PLANNING POLICY

Job Reference:	17 Boscastle Road, NW5 1EE	***Date:***	17th July 2019
Issue:	Planning Policy	***Our Ref:***	17BOS-B-PL-190717

Introduction

This document accompanies and supports the application for planning consent in relation to 17 Boscastle Road, NW5 1EE (planning reference: 2019/2713/NEW). The proposal, submitted 23rd May 2019, comprises the installation of a small external plant unit enclosed by a timber screen which is discreetly sited towards the rear of the flank wall of the applicant's dwelling house.

This document addresses additional requirements stipulated by Alyce Keen of Camden Council, in email sent 12th July 2019, to:

- send justification regarding the need for the installation of an air-conditioning unit for the residential dwelling as outlined in policy CC2 of Camden's Local Plan 2017;
- particularly that each element of the cooling hierarchy has been considered prior to resorting to active cooling.

Overview

Air conditioning is proposed to serve the first floor Master Bedroom and a total of three bedrooms located on the second floor. The air conditioning is intended to provide comfort cooling to the family during the hotter summer months.

The Master Bedroom is located in the existing Victorian house where the existing thermal envelope remains unaltered. The bedroom has two large window openings. The sashes and window boxes have been replaced with high-quality double-glazed replacements. A new radiator system has been installed as part of the works.

The second floor bedrooms - Bedroom 1, Bedroom 2 and Bedroom 3 - are double height spaces that extend into the roof zone. The roof element has been replaced and meets the recommend u-values for refurbished buildings (more information below). New motorised rooflights have been installed at roof level to provide natural light and ventilation. A new radiator system has been installed as part of the works.

The Cooling Hierarchy

The following chapter outlines evidence to show that the elements of the cooling hierarchy have been addressed, as per policy CC2 of Camden's Local Plan 2017:

8.43 The cooling hierarchy includes:

• Minimise internal heat generation through energy efficient design;

All new thermal elements (walls/ floors/ roof) meet the recommended u-values for existing buildings (extension and refurbishment). Appended to this document are the relevant u-value calculations from Kingspan:

- Flat Roof RT02 = 0.18W/m2K
- Pitched Roof (rafter level) RT03 = 0.18W/m2K

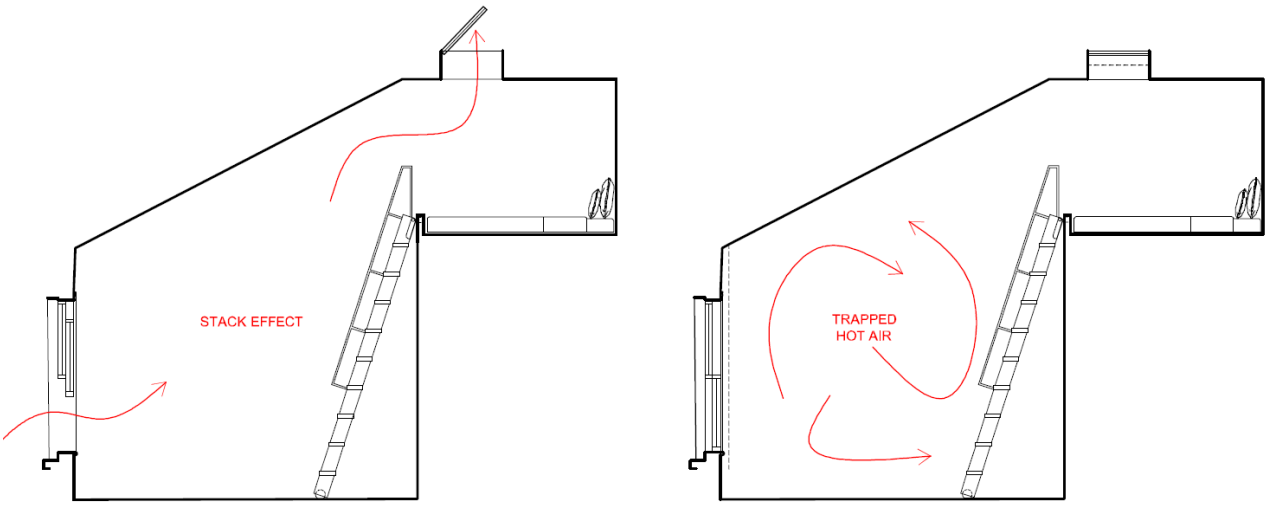
An all new LED lighting system means that there is now a minimal heat source caused by lighting.

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

The nature of the works to an existing property means that the orientation was unalterable. Shading is provided to the Master Bedroom in the form of internal wooden shutters. The new windows and rooflights in the second floor bedrooms will have black out blinds or curtains. External shading in the form of a brise soleil would have been difficult to obtain due to the Council's policy relating to works to external building fabric in a Conservation Area. All fenestration has been replaced from single glazed to double glazed windows.

• Manage the heat within the building through exposed internal thermal mass and high ceilings;

The second floor bedrooms are double height spaces that extend into the roof zone. Despite the integration of rooflights, these rooms are likely to experience trapped hot air during night time. The image below illustrates the layout in Bedroom 1 and how by day (left hand image) a stack effect is created by opening the window and skylight. However, by night (right hand image), the doors are typically closed and windows covered by blinds/curtains, preventing the movement of air and causing temperatures to rise to an uncomfortable level.



The existing external walls have not been upgraded with internal linings and so heat soaking into the solid masonry is still applicable as a heat management strategy.

• *Passive ventilation;*

As previously mentioned, all bedrooms have new sash windows that allow passive ventilation and the second floor bedrooms also benefit from operable rooflights at roof level. All new windows also have trickle vents integrated into the frames.

• *Mechanical ventilation; and*

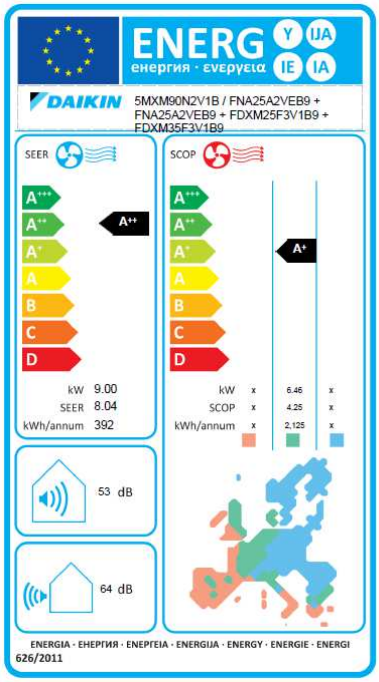
There is no scope or need for mechanical ventilation to the bedrooms and the house as a whole which in itself would have consumed energy.

• *Active cooling.*

The air conditioning is intended to provide comfort cooling to the family on the few occasions in the British summer when the temperature exceeds the levels of comfort that the refurbished building is able to regulate - in both the existing fabric and new thermal elements, shading and fenestration.

Insert paragraph on the energy efficiency of the A/C units and condenser specified

The energy consumption label below illustrates that the specified air conditioning appliances are rated class A, the most energy efficient category.



Conclusion

By addressing each element of the cooling hierarchy, it can be argued that air conditioning will be a key requirement for the residents in peak temperatures. On a holistic level, the measures put in place to upgrade the thermal envelope, provide new service installations and fenestration, have resulted in a more energy efficient home.