

Sustainability and Energy Statement

1.1 Executive Summary

It is the intention of the Applicant to convert the existing site, known as The Hoo, to provide three high quality residential dwellings.

A sustainability and energy strategy has been developed by the project sustainability consultant for the proposed redevelopment in consultation with the Applicant and the design team.

Given the technical and physical constraints typically imposed by refurbishment schemes in dense urban locations, together with the small scale of the different construction elements and that the existing building is Grade II listed, the following sustainability and energy standards and targets have been identified for the proposed scheme:

- ❖ Reduce energy demand and CO₂ emissions;
- ❖ Minimise water use;
- ❖ No net gain in peak surface water runoff from that of the existing development;
- ❖ Neutral impact on biodiversity;
- ❖ Increase in urban greening;
- ❖ Design for resilience to future climate impacts;
- ❖ Responsible use of materials;
- ❖ Promote sustainable travel;
- ❖ Responsible construction practices.

1.2 Development Overview

The site is situated in Hampstead and occupies a prominent site within the Fitzjohns and Netherhall Conservation Area. It is Grade II listed and makes an important contribution to the surrounding conservation area. The Hoo is currently unoccupied but has most recently been used by the Local Health Authority as an office with clerical support and providing limited mental health care to the local community.

The proposal seeks to return the property to its original purpose as a grand domestic home. Due to its listed status, changes to the existing external envelope will be very limited, with the exception of the glazed link between the main house and the annex, which meets current part L efficiency standards. The most significant areas of external works will concentrate on the 1980's extensions. There is also a single modification proposed to the rear of the original house.

The property is to be split into three distinct dwellings; the main house, the lodge and the annex that will contain the following:

- **The Lodge** (Lower Ground and Ground Floor); sitting and dining room, kitchen, four bedrooms, shower rooms.

- **The Main House** (Lower Ground, Ground, First and Second Floor): cinema room, sitting room, lounge, study, kitchen and dining room, five bedrooms, gymnasium, bathrooms.
- **The Annexe** (at Ground and Lower Ground floor): five bedrooms, open plan kitchen / dining room, two staff rooms and bathrooms.

1.3 Approach to Sustainability

The objective is to refurbish the existing property to provide homes that are resource efficient and sustainable, whilst giving due consideration to the Grade II listed status. To do this a balance has been sought between the various environmental, social and economic issues prioritising those that provide the greatest potential for the development.

A number of design measures are proposed and the key measures are summarised in the table below:

Sustainability Issue	Aims	Proposed Measures
Energy Efficiency	To improve energy efficiency performance where possible to reduce the demand for fossil fuels such as gas and electricity.	New construction elements of the link will achieve a high thermal performance. Where possible, enhancement of existing fabric through increased insulation.
Climate Change	To use passive and low carbon measures to ensure CO ₂ emissions associated with the Dwellings are reduced as far as practicable.	Where new windows are specified these will be double glazed. Natural ventilation, when desired. Natural shading from retained mature trees. 100% efficient lighting through LEDs. Energy efficient heating system. Whole house mechanical ventilation with heat recovery, for when opening windows isn't desirable. Minimise demand for cooling through existing thermal mass, internal shading and other passive measures. Potential for heat recovery from waste hot water (to be further investigated).
Water Consumption	To reduce the demand for mains-supplied potable water.	Water efficient bathroom fittings. Rainwater harvesting (to be further investigated). Water efficient white goods.
Surface Water Runoff and Flood Risk	To ensure no additional burden on local drainage infrastructure and that the occupants aren't impacted by localised flood risk.	By containing the redevelopment within the existing footprint, no increase in surface water runoff is anticipated. The extent of the soft landscaping will provide permeable surfaces to allow for natural infiltration of surface water during rainfall.

Materials	<p>To use materials which have the lowest environmental impact.</p> <p>To use materials which are in keeping with the local area.</p>	<p>Refurbishment of existing building will ensure the use of new materials is limited to modifications and improvements.</p> <p>Where new construction materials are used, including insulation, these will be assessed under the Green Guide to Specification to determine their environmental impact.</p> <p>Wherever possible, materials will be procured from responsible sources.</p> <p>All timber will be selected from legal sources, as directed by the UK Government Timber Procurement Policy.</p>
Biodiversity & Urban Greening	<p>To increase urban greening and increase local biodiversity.</p>	<p>Retention of healthy, existing mature trees.</p> <p>Planting of locally valuable species, as guided by the Local Biodiversity Action Plan.</p> <p>Addition of green roofs.</p> <p>Landscaped terraces to be provided.</p>
Sustainable Travel	<p>To promote sustainable travel patterns to reduce transport-related emissions.</p>	<p>Secure, dedicated cycle storage.</p>

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