., bathroom, ensuite and the main kitchen cooker hood. These remove vitrified air from those spaces, with fresh air being provided by the openable windows.

#### 6. *Active cooling.*

Notwithstanding the extensive refurbishment works that were undertaken, it became evident that the addition of energy efficient air conditioning was required to some of the principal rooms to provide cooling for the hot summer months when the air temperature is excessive and air flow alone cannot provide a reasonable level of comfort.

From the thermal model attached it is evident that the temperatures during the summer period exceed the limits of comfortable conditions, especially as the occupants also work from home during the daytime and thus without the addition of the comfort cooling to reduce these extreme temperatures, the environment cannot be cooled sufficiently.

In summary, clever design and specification is well suited to a new building where thought can be given to position, orientation, shading, material use, etc. and where other more environmentally efficient methods of cooling and heating can be incorporated into the design, but unfortunately, adapting an old building for modern living is much less successful. With the current cost of energy, it is regrettable that air conditioning is required but the thermal model proves beyond doubt that it is.

The accompanying thermal model demonstrates the summer temperatures of each room in the house, many of which were existing but upgraded to meet current building regulations, and it can be seen that those temperatures far exceed acceptable levels.



Director: Graham Rosser BSc (Hons), MRICS, C.Build E, MCABE

VAT registration number 174 2169 08

