

## **Sustainability Statement**

**Site:** 1 Ash Cottages, Mill Lane, Brockenhurst, SO42 7UD

**Proposal:** Detached outbuilding, new front fence and gates.

**Date:** 3<sup>rd</sup> August 2022

**Details of how the Proposal reduces carbon emissions and incorporates measures to reduce its contribution to climate change:**

**1. Making the most efficient use of land, buildings and natural resources including site layout and building design.**

Guidance: Energy consumption can be significantly reduced through the location of development, site layout and building design, the type of materials used, the use of existing and new resources and the efficient management of the construction process.

The proposed outbuilding has been located on the southern boundary of the site. This ensures that the construction is kept well away from the existing trees on site and also clears an underground storm water drain that runs across the site, roughly running south to north before turning eastwards close to the northwest boundary in an open culvert. It is the applicants' responsibility to maintain the storm drain.

Since purchasing the property, the applicants have cleared a lot of dead wood and shrubs. They have also re-turfed a large part of the rear lawn and a section of turf outside of the site, adjacent to the road. It is intended to install timber bollards, similar to the existing bollards, outside the site in order to protect the grass verges by discouraging vehicle parking.

The open culvert which forms part of the storm drain has also been reinforced using timber sleepers and the culvert has been cleared.

## **2. Energy Hierarchy\***

Guidance: Level 1 – Reduce the need for energy; Level 2 – Using energy more efficiently; Level 3 – Supplying energy efficiently; Level 4 – Use low carbon and renewable energy. There are opportunities in all types of development to use low carbon and renewable energy sources, however what is appropriate will depend on the physical nature of the building, its site characteristics and the surrounding landscape.

1. Levels 1: The proposed outbuilding is for use as a garage and as such, it will not contain any heating. Any lighting that is installed within the garage will exceed Approved Document L of the Building Regulations. This requires that internal lighting in locations that have most use, and external lighting should only be fitted with lamps having a luminous efficacy greater than 45 lumens per circuit watt, with fixed energy efficient light fittings that number not less than three per four fixed lighting fittings (75%).

## **3. Minimising Flood Risk\*\***

Guidance: Directing development away from flood risk areas, reducing overall risk from flooding within the National Park and areas outside it, upstream and downstream.

It would be intended to discharge surface water into the adjacent storm drain. However, if this is not possible then a new soakaway can be provided on site. This will utilise a standard plastic crate system, being a minimum of 1 cubic metre and located at least 5m from all building structures. An overflow could be provided to flow into the storm drain during exceptional rain conditions. The applicants are also looking to reinstate a land drain to the front of the property which currently appears damaged or blocked.

#### 4. Carbon Reductions

Guidance: Consideration of means of reducing carbon emissions for the development. Seeking to take every opportunity to reduce carbon and build sustainably.

The outbuilding will utilise green oak for the frame and will be constructed relatively locally in Salisbury. Softwood feather edged board will be used for cladding the building. It would be intended to use natural slate or plain clay tiles for the roof covering.

The fencing is constructed from softwood, and it is intended to plant native hedging to the front of the fence. The driveway will consist of shingle on a graded sub-base with natural granite setts on the entrance in order to retain the shingle.

#### 5. Water Efficiency.

Guidance: Water conservation methods include ensuring that the design of buildings and their surrounding landscape maximises water efficiency and minimises water wastage; identifying opportunities to use water more efficiently during the construction of the development; designing surface water drainage systems to take into account future changes in rainfall.

Consideration could be given to the installation of on-site storage for surface water run-off. Water butts could also be utilised.

#### \*Energy Hierarchy

##### **Level 1 – Reduce the need for energy**

The energy hierarchy places great emphasis on Integrated Passive Design. Key methods include:

- *Orientation* – making best use of high summer sun angles & low winter sun angles on southern exposures.

- *Thermal mass* – to store heat in the winter and act as a heat sink for cooling in the summer.
- *Natural ventilation* – designing controlled flows through buildings for cooling.
- *Zoning* – to allow different thermal requirements to be compartmentalised.

## **Level 2 – Using energy more efficiently**

Using energy more efficiently means not wasting energy or using more than is required. The following potential energy efficiency measures should be considered:

- High levels of insulation.
- Utilising appropriate forms of glazing
- Installing heating controls.
- Using energy efficient heating and heat recovery systems.
- Adding draught strips on doors, windows & letter boxes.
- Fitting chimney balloons.
- Installing zoned low energy lighting and presence sensors.
- Replacing doors in existing buildings.
- Upgrading to a high efficiency condensing boiler
- Adding a sun pipe/tunnel

## **Level 3 – Supplying energy efficiently**

Supplying energy efficiently refers to connecting to existing low carbon heat networks. Connection to, or development of, a mini district heating network can be a carbon efficient means of energy supply.

## **Level 4 – Use low carbon and renewable energy**

Once the energy needs of a new building have been minimised through design, consideration needs to be given as to how the remaining energy needs can be met through:

- Heat pumps: ground source heat pumps and air source heat pumps.
- Wood burning stoves/biomass boilers.
- Solar thermal/hot water panels.
- Solar photovoltaic/electric panels.
- Hydro power, small scale water turbines.
- Anaerobic digesters.

### **\*\*Minimising Flood Risk**

Sustainable Urban Drainage Systems (SUDS) remove water quickly and efficiently and should be included in the original design and layout of a proposal wherever possible. The approach used will differ with each application and the circumstances of each site.