Bramble Barn Solar PV Project

Design & Access Statement

This document is designed to allow the reader to fully understand the project that the client proposes.

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Introduction

The client proposes to procure a 4kw solar PV array to supply energy to an existing Heat Pump and reduce the buildings reliance on fossil fuel. For every 1kw of solar energy input to the heat pump 3-4kw of heat output is achieved making the system 300-400% efficient.

Address

Bramble Farm
Cross cliffe
Glossop
Derbyshire

SK13 8PZ

National Grid Reference

SK042936

Easting 404233
Northing 393627

General Description, Scale, Size, Massing

The array measures on footprint some 7m x 2m with 2 panels 1 over the other on pile or concrete based posts, see literature supplied with application.

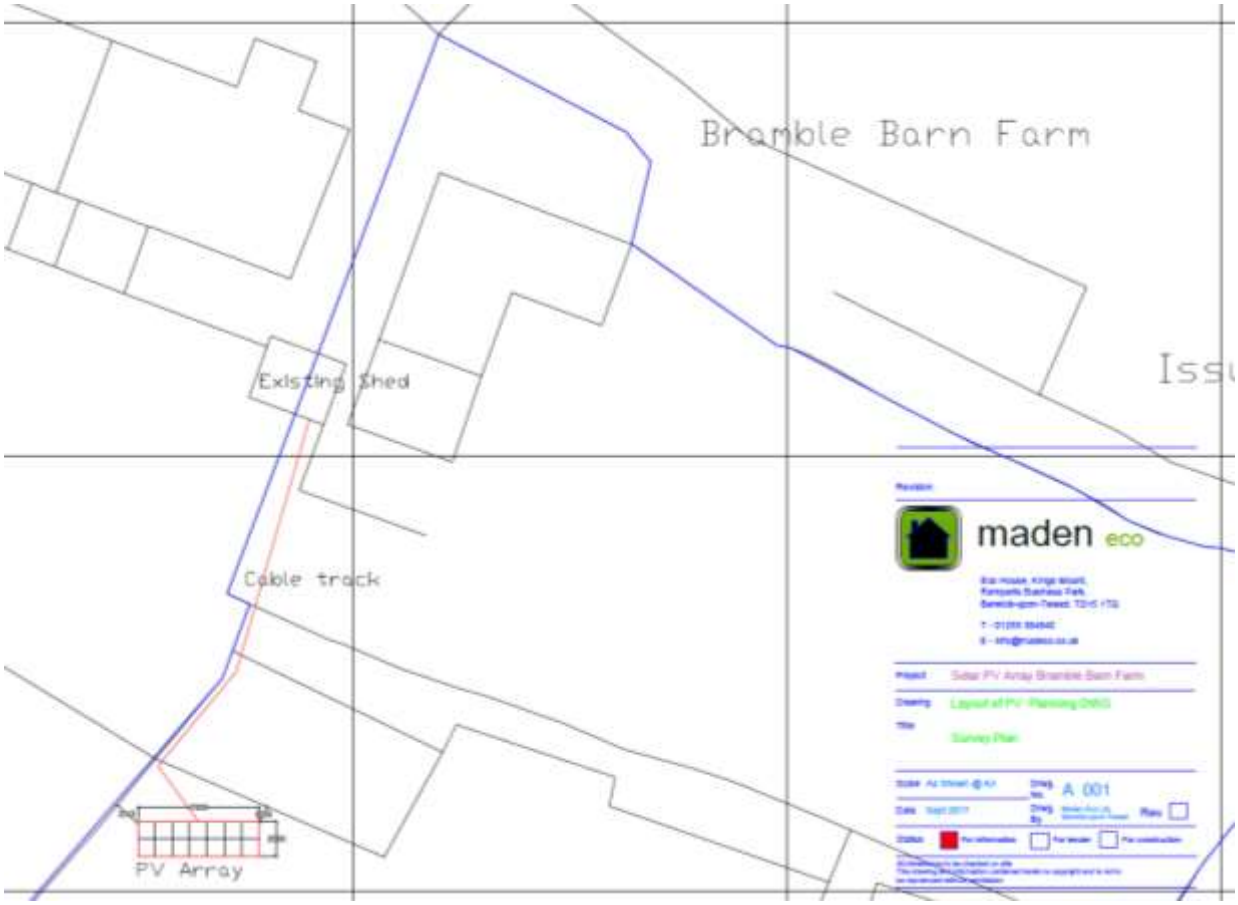
The pv panels will be 285 to 320 watts in output collectively generating a maximum 4 kw output.

Each panel is approx. 1m wide x 1.64m long so 1.64m2 x 14 is 22.96m2 facing the sun on an angle 35 degrees.

The panels will be orientated south and will be screened to a large extent by the recent extension and greenhouse. The client proposes to screen the rear of the array with natural foliage.

A 4kw PV array will contribute upto 4000kwh of the annual requirement of the property being served, in this situation as a heat pump is used for heating and hot water then the further benefit is the upscale of the input kwh of energy that will be multiplied 3 and 4 fold to make an equivalent of 12,000 to 16,000 kwh of heat output. This is a very positive low carbon installation.

The panels will sit to the south of the main house see the yellow pin below.



Planning Policy

The Government's Objectives on renewable energy are set out at the beginning of PPS22

as follows:-

National Planning Policy Guidance The Government's energy policy, including its policy on renewable energy, is set out in the Energy White Paper (.Our energy future – creating a low carbon economy, CM5761, February 2003). This aims to put the UK on a path to cut its carbon dioxide emissions by some 60% by 2050, with real progress by 2020, and to maintain reliable and competitive energy supplies.

The Government has already set a target to generate 10% of UK electricity from renewable energy sources by 2010.

The White Paper set out the Government's aspiration to double that figure to 20% by 2020, and suggests that still more renewable energy will be needed beyond that date. The White Paper sets out policies to stimulate the development of new technologies to provide the basis for continuing growth of renewables in the longer term, to assist the UK renewables industry to become competitive in home and export markets and in doing so, provide employment. Increased development of renewable energy resources is vital to facilitating the delivery of the Government's commitments on both climate change and renewable energy. Positive planning which facilitates

renewable energy developments can contribute to all four elements of the Government's sustainable development strategy: –

social progress which recognises the needs of everyone – by contributing to the nation's energy needs, ensuring all homes are adequately and affordably heated;

and providing new sources of energy in remote areas; –

effective protection of the environment – by reductions in emissions of greenhouse gases and thereby reducing the potential for the environment to be affected by climate change; –

prudent use of natural resources – by reducing the nation's reliance on ever diminishing supplies of fossil fuels; and, – maintenance of high and stable levels of economic growth and employment – through the creation of jobs directly related to renewable energy developments, but also in the development of new technologies.

In rural areas, renewable energy projects have the potential to play an increasingly important role in the diversification of rural economies. These objectives are implemented through the following
(1) Planning Policy Statement: Planning Policy and Climate Change National Planning Policy Guidance Supplement to Planning Policy Statement 1 (PPS1 Supplement)
(2) Planning Policy Statement 22: Planning for Renewable Energy (PPS22)
(3) A Companion Guide to PPS22 :

Planning for Renewable Energy (1) Planning Policy and Climate Change Supplement to Planning Policy Statement 1 (PPS1 Supplement) The PPS1 Supplement begins with a Government statement that tackling climate change is a key Government priority for the planning system:- "Tackling climate change is a key Government priority for the planning system.

The ambition and policies in this PPS should therefore be fully reflected by regional planning bodies in the preparation of Regional Spatial Strategies1, by the Mayor of London in relation to the Spatial Development Strategy in London and by planning authorities in the preparation of Local Development Documents. Similarly, applicants for planning permission should consider how well their proposals for development contribute to the Statement Government's ambition of a low-carbon economy and how well adapted they are for the expected effects of climate change.

Applicants and planning authorities should bear in mind that the policies in this PPS are capable of being material to decisions on planning applications." PPS1 accepts the scientific evidence that human activity is changing the worlds climate and that the right responses both locally and globally are required to prevent an intensification of the climatic changes already being experienced "PPS1 Supplement 'Climate Change and Planning':-
:- "1. There is a compelling scientific consensus that human activity is changing the world's climate. The evidence that climate change is happening, and that man-made emissions are its main cause, is strong and indisputable. The Intergovernmental Panel on Climate Change highlights that we are already experiencing the effects of climate change and if these changes deepen and intensify, as they will without the right responses locally and globally, we will see even more extreme impacts." "3. The Government believes that climate change is the greatest long-term challenge facing the world today.

Addressing climate change is therefore the Government's principal concern for sustainable development. Policies and priorities for action, both in the UK and internationally, are set out in the Climate Change Programme4 and the 2007 Energy White Paper" PPS1, continuing in the section

'Climate Change and Planning' highlights the role the planning system can play in meeting targets for the reduction in carbon emissions:-
"8. The planning system needs to support the delivery of the timetable for reducing carbon emissions from domestic and non-domestic buildings.

Building a Greener Future sets out a progressive tightening of Building Regulations to require major reductions in carbon emissions from new homes to get to zero carbon by 2016. There are similar ambitions to cut carbon emissions from new non-domestic buildings. This PPS sets out how regional and local planning can best support achievement of the zero-carbon targets alongside meeting community needs for economic and housing development." To assist Planning Authority's, the PPS1 Supplement sets out 'Key Planning Objectives'

"9. To deliver sustainable development, and in doing so a full and appropriate response on climate change, regional planning bodies and all planning authorities should prepare, and manage the delivery of, spatial strategies that: – make a full contribution to delivering the Government's Climate Change Programme and energy policies, and in doing so contribute to global sustainability; – in providing for the homes, jobs, services and infrastructure needed by communities, and in renewing and shaping the places where they live and work, secure the highest viable resource and energy efficiency and reduction in emissions; – deliver patterns of urban growth and sustainable rural developments that help secure the fullest possible use of sustainable transport for moving freight, public transport, cycling and walking; and, which overall, reduce the need to travel, especially by car9; – secure new development and shape places that minimise vulnerability, and provide resilience, to climate change; and in ways that are consistent with social cohesion and inclusion; – conserve and enhance biodiversity, recognising that the distribution of habitats and species will be affected by climate change; – reflect the development needs and interests of communities and enable them to contribute effectively to tackling climate change; and – respond to the concerns of business and encourage competitiveness and technological innovation in mitigating and adapting to climate change."

The PPS1 Supplement also gives direction on the content of Local Planning Documents:- 20. In particular, planning authorities should: – not require applicants for energy development to demonstrate either the overall need for renewable energy and its distribution, nor question the energy justification for why a proposal for such development must be sited in a particular location1; – ensure any local approach to protecting landscape and townscape is consistent with PPS22 and does not preclude the supply of any type of renewable energy other than in the most exceptional circumstances; There can be no doubting the sentiments expressed in the Supplement to PPS1 and the requirement for Local Planning Authorities to implement the Governments commitment the reduction of carbon emission through the development of renewable energy schemes.

(2) Planning Policy Statement 22: Planning for Renewable Energy (PPS22) PPS22 provides detail on the objectives and aims set out in the Supplement to PPS1. PPS22 sets out it's own 'Key Principles' to which Regional Planning Bodies and Local Planning Authorities should adhere in their approach to planning for renewable energy:-
(i) Renewable energy developments should be capable of being accommodated throughout England in locations where the technology is viable and environmental, economic, and social impacts can be addressed satisfactorily.
(ii) Regional spatial strategies and local development documents should contain policies designed to promote and encourage, rather than restrict, the development of renewable energy resources. Regional planning bodies and local planning authorities should recognise the full range of renewable energy sources, their differing characteristics, locational requirements and the potential for exploiting them subject to appropriate environmental safeguards.

(iii) At the local level, planning authorities should set out the criteria that will be applied in assessing applications for planning permission for renewable energy projects. Planning policies that rule out or place constraints on the development of all, or specific types of, renewable energy technologies should not be included in regional spatial strategies or local development documents without sufficient reasoned justification. The Government may intervene in the plan making process where it considers that the constraints being proposed by local authorities are too great or have been poorly justified.

(iv) The wider environmental and economic benefits of all proposals for renewable energy projects, whatever their scale, are material considerations that should be given significant weight in determining whether proposals should be granted planning permission.

(v) Regional planning bodies and local planning authorities should not make assumptions about the technical and commercial feasibility of renewable energy projects (e.g. identifying generalised locations for development based on mean wind speeds). Technological change can mean that sites currently excluded as locations for particular types of renewable energy development may in future be suitable.

(vi) Small-scale projects can provide a limited but valuable contribution to overall outputs of renewable energy and to meeting energy needs both locally and nationally. Planning authorities should not therefore reject planning applications simply because the level of output is small.

(vii) Local planning authorities, regional stakeholders and Local Strategic Partnerships should foster community involvement in renewable energy projects and seek to promote knowledge of and greater acceptance by the public of prospective renewable energy developments that are appropriately located. Developers of renewable energy projects should engage in active consultation and discussion with local communities at an early stage in the planning process, and before any planning application is formally submitted.

(viii) Development proposals should demonstrate any environmental, economic and social benefits as well as how any environmental and social impacts have been minimised through careful consideration of location, scale, design and other measures.

PPS22 accepts that small scale renewable energy projects are acceptable even in areas of high landscape designation such as National Parks and AONB'S:-

"12. Regional planning bodies and local planning authorities should set out in regional spatial strategies and local development documents the criteria based policies which set out the circumstances in which particular types and sizes of renewable energy developments will b acceptable in nationally designated areas. Care should be taken to identify the scale of renewable energy developments that may be acceptable in particular areas. Small-scale developments should be permitted within areas such as National Parks, Areas of Outstanding Natural Beauty and Heritage Coasts provided that there is no significant environmental detriment to the area concerned."

PPS22 also discusses the Landscape and Visual Effects of Renewable Energy Developments:-

"Landscape and Visual Effects of Renewable Energy Developments

19. The landscape and visual effects of particular renewable energy developments will vary on a case by case basis according to the type of development, its location and the landscape setting of the proposed development. Some of these effects may be minimised through appropriate siting, design and landscaping schemes, depending on the size and type of development proposed. Proposed developments should be assessed using objective descriptive material and analysis wherever possible even though the final decision on the visual and landscape effects will be, to some extent, one made by professional judgement .Policies in local development documents should address the minimisation of visual effects(e.g. on the siting, layout, landscaping, design and colour of schemes).

Conclusion

Our research into local policies hs also found support for this type and scale of renewable again caveated by siting and size etc..

We feel that generally the development proposed accords with National and Local policy and should be supported.

The scale of the development proposed should be taken in the context of a single dwelling, improvements in technology mean that we now with improved cell performance only need to install 14 panels where we would have installed 16 less than two years ago. This reduces the visual impact.

We also specify a low reflecting glass panel .