

Design and Access Statement

Shelley House
Shelley
Ipswich
IP7 5QY

Easting: 603018
Northing: 238882

Ground Mounted Solar PV System

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	Reviewed By	Approved By	Date
Initial			
Revision			

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1.0 Design

1.1 Introduction

This design and access statement accompanies a planning application by East Green Energy Ltd to Babergh District Council for full planning permission to install a Ground Mounted Solar PV system within the land owned by Mr Edward Galvin, Shelley House, Shelley, Ipswich IP7 5QY. The application site grid reference is TM030386.

The ground mount solar system will be located 105m to the north of the listed Shelley House.

Fig. 1.1 Site Location.



The yellow lines donate indicative location of the proposed ground mount Solar PV System.

1.2 Use

The proposal is for a ground mount solar PV system with the capacity to generate up to 50kW. The Solar PV system will generate electricity consumed on site heating Shelley House and fuelling Mr Galvin's electric cars. Thereby reducing the reliance on fossil fuels whilst also lowering carbon emissions. The estimated annual electricity generation from the ground mounted solar PV system is approximately 47,000kWh which equates to a carbon savings of up to 16.5tCO₂e/year based on the reduction on reliance on the grid which is the equivalent of planting over 700 trees.

The proposal will therefore contribute towards the regional targets for renewable energy generation.

1.3 Layout of the Development

Appraising the context of the proposal has involved a site visit by an East Green Energy representative during which the site was walked over to evaluate the landscape character and to identify any on site constraints.

The selection of the site has been guided by the need to meet the manufacturer's requirements for available sun and shading etc. The appraisal completed has indicated that the site is appropriate for the siting of a solar PV system by virtue of its topography, location, and technical performance of the proposed installation. The visibility of the site from the surrounding area was assessed in terms of its potential implications for the surrounding landscape which in this case is considered as low.

Appraising the context of the site has involved an evaluation process that has sought to balance the various aspects of the proposal. It is considered that the site chosen by the applicant and the design selected satisfies the requirements of relevant local and national planning policies and in particular those relating to; built and cultural heritage, public safety and security, ecology, hydrology, landscape and visual and access.

1.4 Scale

The proposed Ground Mount Solar PV System comprises:

120 solar panels, up to 420kWp each, ground mounted at a 30-degree angle, consisting of 3 double rows covering total area of approximately 488sqm.

1.5 Landscaping

A visual inspection was carried out using methodology consistent with current national and regional guidelines. The assessment process has sought to establish the full extent of the likely landscape and visual effects arising from the proposed Ground Mount PV System, at all stages of the project.

1.6 Appearance

To keep the array as compact as possible we have designed an array consisting of 3 double rows, the first at 16.10m wide, the second at 23.08 wide and the third at 30.00m wide. The rows are 2.38m high and 3.1m deep with just under 7.0 meters between each row. The rows are set at an angle of 30 degrees to the horizontal.

1.7 PV System Details

Panel Manufacturer:	Trina Solar Vertex
Panel Model:	420
PV system generation capacity:	50kWh
Number of panels:	120
Colour:	Black
Type of mounting:	<i>Ground Mounted Solar</i>
Panel dimensions:	1762mm x 1134mm x 35mm
Panel weight:	approx. 21.8kg

1.8 Mounting System

120 photovoltaic (solar) panels will be installed on ground mounted frame. The panels sit just under 600mm from the ground at the front and approximately 2.38m at the rear. Each panel is 1.134m in width and 1.762m in length, the panels are mounted as 3 double row of 14, 20 and 26 = 120 modules.

Fig. 1.2 Mounting System.



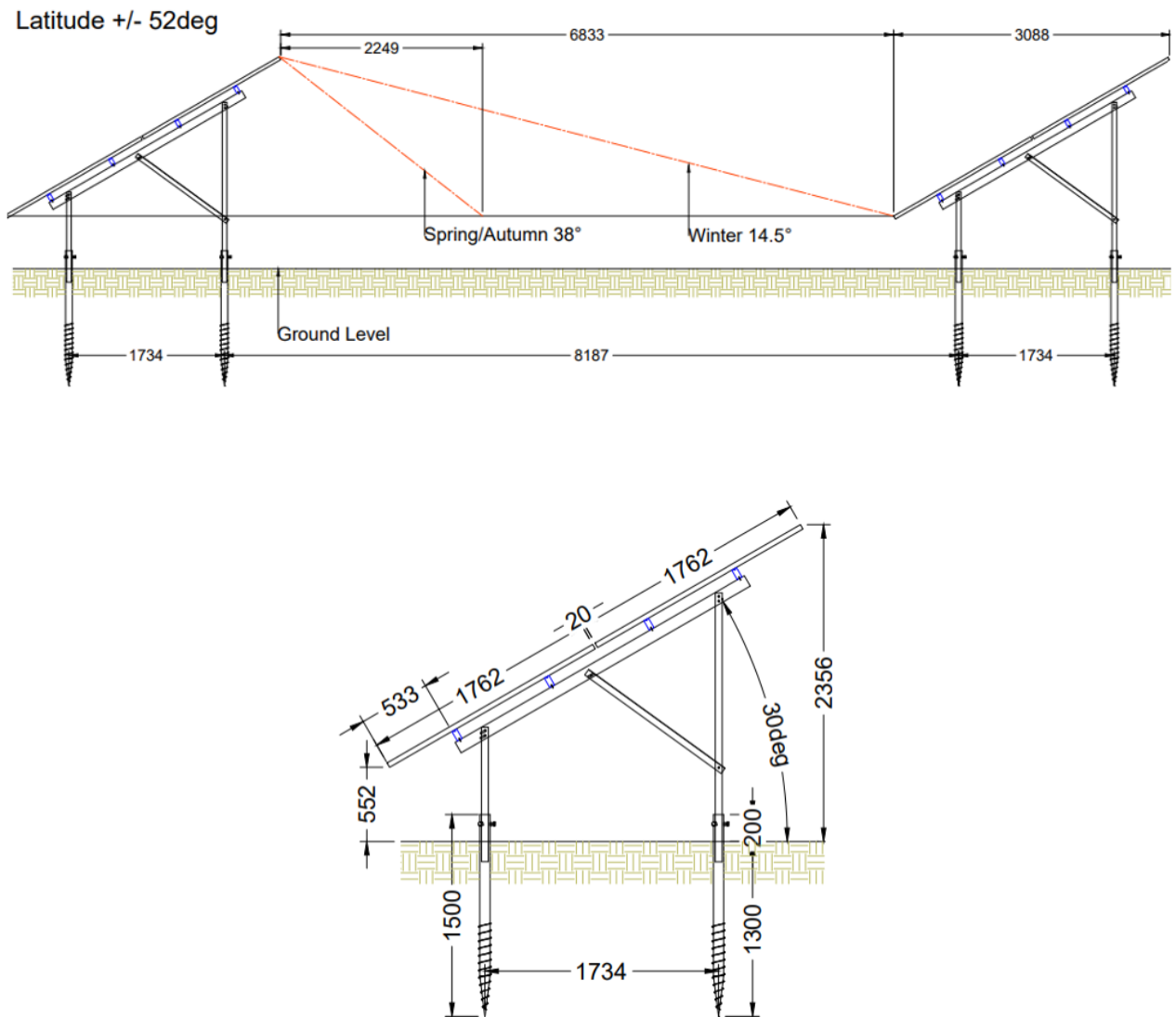


Fig 1.2 Mounting System - examples from previous ground mount installation.

1.9 Cabling

The PV system is connected to the incoming supply via the existing stables. This will require a cable run of approximately 48m from the array to the stables. Any noise generated from the inverters (maximum noise output <25 dBA per inverter) will be completely contained within the stable block.

2.0 Access

2.1 Proposed Route and Site Access

Access will be via the applicant's own land. No permanent roads will need to be constructed for the works and there will be only the occasional heavy vehicles accessing the site, there will be no abnormal loads.

2.2 Public Use of the Site

The Solar PV system will be situated on private land.

There will be no impact on routes or open spaces and the panels are obscured from view by existing hedges trees and the stable block. Therefore, the proposal will not cause any unnecessary impact on the surrounding area.