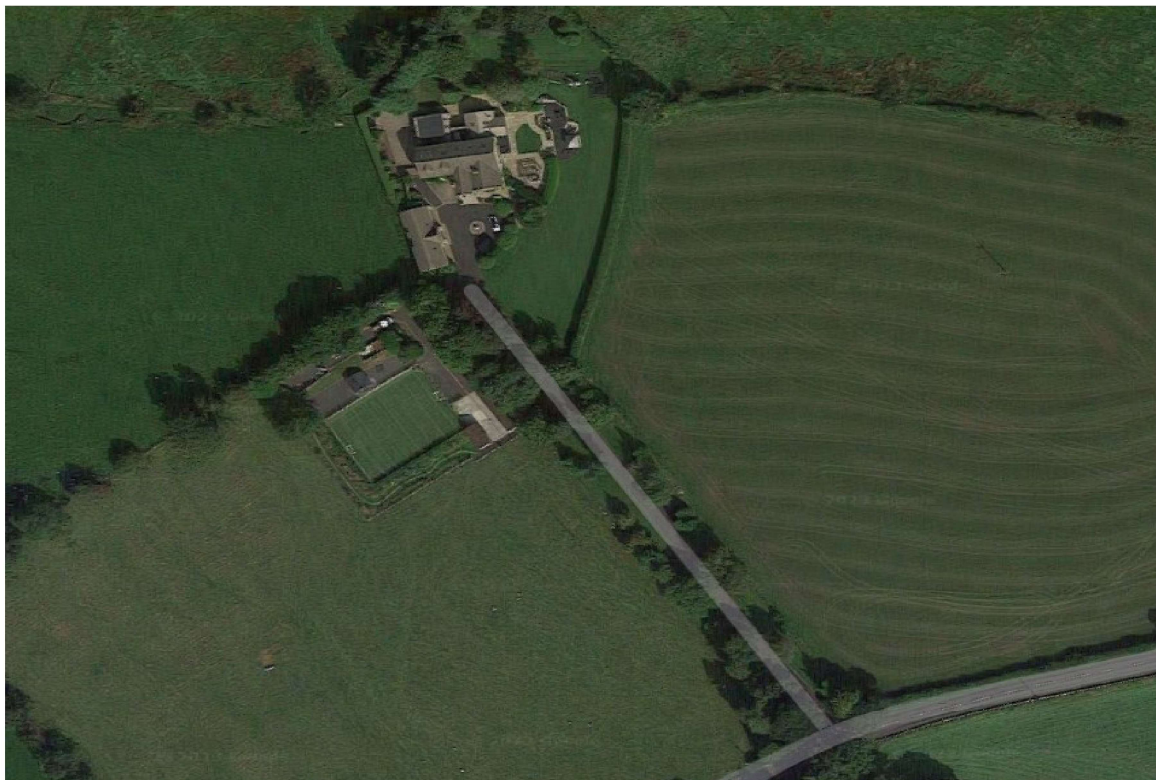


Peter Hitchen Architects

Peter Hitchen Architects Ltd

Marathon House
The Sidings Business Park
Whalley
Lancashire
BB7 9SE
13 March 2023

DESIGN STATEMENT PROPOSED FIELD MOUNTED SOLAR PV ARRAY LOWER BARN FARM, WHALLEY ROAD, SABDEN



Introduction

This design statement has been prepared by Peter Hitchen Architects as a supporting document to accompany the formal planning application to RVBC following the withdrawal of the pre-application enquiry for a 20,800kw field mounted solar PV array on land owned by the applicant close to the house and associated buildings. The applicant has provided a personal statement included here and there is a separate planning statement provided by the Planning consultant which addresses the relevant planning policies.

Location

The site is in a designation of open countryside but located close to stables and an equestrian arena as shown on the plans. Lower Barn Farm is a private dwelling which is within a large domestic curtilage which includes the main house, annex and ancillary buildings. The main drive to the house is off Whalley Road and Sabden is approximately 1 mile away.

The area for the solar panels is suitably positioned to the south of the house in a location to service the technology and adjacent to the riding arena and stables on land within the ownership of the applicant.

Applicant Statement

We have lived in our home, a barn conversion typical of the Ribble Valley for [REDACTED] years. During that time we have invested heavily to improve its energy rating and reduce its carbon footprint. The property is a large detached family home with five bedrooms and a separate garage/annex with two further bedrooms. It sits within its own 20 acre plot with no other property overlooking it.

During our ownership we have fully renovated the property. The works include removing and replacing a poorly built existing extension, increasing the insulation throughout the house and installing triple glazed windows. Alongside this we have removed the fossil fuel, oil fired central heating boiler and replaced it with energy efficient Air source heat pumps that run on electricity and heat the house through underfloor heating. We replaced a diesel car with [REDACTED] again reducing our carbon footprint. An existing swimming pool was removed because of the impracticalities of operating it as we strive towards zero carbon.

As part of our improvements we now need to generate renewable energy to power the house. Fortunately as the house is now entirely electric with no gas or oil we can do this by way of solar panels in a clean efficient way. We have looked at an alternative of wind but the land around the house is not ideally suited due to the presence of trees disturbing the air flow. Fortunately the house and its land faces South making it ideal for solar.

The house is large and as explained all the heating and the car runs off electricity. The annual consumption is between 40,000 and 50,000 kwh. The solar system we want to install is a 20kw system designed entirely for our domestic use. Coupled with a battery system it will generate all the electricity requirements in the summer months and make a contribution in the winter months.

A smaller system would not operate the Air source pumps for the heating or charge the car even in the summer when the solar gain is larger and the demand lower. The system is designed that it matches the household requirements in the summer so there is no need to export energy to the grid and all electricity generated will be used by the house. A battery system fitted internally will allow power harvested in the day to run appliances at night.

During the winter the 20kw solar array will generate a percentage of the power requirements with the rest met by the grid. Unfortunately the array would need to be five or six times bigger to meet the requirements in winter but would then generate far

too much in the summer for the house. The design at 20kw is perfectly designed to be domestic use only with no waste.

There is no suitable roof area on the house large enough to accommodate the panels and the garden is under shade meaning it's not suitable. Fortunately the land around the house is south facing and the contours mean a discrete location is available for the panels to be located in the field close to the property and it's associated buildings and only a short underground cable run from the electricity circuit boards in the house.

The panels can thus occupy a tiny area within the large acreage of the fields surrounding the house. In keeping with our environmental objectives the panels will be located to minimise their profile and will be mounted on temporary structures that can easily be removed at the end of their life returning the area to its natural state.

Whilst in situ the panels will not impact the existing agricultural activity of grazing sheep on the land.

Overall the panels and batteries represent a [REDACTED] investment to generate the houses power from renewable sources. We have followed all guidelines in installing alternative heating to fossil fuels and moving towards electric vehicles. Unfortunately these increase the electricity required and the next step is to generate a renewable source of the power. The proposed system will produce 50% of the house's electricity requirement making a huge impact on its carbon footprint. With a 25 year lifespan we are expecting to make a real contribution to lowering our impact on the environment.

Proposal

The solar panels are aligned in four rows of 52 panels and are on timber frames aligned in single rows to minimise their impact. They are positioned within the pasture adjacent to the riding arena and stables facing south to maximise their efficiency. The panels are mounted on a timber frame and enclosed with a timber stock fence. The site has been chosen because of the location close to the property and buildings, orientation and topography, as it is important to ensure that the panels have minimum impact on the openness of the area.

Note

We request that the proposal is now assessed as a formal planning application on the basis of all the information submitted with this application following the consultations with the authority in March 2023 which clarified the reason for the withdrawal of the pre-application enquiry which was originally submitted.

PETER HITCHEN ARCHITECTS