

24 PEREGRINE ROAD
CHELTENHAM, GLOUCESTERSHIRE

DOCUMENT TO DEMONSTRATE ALIGNMENT
WITH CHELTENHAM BOROUGH COUNCIL'S
CLIMATE CHANGE STANDARDS

Background:

The Planning Application which this document supports is for a single-storey rear extension and extension to the roof above the garage, and a dressing-room to improve amenity and thermal standards. The property comprises a large detached house constructed in the early 1960s, which has had limited thermal improvements to include a foam cavity wall insulant and PVCu double-glazing.

Orientation:

This proposal is for an extension. The orientation is already set, the principal windows of the new extension will face north, thus there will be no improvement in solar gain, and no significant solar but there will be good levels of natural light.

Fabric Energy Efficiency:

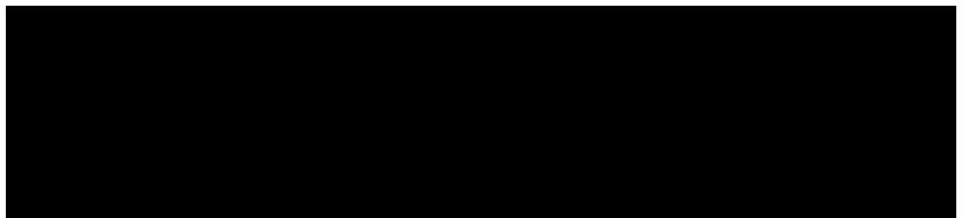
All new walls will be constructed and insulated well in excess of the current Building Regulation Standards.

<u>New Element:</u>	<u>Proposed U-Value W/m²K:</u>	<u>Limiting U-Value in Building Regulations:</u>
Floors	0.12	0.18
Walls	0.13	0.26
Roof	0.12	0.16
Windows / Doors	1.2	1.6

A significant improvement by these works will also be made to the thermal efficiency of the roof above the garage and also to the existing front dormer window. In addition, roof void insulation will be brought up to levels above current Building Regulation Standards and new double glazed windows will be installed throughout.

Low Carbon Heat:

The proposal is to utilise the existing boiler serving the existing house which has a reasonable life expectancy. When the opportunity arises this can be replaced by an air-source heat pump. The heating within the extension and the former kitchen will be by underfloor heating with room programmable thermostats suitable for heat pump use when installed. The proposal also includes a new unvented, low heat loss, indirect hot water cylinder.



Renewable Energy:

There are no proposals at the present time to install renewable energy, for instance, in the form of photovoltaic panels. Roof orientation / configuration makes this somewhat difficult.

Water:

Water efficient sanitary appliance outlets will be installed. Complete renewal of sanitary appliances will take place.

Transport and Travel:

This is an extension to an existing building. The site is well located, close to all amenities and public transport is available nearby to enable sustainable travel choices.

Prevention of Flooding:

The property is located in a low risk flood area. The roof area will be increased but will replace some existing hardstanding and rainwater taken to an enlarged surface-water soakaway drainage system.

Ecology and Biodiversity:

The extension will not affect the ecology and biodiversity associated with the dwelling. The extension is largely located over an existing paved area. No trees or shrubs will require removal.

Embodied Carbon:

This is an extension to an existing house. In re-roofing the garage, the existing roof tiles will be re-claimed and re-used. Re-claimed bricks will be utilised to adjust existing openings in the extension, but the new extension walls will be of new brickwork and blockwork. A conventional trench-fill concrete foundation should be suitable in this location. The width of foundation trenches will be reduced to the minimum possible to reduce the volume of concrete utilised in the foundation construction, dependent upon ground conditions and Building Control approval.

Waste:

Adequate space is provided inside and externally to the existing building for waste, recycling and storage. Waste during the construction / demolition will be reduced by the retention of re-usable components.