

SUPPORTING STATEMENT

**PROPOSED
SOLAR PANEL ARRAY.
AWLISCOMBE HOUSE
Awliscombe
Nr Honiton.
EX14 3NP**

INTRODUCTION

Ejw Architects were instructed by Miss Christine Kirk in conjunction with Mole Energy, to consider installing a stand-alone ground mounted solar array, located to the north west of the house, on the southern side of the mature hedging. See Figs 1 – 3.

SITE DESCRIPTION

The field falls slightly to the south, with a mature hedge line to the south of the array, with the existing main site buildings to the north west of the array. Ivedon House to the north of the site is listed, grade 2, screened from the array by mature trees and hedging, thus the array is not detrimental to the setting of the listed building.



Fig 1. Aerial view.



Indicative area for array.

Fig 2. View looking north west toward the site.



Fig 3. View looking northwest towards site.

ACCESS

Access will be via the existing drive and track network.

PROPOSED

The proposed mounted PV array is to take the form of Solar PV panels, of ground mounted Vertex S back sheet monocrystalline modules, in 4 rows, panels in portrait format, totalling 72 panels, on a Park Tegra Ground galvanised Anchor system, see fig 7. With the electric inverters positioned to the underside of the panels, see fig 5 below, avoiding the need of a separate hut. A total of approximately 31 kWp is to be generated at peak times.



Fig 4. Plan View of array.



Fig 5. Invertors installed below / behind the solar panels- no freestanding hut required

APPEARANCE

The general appearance of the panels and installation can be seen from the photographs, in Figs. 6, 8-9 below, which represent panels installed in similar circumstances elsewhere.



PRODUCT: TSM-DE09R.08
PRODUCT RANGE: 415-435W

435W

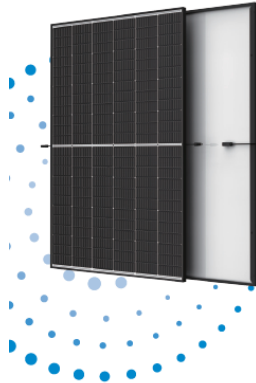
MAXIMUM POWER OUTPUT

0~+5W

POSITIVE POWER TOLERANCE

21.8%

MAXIMUM EFFICIENCY



Small in size, big on power

- Small form factor. Generate a huge amount of energy even in limited space.
- Up to 435W, 21.8% module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection
- Reduce installation cost with higher power bin and efficiency
- Boost performance in warm weather lower temperature coefficient (-0.34%) and operating temperature

Universal solution for residential and C&I rooftops

- Designed for compatibility with existing mainstream optimizers, inverters and mounting systems
- Perfect size and low weight. Easy for handling. Economy for transporting
- Diverse installation solutions. Flexible for system deployment

High Reliability


- 15 year product warranty
- 25 year performance warranty with lowest degradation:
- Minimized micro-cracks with innovative non-destructive cutting technology
- Ensured PID resistance through cell process and module material control
- Mechanical performance up to 6000 Pa positive load and 4000 Pa negative load


Trina Solar's Backsheet Performance Warranty




Years	Guaranteed Power (%)
0	100%
25	84.8%

Comprehensive Products and System Certificates






IECS12L5/IECS17.30/IECS1701/IECS2716/UL61730

ISO 9001: Quality Management System

ISO 14001: Environmental Management System

ISO 45001: Occupational Health and Safety Management System

ISO 14064: Greenhouse Gas Emissions Verification



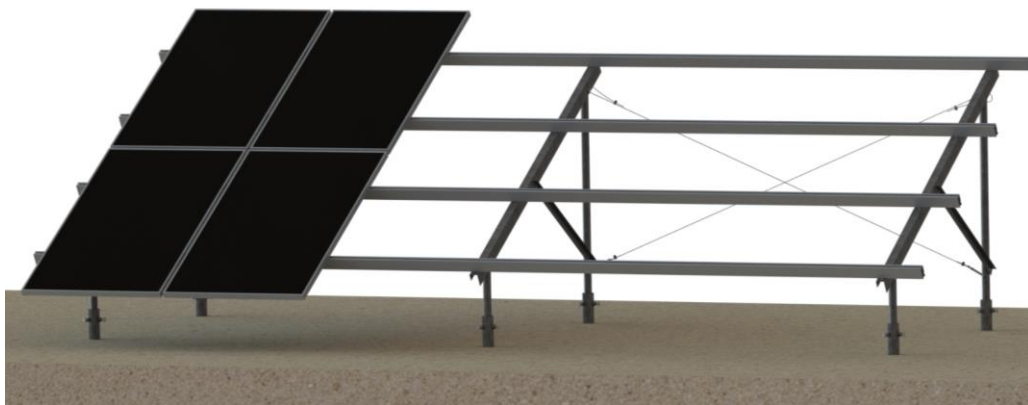


Fig 6. Solar panel system details.

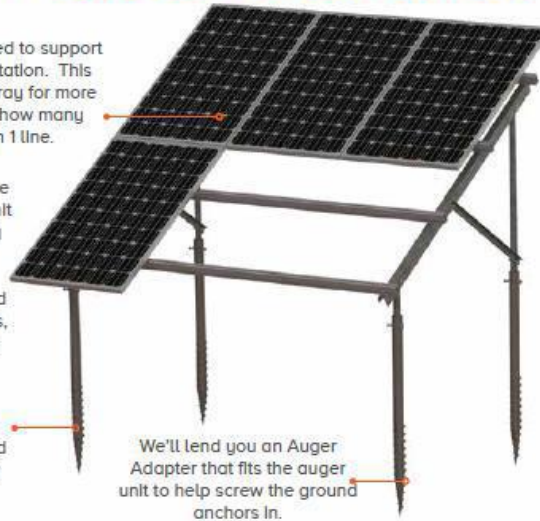
PARK TEGRA **GROUND ANCHOR**

Our standard structure is designed to support 2 modules high in portrait orientation. This allows more space within the array for more modules. There isn't a limit to how many modules can be installed in 1 line.

We recommend hiring a 2.5 tonne cylinder head hydraulic auger unit with reverse option for installing the ground anchors.

Sometimes the ground may need more pressure applying. For this, a 4-5 tonne auger unit is more suited.

Screws into ground with a high clay content, making it a fast and popular solution, particularly for small to medium projects.



We'll lend you an Auger Adapter that fits the auger unit to help screw the ground anchors in.

9.77kg/m²
Weight

Portrait
Module orientation

30°
Standing module angle

Aluminium, stainless & galvanised steel (EN ISO 1461)
Material

+44 (0) 1451 824 312
info@sunfixings.co.uk
R3 Bourton Industrial Park, Bourton on the Water, Cheltenham, Glos, GL54 2HQ, UK
WWW.SUNFIXINGS.CO.UK
V122016



Fig 7 Park Tegra galvanised support system



Fig 8. Photos of the previously installed similar solar array.



Fig 9. Image of panel installed similar solar arrays.

FLOOD RISK

The application site sits outside of the Environment Agency flood zones 2 & 3, with low risk of flooding, see Fig 10, EA map below. The array is away from any nearby buildings and, less than 130 sqm and not likely to be a flood risk, see Fig 11. below for definition of minor developments.

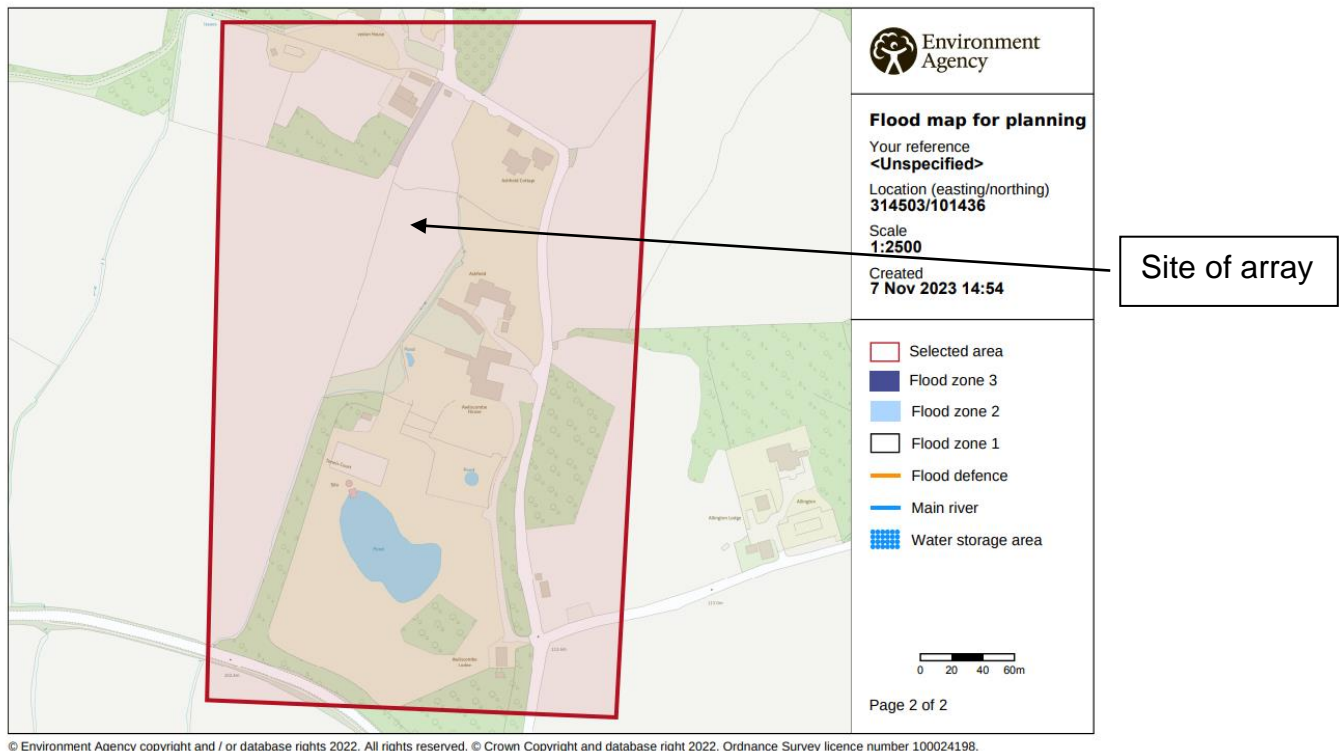


Fig 10. EA Flood map

¹⁰ Minor development means:

- Minor non-residential extensions: industrial/commercial/leisure etc. extensions with a footprint less than 250sqm.
- Alterations: development that does not increase the size of buildings e.g. alterations to external appearance.
- Householder development: e.g. sheds, garages, games rooms etc. within the curtilage of the existing dwelling in addition to physical extensions to the existing dwelling itself. This definition excludes any proposed development that would create a separate dwelling within the curtilage of the existing dwelling e.g. subdivision of houses into flats.

Fig 11. EA definition of minor development.

SUMMARY

The array is modest in width and area (under 130 sqm) but arranged in 4 rows to fit the site, and avoid over shading, they are screw rotated into the ground, with no concrete used, but easily removed, if required in the future, without detriment to the immediate setting. No increased risk of flooding is created, nor is it within a flood risk zone. It is reasonably screened and would be difficult to be seen from public highways due to landscaping, earth banks and topography.

The applicant is keen to reduce their reliance on fossil fuels, in line with HM Government policies, whilst also reducing energy running costs during peak summer months and, with this carefully selected location for the array, we believe this to be a positive renewable development.

Producing electricity with PV emits no pollution, produces no greenhouse gases and uses no finite fossil-fuel resources. Where, as has been generally recognised, the current consumption of and reliance on fossil fuels is unsustainable, there is a very real need to find a viable long-term alternative solution, this makes a meaningful contribution.

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