

Pucklechurch Solar Project

Summary of Proposals

Introduction

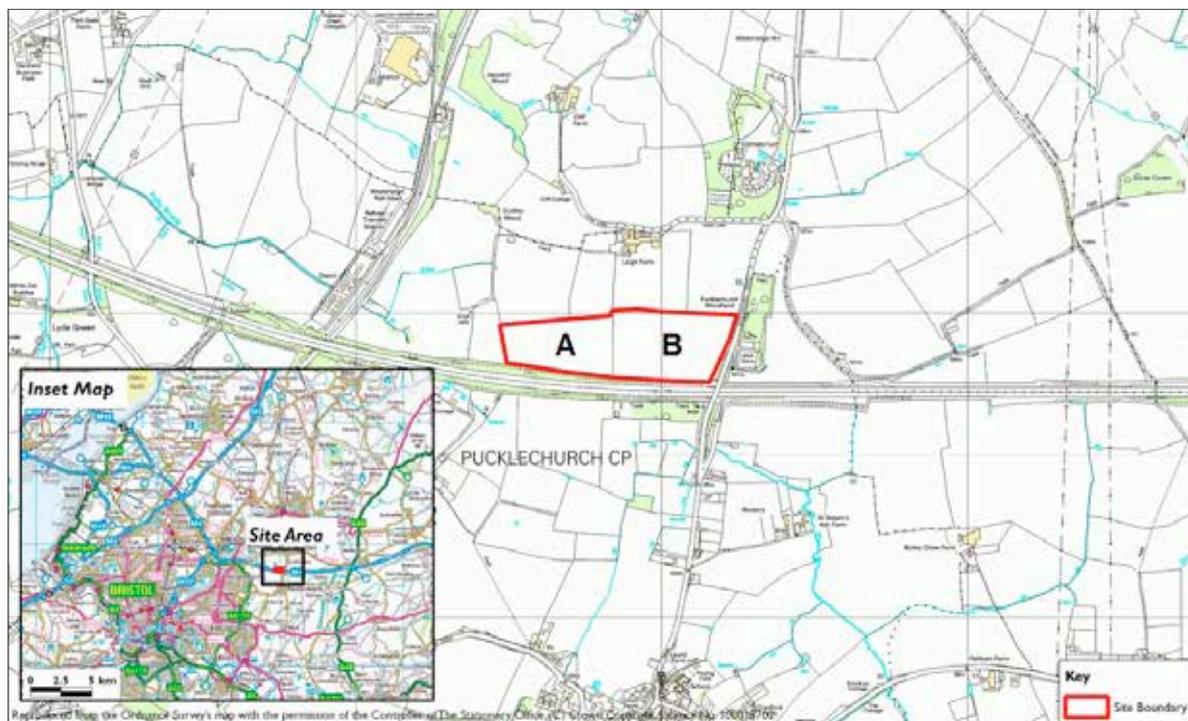
We are investigating the potential for a 5 Megawatt (MW) ground mounted solar array at Leigh Farm 1 Pucklechurch, one of the council's tenanted small holdings. The site has been identified as the best council owned site for solar with the least number of constraints. It is in Pucklechurch parish where the Parish Plan includes an ambition for a renewable energy project in the area.

This project is expected to generate renewable electricity equal to that used by 935 homes, 81% of all the homes in Pucklechurch. It would help reduce carbon emissions and generate income for the council and the community. The surplus income would be used to support local services and to fund community projects. We have secured a grid connection offer and are carrying out further investigations into the suitability of the site and ownership options.

We would like to hear your views so that we can take them into account along with viability issues prior to taking a decision to. If we proceed to planning you will be formally invited to comment in the usual way. We anticipate that this will be in autumn 2015.

For further information see www.southglos.gov.uk/solarpanelproject

Site Location Plan

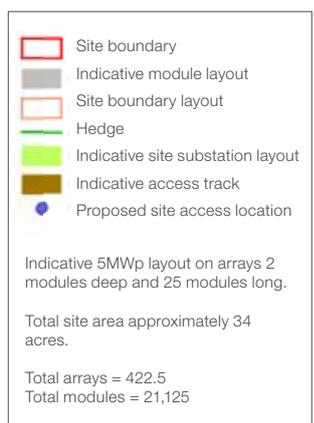


Design and Access

A brief description of the proposal is provided below:

- Banks of solar panels will be mounted on a metal frame fixed to the ground. These are connected to inverters and transformers that are connected to the local electricity distribution grid via a cable to Wapley substation. The cable would be taken underground along Westerleigh Road and the B4465. An alternative cross country connection is being investigated.
- Access to the site for construction traffic is expected to be from Westerleigh Road.
- A small temporary compound will be needed to provide materials and plant storage, welfare facilities etc for the duration of construction and will be removed following installation
- A security fence will be needed around the perimeter of the site. A deer fence is proposed, in keeping with the rural nature of the area.
- A request to divert the existing public right of way to the side of field B will be made.
- An archaeological and cultural heritage assessment will consider the potential effects on buried archaeological features on the site, and also visual effects on heritage assets around the site.
- Existing field hedgerows would be retained, and strengthened by supplementary planting of native species, except where access between fields is required. New native hedgerows would be planted to reinforce the southern and eastern boundaries of the site to provide some shielding of the solar array from predominant views.
- A landscape management plan will be created to define the approach to reduce impacts upon sensitive viewpoints.
- Ecology surveys are underway to identify any potential effects of the solar scheme on nature conservation
- A recent survey shows the land to be grade 4 'poor quality agricultural land.'
- The project will have a 25 year life. After that time the solar array would be dismantled and the farmland restored to its present state. The solar panels and the steel frames that they are mounted on would be recycled.

Figure 2: Proposed layout



Landscape and Visual Impact Assessment

A formal landscape and visual impact assessment has been carried out. The report assessed the potential for a 5 MW and larger 7.2 MW scheme at the site. The larger scheme has been discounted to reduce the impact.

Close up Views

The site will be most visible from footpaths within the farm, from Westerleigh Road and the Leigh Farm houses, where existing screening is of limited influence. Motorists travelling from Pucklechurch to Westerleigh will get a glimpse of the site as they drive over the motorway bridge. New hedgerows and trees will provide some additional screening but the site will still be visible. Views from the motorway will be significantly reduced with new planting. A glint and glare assessment will be undertaken to determine if this will create any problems for motorists.



Figure 3: Viewpoint from Westerleigh Road motorway bridge

View from Pucklechurch Village and surrounding footpaths

From Pucklechurch and the surrounding footpaths and roads, south of the M4, views are generally well screened, and the inclusion of additional boundary planting will be of considerable benefit to the integration of the solar farm into the wider landscape.



Figure 4: Viewpoint from footpath near Rose and Crown Pucklechurch

Distant View from Dyrham Hill Fort, Cotswold Escarpment

The site will be visible in more distant views from selected locations along the Cotswold escarpment, that are not screened by trees, including Dyrham Park and Dyrham Fort. Here, the impact from new boundary planting would be more limited and the solar arrays would be a notable element as a small proportion of the overall view



Figure 5: Viewpoint from Hinton Hill Fort

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Key facts

Hectares occupied	14 in red line boundary
Installed capacity	5 MW
Number of panels	20000
Number of rows	19
Energy generated	4380 MWh/year
Number of homes supplied	935 (equivalent)
Number of homes in Pucklechurch	1153
Electricity used by the homes in Pucklechurch (2012)	5413MWh/year

Development and Ownership Options

We are looking for the ownership model that brings the greatest level of public benefit.

By public benefit we mean income to the council plus income to a community benefit fund.

This will vary depending on:

- Cost of construction
- Level of subsidies at the time of registration of the scheme
- Sale price for the electricity

We will only proceed if the business case stacks up. We are considering the following ownership options:

Option 1

Council develops and owns the scheme and makes a community benefit payment

With this option the council would borrow money to build and own the scheme. Surplus income after paying off the borrowing costs would be used to fund local services and an annual community benefit payment would be made to fund local projects.

Option 2

Council leases the land for a community owned project

With this option the council would apply for planning permission and if successful would offer a local community energy enterprise the opportunity to develop and run the project.

The project would be financed through a community share offer and loans if needed. Investments can be from £50 up to £10,000 and rate of return on similar schemes is typically between 5 and 7%. Any surplus income generated could be re-invested in local community energy or other priority projects. The enterprise would need to be governed by local people and professionally administered.

Community benefit payment

An annual payment to a community benefit fund of approximately £1000/MWh generated is usually made to the parish council for distribution to local community projects. This would be made under either ownership option.