



Flood Risk Assessment



100.00kWp

Bowley Farm Solar PV Ground Array

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Clarks Of Bowley
Bowley Farm
Bowley Lane
Chichester
West Sussex, PO20 1NB

Arun District Council Planning Ref: P/52/14/PL

Development Description and Location

The proposed application site is approximately 0.27 hectares and is undeveloped land within the boundary of a Bowley Farm, an arable farm site. The OS Grid centre point coordinates for the site: 488522, 099797.

The site is adjacent to Clarke of Bowleys existing arable farm land which is to the East, and directly to the North of a number of static caravans.

The site is North-West of Nyetimber, West Sussex, and is approximately 4km from Bognor Regis town centre. Our site is also approximately the same distance from Sidlesham, which is South-East from Bowley Farm.

Solinium Ltd have commissioned a Flood Risk Report which identifies that areas of Bowley Farm are classed as 'High Risk'. Following these findings we have also carried out our own assessment to establish the most suitable location for this PV Ground Array.

Whilst there are areas of Bowley Farm that are high risk for Surface Water, River and Tidal flooding (see image 2, and 3), the location of our proposed Solar PV Ground Array is not sited within these 'High Risk' areas.



Image 2 – River and Tidal Flood Risk Plan

This map shows the extent of flooding from rivers or the sea which could be expected with different return periods



Image 3 – Surface Water Risk Plan

This map shows the extent of flooding due to heavy rainfall which flows down hills and ponds in low points. The map shows the flood extent which could be expected based on a 1 in 75 year return period flood event



Where access tracks are required, permeable tracks will be used, and localised SUDS, such as swales and infiltration trenches will be utilised to control any run-off rain water from the PV system. Given the temporary nature of solar PV farms, our site has been selected to avoid the need to impact on existing drainage systems and watercourses.

Solar Panel Installations are considered as 'less vulnerable' developments, however any electrical components, where possible, should be positioned above the predicted worst case flood levels. With this in mind we have specified Power-One Trio Inverters with are houses in IP 66 rated enclosures (*IP 66 rated as "dust tight" and protected against heavy seas or powerful jets of water*). These will be mounted to the rear of the framework supporting the PV Panels. We have been advised that the potential flood levels for the worst effected areas of the site could be as high as 0.25m. Our Solar PV Inverters will be mounted at an approximate height of 1.5m, all DC cabling will run at a similar level.

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