

Cheltenham Borough Council
Directorate of Environmental Services
Municipal Offices
Promenade
Cheltenham Glos GL50 1PP

Ref: 321009/PL

8 February 2024

SUSTAINABILITY STATEMENT

Re: 3 storey side extension and loft conversion with dormer, 9 Bream Court, Cheltenham, Gloucestershire GL52 5FY

To be read in conjunction with Architect's drawings numbered:

231009/PL/001: Location

231009/PL/002: Extg Plans

231009/PL/003: Extg Elevs

231009/PL/004: Prop Plans

231009/PL/005: Prop Elevs

231009/PL/006: Site Photos

This application is for proposed works to construct a side extension to the 9 Bream Court, Cheltenham.

This building is a traditional, modern semi-detached house.

Sustainability design and construction measures

The proposed extension will all be built in accordance with the Cheltenham Climate Change SPD and the following Building Regulation Approved Documents relating directly to sustainability, energy performance and resources:

F - Ventilation

G - Sanitation, hot water safety and water efficiency

H - Drainage and waste disposal

L - Conservation of fuel & power

O - Overheating

S - Infrastructure for charging electric vehicles

Ventilation:

The rooms of the extension are to be naturally ventilated generally, with manually-opened windows sized to provide an infiltration rate of at least 0.15 air changes per hour. The open area of windows will be at least 1/20 of the rooms floor area.

This ventilation rate, as set out in Approved Document F, has been designed to meet the indoor pollutant levels where the outside air is of reasonable quality.

The new bathroom and shower room will be mechanically ventilated by means of light-actuated extract fans. The minimum extract ventilation rate for these rooms will be in 15 litres per second for intermittent operation extract.

Foul water drainage:

Existing and new foul drainage will remain/be connected to the main sewer.

Surface water drainage:

Subject to suitable ground and subsoil conditions – A soakaway will be provided to service surface water drainage collected from the roof of the extension.

The above will be implemented in order to eliminate additional demand on the existing drainage infrastructure in the locality.

Any paved surfaces will be constructed with a fall in order to drain water naturally away from the property.

Water efficiency:

Reasonable provision will be made by the installation of fittings and appliances that use water efficiently for the prevention of undue consumption of water. All newly fitted appliances will be 'A' rated.

Waste disposal:

Separate bins will continue to be utilised to aid the storage and collection of recyclable waste product. These will be stored under cover, within the new Store at the front of the house.

Conservation of fuel & power:

The proposed extension will be highly insulated to conserve heat and reduce heat gain in summer months.

Walls, floor and roof will be insulated in excess of the requirements of Approved Document L1 2021: Dwellings. New windows will be double or triple glazed to conserve heat.

The applicant will explore the feasibility of installing an AAA+ rated Air Source Heat Pump system to replace the existing hot water and central heating system.

Within this proposal, when the heating system is next upgraded the central heating system will be zoned and each zone will have an independent heat control valve.

All light fittings will be fitted with low voltage, high efficiency bulbs.

Showers and taps will all be fitted with flow restrictors and the toilet cisterns will be dual flush in order to reduce water consumption.

The applicant will also explore the feasibility of installing Solar photo voltaic technology in order to reduce the reliance on mains electricity.

Construction and Recycled materials:

Construction materials and internal fittings will be sourced locally, wherever possible, in order to reduce transportation CO² emissions.

Sustainable building materials are to be incorporated in the build wherever possible.

SPD Key Measures:

Roof: The feasibility of incorporating solar panels (at a low pitch) on top of the flat roof of the south-facing dormer is to be explored by the applicant.

Windows: Any new windows and glazed doors will be high performance double or triple glazing designed specifically to reduce heat loss and sized/positioned to maximise solar gain.

Avoid overheating: Blackout blinds will be fitted to south-facing windows to reduce overheating.

Renewable energy: The applicant will explore the feasibility of installing an AAA+ rated Air Source Heat Pump system to replace the existing hot water and central heating system.

Within this proposal when the heating system is next upgraded the central heating system will be zoned and each zone will have an independent heat control valve.

The applicant will also explore the feasibility of installing Solar photo voltaic technology in order to reduce the reliance on mains electricity.

Smart Energy: Smart technology and appliances will be incorporated wherever possible.

Water: Reasonable provision will be made by the installation of fittings and appliances that use water efficiently for the prevention of undue consumption of water. All newly fitted appliances will be 'A' rated.

Ventilation and heating efficiency

See 'Ventilation' section above.

Waste: Separate bins will continue to be utilised to aid the storage and collection of recyclable waste product.

Efforts will be made to minimise waste from the renovation works.

The applicant will store and pass-on materials removed during the build for re-use/ re-purposing on other projects wherever possible.

Embodied Carbon and Carbon Reduction Technologies: The extension has been designed so that building materials can be sourced locally in order to reduce transport related carbon emissions. The

client intends to make use of recycled materials (for example brickwork for retaining walls and fencing) and/or sustainably sourced building materials.

All measures will be taken throughout the construction process to reduce carbon emissions and waste products. Carbon reduction technologies will be considered whenever the technology becomes available and in the best interest of the environment and health of the future owners/occupiers.

Flooding: See 'Surface Water Drainage' section above.