

Design and Access Statement

Air Source Heat Pump for Wiltshire Cottage, Brook.

Background

Wiltshire Cottage is an old Grade II listed property dating to the 1900's. As such it is built of solid brick with no cavity for insulation purposes. It has substantial insulation in the loft and is in the final stages of the process to include double glazed panes to the rear elevation windows and secondary double glazing to the windows in the front elevation, and bi-fold doors to separate the conservatory from the kitchen, as a result of planning permission granted in March 2020.

Despite these changes, which has had considerable impact on retaining heat in the house, it is still cold and very costly to heat, using bottled gas and seasoned wood. The cost of doing so is running at a rate of █████ to █████ per month. This is an inordinate cost given the size of the property and an alternative solution is needed to keep the running costs under control, given the recent dramatic increases in heating costs and the anticipation in 2022 that there will be considerably higher still.

A number of alternatives for heating the house have been explored including adding a gas or oil tank, but this is not sufficient for future proofing the property. The focus has then been upon the on the environmental alternatives of air source or ground source heat pumps. Given the characteristics of the garden and house it is deemed the best solution being an air source heat pump.

Site of Air Source Heat Pump

This will be sited at the west end of the property, replacing 2 of the existing torpedo gas bottles (see photographs). It is to be sited here, for the most aesthetically pleasing, away from the rear and front elevations. It is to be a high temperature Daikin18kW Heat Pump, see attached details. The pipework will be 28mm lagged pipes to first floor and going into the wall to be under the floor at first floor level. The electrics will also be in trunking to first floor level. The remainder of the system is internal in the existing airing cupboard for the hot water cylinder, and into the loft above for the hydrobox and buffer vessel.

The heat pump will then attach to the existing heating system. 2 additional radiators will be included (one in the kitchen and one in the conservatory), will simple screw fixings to the walls.