Planning Supporting Information

Proposed Installation.

The application is to install 22 x JA Solar 405W Solar Panels mounted on low level supports configured in a two row array each with 11 panels.

The proposed location for the panels is in our field south of our outbuilding (Workshop). (see **Plan 1 - 1250 scale site plan The Beeches**, **Plan 2 - Schematic of Two row Panel Array - end elevation** and **Plan 3 - Schematic of Two row Panel Array - plan** view and **Photograph 2**)

Power to be transmitted to the house by underground armoured cable as indicated in **Plan 3 - Schematic of Two row Panel Array - plan view**.

Land Use.

The proposed location of the panels is in a field used for sheep grazing 8-10 months of the year. The panels will cover less than 0.5% of the available grazing area.

The installation will be 'reversible' and can be removed when no longer required. The panels would be mounted on deep 'screw' driven piles – so there will be no permanent concrete foundation. The area under the panels will be covered with weed control membrane and gravel. A simple wooden post/wire fence will be erected around the panels to keep livestock out.

Visibility.

There are no visible neighbours to the south, east and west sides of the property. The proposed position has been chosen such that the panels will not be visible to any residents of the village.

The panels will be also barely visible from the Ennerdale Bridge - Kirkland road because of the field wall. **Photograph 2** is a view from the road. The panels will have the lower dark stone Workshop wall behind them and so they will not be prominent against the building and will not be outlined against the skyline.

An example of such a low level array is shown in the manufacturers photograph**: Photograph 3 - Example of low profile solar array**

Justification: Physical Structure:

The proposal to mount at ground level in the field is driven by several factors :

a. the house roof orientation is East/West not the more efficient south facing

b. the usable roof area is insufficient

c. the property is frequently exposed to high blustery winds. For this reason, a 'low level' support structure at ground level is proposed. The top of the panels will be just over 1m from the ground.

d. there is insufficient ground area within the curtilage of 'The Beeches' to ground mount the array without shading or impeding existing parking access areas.

Justification: Renewable Energy.

We have already taken measures to reduce the CO_2 impact of our property by installing an Air Source Heat Pump, high performance double glazing and a Mechanical Ventilation with Heat Recovery system.

These solar panels would further reduce the CO_2 impact by reducing the grid electricity consumption of the domestic appliances and will also make a significant contribution to the power needed by the Air Source Heat Pump (used for Central Heating and Domestic Hot Water).

Greater utilisation of the renewable solar electricity will be obtained by also installing a storage battery in the garage of The Beeches. This will store excess power, when not required for immediate use. This will allow overnight and cloudy period consumption of the renewable electricity produced in brighter periods. Any excess power beyond that required on site will be exported to the national grid.

The significant investment in this system, as well as benefitting this property, will contribute to the wider sustainability agenda of Copleand Council.