THE INSTALLATION OF PHOTOVOLTAIC SOLAR PANELS AT ROSE COTTAGE CONDOVER

Rationale:

Our interest in Zero Energy Projects started when we began to address the need for replacing our aging Gas Powered Central Heating Boiler. After looking at the alternative 'Green' options, we arranged for the installation of an Air Sourced Heat Pump (A.S.H.P.) by a local specialist contractor. Living in a 'Listed Building', located in a Conservation Area this installation required planning permission. This was sought on my behalf by the contractor and was granted on 29th June 2021 (Ref: 21/02052/FUL).

On reading that Shropshire Council had declared a 'Climate Emergency' we read information on the 'Zero Carbon Shropshire' website about how individuals/households could make a difference both in their purchasing decisions and their use of energy. One of the suggested ways of reducing our household carbon footprint was to move away from using fossil fuels for heating and to produce electricity locally, (we would need electricity to power the A.S.H.P. and for other domestic use), from solar panels.

A recent informal survey of the Village indicates that there are on only 8 P.V. solar arrays at present, indicating that the majority of homes depend of their electricity supply from the National Grid. Although some power from the grid comes from 'Green' sources (Wind and Solar farms) the demand for energy from the National Grid will only increase as the move to electric power vehicles accelerates. We therefore wanted to support the measures proposed by Zero Shropshire to address the Climate Emergency, by generating the electricity we require for our Heat Pump (and other domestic use) using P.V. Panels. The size of the proposed array is just over 4 Kw, an average array for a 3 bedroom dwelling.

Not wishing to mount panels on Rose Cottage (a listed building) we felt the best alternative would be to mount an array on the roof of the garage which is some 20 - 25 metres from the Cottage. The garage is in the curtilage of a listed and therefore requires planning permission for the project to proceed.

Proposal:

It is proposed to install 12 x P.V. solar panels on the roof of the garage located at Rose Cottage, Condover, which is some 20 - 25 metres from the cottage. As the attached plans/maps/pictures show, the proposed site does not detract from any elevation views of the cottage, or any of the neighbouring heritage assets.

The 12 panels would form a 4.32 kW array, 8 panels on the rear of the garage (facing approximately South East) in portrait (4152 x 3510 mm), and 4 mounted on the front of garage (approximately south west) towards the ridge in portrait (4152 x 1755 mm), orientation angle from horizontal = 40 degrees. The enclosed photomontage provides a visual impression of the array in situ.

It is estimated that the electricity generated from the panels will provide a reduction in CO2 emissions of 1018 Kg p.a. * Together with the Air Sourced Heat Pumps the panels will enable Rose Cottage to become a 'Near Zero Energy Building.

The panels we propose to use are Longi LR4-60HPB 360M - Full Black Panels. (brochure enclosed). They will be mounted on a framed grid which will be approximately 100 mm. above the present fabric of the roof (Approximate Grid Dimensions are given above) . Panels will initially be installed without battery storage, all surplus energy being exported to the 'Grid'. The equipment used for the initial installation will enable battery storage to be retro-fitted at a future date if this proves to be a more efficient use of the generating capacity of the panels.

HERITAGE STATEMENT

This statement is supplementary to that provided for application (Ref; 21/02052/FUL - Air Sourced Heat Pump)

Rose Cottage is a 'grade 2' listed building (The Listing reference number is 1175674) and is believed to have been constructed in the 15/16th century as a thatched agricultural building. (*1) It was converted into two adjoined cottages and later became the single dwelling as it is now. It has been modified several times over the years, most recently with the addition of a kitchen, (possible in the 1950's) and the addition of a timber framed extension in 2000/2001 to form the dwelling as it is now.

There are several listed properties close to Rose Cottage. (see enclosed Heritage Map) Four listed properties are on Station Road, The Vicarage (with a barn), and the Old Vicarage on the west side of Station Road, and Yew Tree Cottage alongside Rose Cottage on the east of Station Road. On the north side of Church road there is the Village Hall (not listed but considered a heritage asset), the Old Bakery (grade 2 listed) and a mixture of modern and more ancient dwellings including 5 adjoining cottages (listed).

The application seeks to maintain the integrity of Rose Cottage, by mounting the arrays on the garage located in the garden of Rose Cottage some distance from the cottage and its more modern extension. The panels are 'full black' which will be complementary to the roof lines on buildings adjacent to the proposed sitting of the panels on the garage. (See enclosed photograph with the view from Rose Cottage).

The proposed sitting of the P.V. panels, would not enable them to be viewed from the Old Bakery although they would be visible from rear upper windows in the adjacent modern unlisted buildings to the east of the Old Bakery. (see photographs taken from the rear of the garage in Rose Cottage facing North East and East) It would not be possible for the panels to be seen from the cluster of cottages on Church Road (listed buildings) opposite Church House, or from Church House (listed building) itself. At no point would the solar panels interrupt any sweeping views of the front elevations of properties on Station Road or Church Street.

Whilst it would not be possible to view the solar panels in the proposed location on the rear of the garage from any of these properties, a partial view of the 4 panels mounted on the front of the garage would be visible from upper windows of properties on the east side of Station Road and from directly opposite Rose Cottage and this is shown in the photographs taken from Station Road. (The front of Rose Cottage).

Mounting the P.V. panels will not require any structural changes to the garage and have a minimal operational lifetime expectancy of 25 years. After which time they can be removed or replaced as required, there being no permanent changes to the structure of the garage.

After surveying properties close to Rose Cottage, viewing the proposed sitting of the P.V. panels on the garage from neighbouring properties, and given the specification of the panels themselves, it is considered that their impact on Rose Cottage and the Conservation Area to be low.

Roger Nash - 9th July 2021

* MCS standard procedure calculation estimate.
(*1) Source, *'Condover near Shrewsbury'*, a leaflet, J.P. Jones & Miss J. Wood, date unknown.

Front elevation of the house

View from Front of garage showing rear elevations of properties on Church Street Condover.

view from the rear of the garden facing north east.

view from rear of Garage facing south east.

view from rear of garage facing south south east.