

4 TEMPLEWOOD AVENUE: ENVIRONMENTAL STRATEGY

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The client and Architect are committed to ensuring the redevelopment of 4 Templewood Avenue is environmentally conscious in every respect. The following aspects of the project will be included in the realisation of the building to ensure this aim is achieved:

Renewable Energy - Ground Source Heat Pumps:

Space heating and cooling will be provided through the use of ground source heat pumps. A Rehau earth tube system will be installed under the main garden area, consisting of a network of buried 200mm and 400mm diameter pipework at a depth of approximately 1.8 metres to make use of the large thermal mass of earth. The system requires little maintenance and has a life span of 100 years. The passive earth tubes will be integrated into the whole house mechanical recovery ventilation system, whilst maintaining a degree of manual controlled ventilation from the window system.

Air conditioning will only be provided to a few rooms which require specific cooling levels, i.e. gym and wine store.

Renewable Energy - Solar Collectors:

Water heating will be supplemented through evacuated solar collectors, which will be discreetly located on the flat roof space above the dormer windows. The energy used to create hot water will therefore be significantly reduced all year round.

Glazing and Daylight:

All existing windows will be replaced with white painted timber conservation sashes – modern double-glazed versions of the original sash windows that have significantly better thermal and air tightness.

Daylight levels have been increased through larger openings to admit more daylight to the interiors and reduce energy consumption through artificial lighting. New loggias have been designed to south facing elevations to provide shading and prevent over heating in the summer, whilst admitting low sunlight to warm and illuminate the interiors during the winter.

Building Envelope

Thermal improvements to the fabric of the building will be provided with additional insulation added to the existing structure, either within the existing cavity or as a new internal lining. This increase in insulation benefits the renewable energy methods by reducing the actual demand for heating or cooling and limiting internal temperature fluctuations.

The new linings will provide significantly increased air tightness further reducing energy loss and consumption from the cold and draughty existing structure.

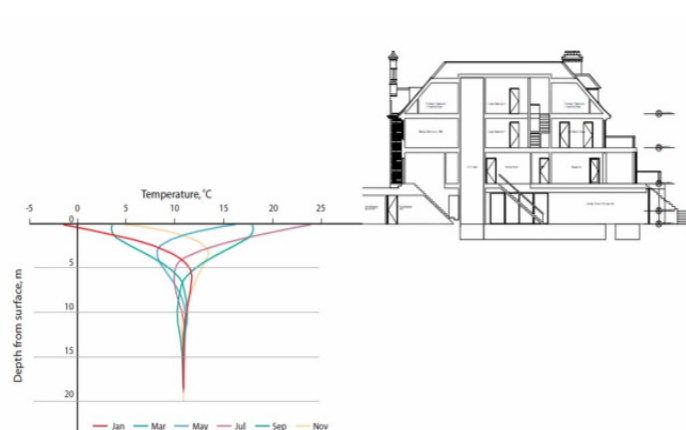


Diagram to demonstrate the consistent temperature of the earth surrounding the site