

Project Reference: 208-18RPR  
Project Title: 18 Regent's Park Road, London, NW1  
Revision: -  
Issue Date: 02 April 2019

## **SUSTAINABILITY STATEMENT TO SUPPORT APPLICATION 2019/0556/P**

This Sustainability Statement has been produced to support application 2019/0556/P, for 'installation of air conditioning condensing unit on roof terrace', to serve rooms to the first and second floors.

Camden Council state:

"A sustainability statement should accompany applications for:

- *All new build residential houses and flats*
- *Multi-occupation residential buildings with 10 or more rooms/units or occupiers*
- *Residential refurbishments, conversions and change of user for:*
- *5 or more dwellings, or*
- *500sqm or more of floorspace*
- *Non-residential development of 500sqm or more of floor space (including offices, retail and industrial)"*

As this application pertains to a single-family residential property of less than 500sqm of floor space - outside of the scope of applications requiring a sustainability statement above - this statement is produced in detail appropriate to the scale of the application, as requested by Camden Borough Council.

## **OBJECTION**

The Primrose Hill Conservation Area Advisory Committee have submitted the following objection:

*We object strongly to the installation of air-conditioning in houses where natural ventilation, including cross-ventilation, is possible.*

*We note that Camden's Local Plan, Policy CC2 'Adapting to climate change', requires 'all development' (and not only those proposing 5 residential units or more) to adopt appropriate climate change adaptation measures, spelling out, in para. 8.39 'The Council will discourage the use of air conditioning and excessive mechanical plant.' At para. 8.42 'Active cooling (air conditioning) will only be permitted where dynamic thermal modelling demonstrates there is a clear need for it after all of the preferred measures are incorporated in line with the cooling hierarchy.'*

*We fully endorse Camden's policy CC2 and ask for it to be upheld.*

## **CAMDEN LOCAL PLAN**

The Camden Local Plan policy CC2 states:

### ***Policy CC2 Adapting to climate change***

*The Council will require development to be resilient to climate change.*

*All development should adopt appropriate climate change adaptation measures such as:*

- a. the protection of existing green spaces and promoting new appropriate green infrastructure;*
- b. not increasing, and wherever possible reducing, surface water run-off through increasing permeable surfaces and use of Sustainable Drainage Systems;*
- c. incorporating bio-diverse roofs, combination green and blue roofs and green walls where appropriate; and*
- d. measures to reduce the impact of urban and dwelling overheating, including application of the cooling hierarchy.*

*Any development involving 5 or more residential units or 500 sqm or more of any additional floorspace is required to demonstrate the above in a Sustainability Statement.*

#### **Sustainable design and construction measures**

*The Council will promote and measure sustainable design and construction by:*

- e. ensuring development schemes demonstrate how adaptation measures and sustainable development principles have been incorporated into the design and proposed implementation;*
- f. encourage new build residential development to use the Home Quality Mark and Passivhaus design standards;*
- g. encouraging conversions and extensions of 500 sqm of residential floorspace or above or five or more dwellings to achieve “excellent” in BREEAM domestic refurbishment; and*
- h. expecting non-domestic developments of 500 sqm of floorspace or above to achieve “excellent” in BREEAM assessments and encouraging zero carbon in new development from 2019.*

The policy requirements ‘a-c’ and ‘e-h’ are not relevant to this application. We will address requirement ‘d’ within the CC2 policy.

#### **REQUIREMENT FOR ADDITIONAL VENTILATION**

Policy 5.9 Overheating and Cooling of the London Plan states:

*5.47 London will experience higher average temperatures. This is likely to intensify the urban heat island effect – the way higher ambient temperatures are experienced after sunset in urban areas in comparison with rural areas. This is most intense at night and in London is principally experienced within the Central Activities Zone, as buildings and roads absorb more solar radiation than green space and vegetation. Combined with man-made heat emissions, this can make the centre of London up to eight degrees warmer than the Green Belt on hot summer nights.*

18 Regent’s Park Road borders the Central Activities Zone and suffers the higher than average temperatures referenced above. The introduction of additional ventilation is necessary to mitigate the dwelling overheating experienced at the residence.

#### **LONDON PLAN ‘COOLING HIERARCHY’**

The London Plan ‘cooling hierarchy’ was applied to this scheme and informed the choice of air conditioning as the appropriate solution.

Policy B of 5.9 Overheating and Cooling of the London Plan applies to this scheme as follows:

- 1 minimise internal heat generation through energy efficient design  
*– the application is solely for the addition of an air conditioning unit, and therefore the scheme offers no opportunity to integrate energy efficient design elsewhere*

2 reduce the amount of heat entering a building in summer through orientation, shading, albedo, fenestration, insulation and green roofs and walls

*- the application is solely for the addition of an air conditioning unit, and therefore the scheme offers no opportunity to integrate the suggested measures. The application property's location within the Primrose Hill Conservation Area also prohibits introducing these measures*

3 manage the heat within the building through exposed internal thermal mass and high ceilings

*- there are existing high ceilings to the ground and first floor, which do not mitigate the thermal gain. It is not possible to expose internal thermal mass of an existing building without causing significant harm to the property*

4 passive ventilation

*- not possible to retrospectively implement within an existing building. Passive ventilation is utilised where ever possible through opening windows, but as mentioned below this is not a suitable permanent solution*

5 mechanical ventilation

*- the application is solely for the addition of an air conditioning unit, and therefore the scheme offers no opportunity to integrate mechanical ventilation without causing significant harm to the existing property. The application property's location within the Primrose Hill Conservation Area also inhibits introducing these measures*

6 active cooling systems (ensuring they are the lowest carbon options)

*- this is the only suitable solution for this proposal*

## **NATURAL AND CROSS VENTILATION**

Natural and cross ventilation are suggested in the objection above as adequate to cool the property. The suitability of utilising natural/cross ventilation has been thoroughly tried and tested within the property and found to be insufficient to mitigate the thermal gain the property suffers.

As a 19<sup>th</sup> century home, the property was designed with natural ventilation in mind. High ceilings to the ground and first floors which mitigate some thermal gain, but due to the change in environment and modes of living since the house was designed, this feature is inadequate to address the cooling needs of the house. In particular the first and second floors, housing the bedrooms and home office, suffer from overheating. The proposal seeks to install air conditioning only to the areas worst affected by the dwelling overheating, therefore minimising any perceived negative impact of installing air conditioning.

Proximity to busy vehicular routes mitigate the application of natural and cross ventilation in the property. Noise pollution means it is impossible to rely solely on cross ventilation and open windows as it would render bedrooms and home offices (both spaces concerned with this application) unusable. In addition, air pollution from the same roads compound the negative impact on the house and its occupants. If windows are left open in an attempt at natural ventilation, air pollution is evident on building fabric, finishes and furnishings of the house. This impacts the health and quality of life of the occupants. The Camden Local Plan (Adopted 2017) states in Policy A1:

*The Council will seek to protect the quality of life of occupiers and neighbours. We will grant permission for development unless this causes unacceptable harm to amenity. We will .... seek to ensure that the amenity of communities, occupiers and neighbours is protected*

Ventilation and thermal comfort are evidently a requirement for quality of life, and as sole use of cross ventilation damages the health of the occupants, the installation of air conditioning units will serve this purpose without damaging amenity.

The need for additional ventilation is necessary, as explained above, but also evident by the number of air conditioning units in the area serving both identical and similar properties. The objection above mentions the use of dynamic modelling in applications, but this would be wholly inappropriate for a proposal of this size which has a clearly established need for additional ventilation that can only be provided by active cooling.



*Air conditioning units installed to Princess Road in 2019, to a domestic property*

## SUITABILITY OF ACTIVE COOLING SYSTEM

The air conditioning condensing unit (Fujitsu AOYG18LAT3) to be installed has been chosen due to energy efficiency, to limit environmental impact from its use. The specifications have been included with this statement.

The occupants of the property currently have to rely on floor standing and window mounted air conditioning units, which are inefficient in energy usage terms and have a negative impact on the conservation area. The occupants want to move from these to an energy efficient solution of permanent air conditioning units. The proposed unit features an A++ rating for energy efficiency when cooling.



*A window mounted air conditioning unit. These units are not energy efficient or environmentally friendly. We propose to cease use of these type of units with this application.*

The unit has also been chosen due to its ability to heat as well as cool. In winter, the unit will reduce the need for gas heating – therefore increasing energy efficiency of the property and lessening reliance on gas. The proposed unit features an A+ rating for energy efficiency when heating.

## RELEVANT PLANNING APPROVALS

There are numerous approved applications within the ‘Camden Town with Primrose Hill Ward’ pertaining to the installation or retention of air conditioning units in both domestic and commercial properties. A brief sample of relevant applications follow:

- 2018/3871/P – Installation of 1no. air conditioning unit at roof level (retrospective)  
*Objected to by Primrose Hill Conservation Area Advisory Committee*
- 2018/3245/P – Installation of 3x air conditioning units (1 x retrospective) to first floor roof level behind front parapet
- 2017/5832/P – Installation of 5 air conditioning units
- 2015/3849/P – Installation of air conditioning unit to rear terrace of flat
- 2015/0680/P – Installation of air conditioning plants and acoustic enclosures to the rear of the property  
*Objected to by Primrose Hill Conservation Area Advisory Committee. The officer response to objection: “Whilst the Council strives for energy efficient development, the lack of sustainable attributes of the proposal is not, in itself, grounds for refusal in this specific instance. Details regarding the size of the units are provided in the section titled The Proposal.”*
- 2014/6391/P – Installation of an air conditioning unit at ground floor level  
*Objected to by Primrose Hill Conservation Area Advisory Committee*

Additionally, the following application is currently pending consideration by Camden Council:

- 2019/0344/P – Installation of 3x air conditioning units and associated acoustic enclosures to roof of dwelling (retrospective)  
*Commented on by Primrose Hill Conservation Area Advisory Committee, however they did not object*

## CONCLUSION

It has been demonstrated within this statement that the application property requires additional ventilation, and through the use of the London Plan cooling hierarchy, the suitable solution is to install a single energy efficient air conditioning condensing unit as proposed.