

Energy Statement

Erection of a new dwellinghouse

Land adjacent to 88 Teignmouth Road, Clevedon

This Energy Statement supports the full planning application for the erection of a new detached dwellinghouse at land to the south of 88 Teignmouth Road, Clevedon. This statement should be read in conjunction with the submitted plans and covering letter.

Sustainable design principles

Design for health and wellbeing

An open-plan ground floor is proposed, to maximise sunlight and ventilation to the main living spaces. The dwelling is broadly orientated east to west, thereby providing both solar gain and cooler areas to the ground floor throughout the day.

Energy use

The project will take a fabric-first approach by reducing the energy demands from the outset. The building will be constructed with high standards of energy efficiency, insulation in the thermal elements which will exceed that which is required by Approved Document L1A. High levels of insulation are to be provided throughout the fabric of the building. Attention will be given to minimise (where possible and practicable) thermal bridging and air leakage. The dwelling will be designed to achieve an air permeability rate of 5 m³/hm² or better.

Consideration will be given to using materials and construction that have a low environmental impact. Where possible, materials will be chosen that are responsibly sourced (such as FSC timber), recycled or reclaimed. All insulation materials will have a GWP (Global Warming Potential) of 5 or less.

The following measures will be undertaken:

- All roofs will be insulated and ventilated.
- All windows will be double glazed with trickle vents
- Air Source Heat Pump to be provided.
- Thermostatic valves to be fitted to all radiators
- All rooms have good access to natural light.
- No air conditioning is included as overheating in summer is unlikely
- Where supplied, white goods will be energy efficient (A+ or A rated), and
- All external lighting will be dedicated low-energy, and all security lighting will be adequately controlled through the use of movement detection devices (PIR), daylight cut off sensors and a requirement that all security bulbs are less than 150 Watts and are designed for energy efficiency.

Siting and orientation

The largest elevation of the dwelling (the side elevation) is to be sited within 20 degrees of south, and the garden will face south-southwest, with a south-facing side/front garden area.

Waste management

Separate areas are to be provided for waste and recycling storage, and home composting bins can be provided within the garden.

Water use

This scheme will be reducing potable water consumption in the property to below 120 litres per person per day. This will be achieved through the use of internal potable water fixtures and fittings which utilise low flow rates and capacities without reducing an individual's ability to enjoy their property. The scheme will incorporate rainwater butts to collect rainwater for the watering of the garden areas etc.

Surface water run-off

Soakaways are proposed to all parking spaces, with substantial areas of soft landscaping, and new hedgerow planting, to further reduce any surface water run-off.

Sustainable and Active Travel

A cycle storage shed is proposed within the rear garden. The site is accessible by non-car modes by virtue of its location within the town, with the defined town centre within 400 metres, and bus stops on Old Street within 200 metres.

Land use ecology

Native hedgerow planting is proposed to the front, side and rear boundaries.

Renewable and low carbon energy provision

10% of the building's predicted energy use will be provided through 3 panels of approximately 1650mm x 1000mm. These are indicated on the submitted elevations and roof plan. An electrical charging point can be provided for one of the parking spaces.

Sustainable drainage systems

As noted above, soakaways are proposed to all four parking spaces.

Climate change adaption measures

The accompanying Flood Risk Assessment details the flood resilience measures proposed. Green infrastructure measures, and methods of addressing overheating area addressed earlier in this statement.