

Project:	Holly Walk, Hampstead, London Borough of Camden	2 Tollbridge Studios Tollbridge Road Bath, BA1 7DE
Subject:	Planning Energy and Environmental Strategy Statement.	T 01225 852 981
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1 Introduction

This document provides information on the energy and sustainability design principles for the extension and refurbishment of the house at Holly Walk in Hampstead, London Borough of Camden (LBC). The statements provided here are to be read in conjunction with the planning documents and additional information provided by Studio Mark Ruthven, including building drawings and details.

2 Policy

LBC has a number of key policies relating to sustainable development. The majority tend to be applied to new larger developments, generally over 5 dwellings and over 500m² in building area, and therefore this building would not strictly come under policy requirements. However, the building is to be designed to incorporate a number of key principles which would be in line with LBCs development policies.

- Camden Local Plan 2017
 - Policy CC1. Climate Change Mitigation
 - Policy CC2. Adapting to Climate Change
 - Policy CC4. Air Quality
- Camden Planning Guidance “Air Quality” March 2019
- Camden Planning Guidance “Design” March 2019

3 Energy

3.1 Fabric First Approach

The existing building is to be extended and modified as detailed on the drawings. All new building fabric elements will be in accordance with the latest building regulations requirements, and all existing fabric elements will be improved as required. Air tightness will also be improved, and overall the building will have better energy efficiency when compared to the original house. This would generally be in line with the “be lean” policy for new dwellings.

3.2 Energy Systems

The refurbished building also allows for the installation of new building services, and the following key low energy provisions are proposed.

- New LED lighting scheme throughout, with reduced energy consumption.

- The installation of an air source heatpump system, to provide hot water and underfloor heating throughout the house.
- The incorporation of a new air source heating/cooling system to a number of key rooms, using the latest refrigerant technology and high efficiency heatpumps.
- The installation of intelligent controls, to provide individual control for rooms.
- Smart metering for the electricity installation.

3.3 Heatpump Installation

The heatpump outdoor units will be installed in a concealed area, away from views from neighbouring properties and street. The units have been selected to be of low noise output, and installed in conjunction with acoustic absorption. A detailed acoustic analysis has been undertaken on the proposed systems and is proven to be compliant with external noise requirements.

The heatpump installation provides a number of key environmental advantages over a new gas fired installation.

- The system is non polluting, with no emissions from the building, which would have been the case with a conventional gas boiler installation.
- There are no flues from the building, so no visual emissions.
- The installation will be in line with future legislation for new homes, which will be designed to eliminate gas fired boilers in urban areas.
- The heating system will optimise the decarbonised electricity grid, and with high performance coefficients will have a lower carbon emissions rate compared to gas heating. This is generally in line with current national and local Government direction.
- The building is future proofed against future fuel changes, and so an installation for the long term.

4 Air Quality

The CPG on Air Quality dated March 2019, has guidance on building design and heating and energy supplies. Maximum pollution requirements are given for gas fired boilers, although there is a special section on renewable energy. The local plan CC1 promotes the use of renewable heating systems, with the added benefit of zero pollution at the point of use.

The new heatpump heating system for the building will therefore meet the latest guidelines and recommendations.

5 Design for Future Climate Change

One key aspect of climate change is the increase in outside temperatures, leading to issues of existing buildings suffering from overheating. This is particularly prevalent in London. The provision of supplementary heating and cooling from the additional system will ensure that the key spaces remain comfortable during the warmer environmental conditions.

6 Conclusion

The incorporation of the new heatpump systems is in accordance with the current guidance for new dwellings under Camden Policy, but goes beyond what is normally required for the refurbishment of an existing house. All systems proposed are compliant with the current regulations, have zero pollution impacts and ensure that the building is future proofed against future energy provision and the effects of climate change.