

New Porch and replacement roof covering

The Granary, Filkins, GL7 3JJ

Sustainability Statement



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Introduction

This statement is to be read in conjunction with the submitted drawings to outline the environmental impact and sustainability of the proposed works. Within this report it will set out the design intentions for the improved of the existing fabric and thermal performance of the new structure; along with the Energy improvements and supplements to reduce the overall impact of the project in its local environment.

Thermal improvements

For new structure of the building fabric, it is intended for the performance of this elements will exceed the minimum requirements set out in the current building regulations Part L1. The table below stated the minimum allowable thermal performance started within the Par L1.

Limiting U-values for new fabric elements in existing dwellings

Element type	Minimum U-value W/m ² K
Roof	0.15
Wall	0.18
Floor	0.18
Window	1.4
Rooflight	2.2
Doors with >60% of internal face glazed	1.4
Other doors	1.4

Airtightness

When installing the windows, care will be given to the junction between the window frame and the airtightness layer of the external wall. High performance airtightness tape will be used to limit infiltration as the connection between windows and external walls.

Roofs:

Continuation of the insulation across the wall-to-eaves and wall-to-gable junctions.

i. Wall insulation to be installed to the top of the wall plate; in some places, such as the eaves, may be above the cavity closure or barrier. In all cases, roof insulation will be continuous with wall insulation.

ii. Roofs insulated at ceiling level: loft insulation at the eaves to extend beyond the wall insulation without any reduction in thickness due to the pitch of the roof. At gables and party walls, insulation will extend to the wall edges.

iii. Roofs insulated at rafter level: at the eaves, insulation will extend to the top of the external wall. Voids between insulation at the top of the external wall and the cavity wall.

Peak reduction

- Use passive measures and efficient systems to reduce heating, cooling and hot water peaks

Active demand response measures

- These measures reduce the electricity consumption for a certain period.
- Install heating and cooling set point control with increased comfort bands, controlled with smart thermostats or home energy management systems.
- Integrate thermal storage of heat into communal or individuals system within a building.
- Reduce lighting ventilation and small power energy consumption

Behaviour change

- Raise awareness of how best to use electricity and the impacts.
- Consideration of incentives to reduce peak demand.
- Encourage responsible occupancy.