Powersun
Energy Solutions

Powersun

Precision
Will Moffatt

Contact person:
Ian Brent-Smith
Phone: +44 1869 250505
E-Mail: sales@powersun.ltd.uk

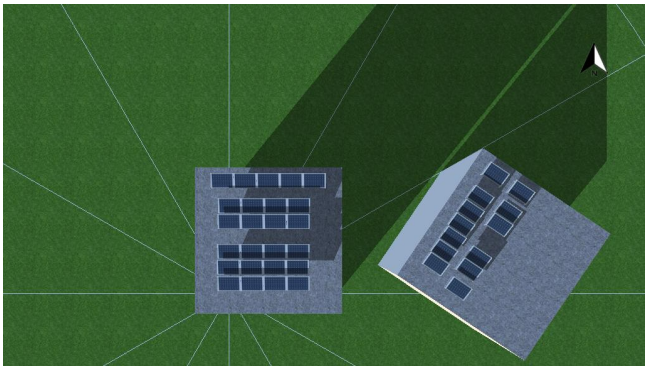
Customer No.: IB1010
Project Name: ROUNDHOUSE

13/04/2022

Your PV system from Powersun

Address of Installation

Chalk Farm
NW1 8EH



Project Description:
38 panels - 15.58kWp

Project Overview

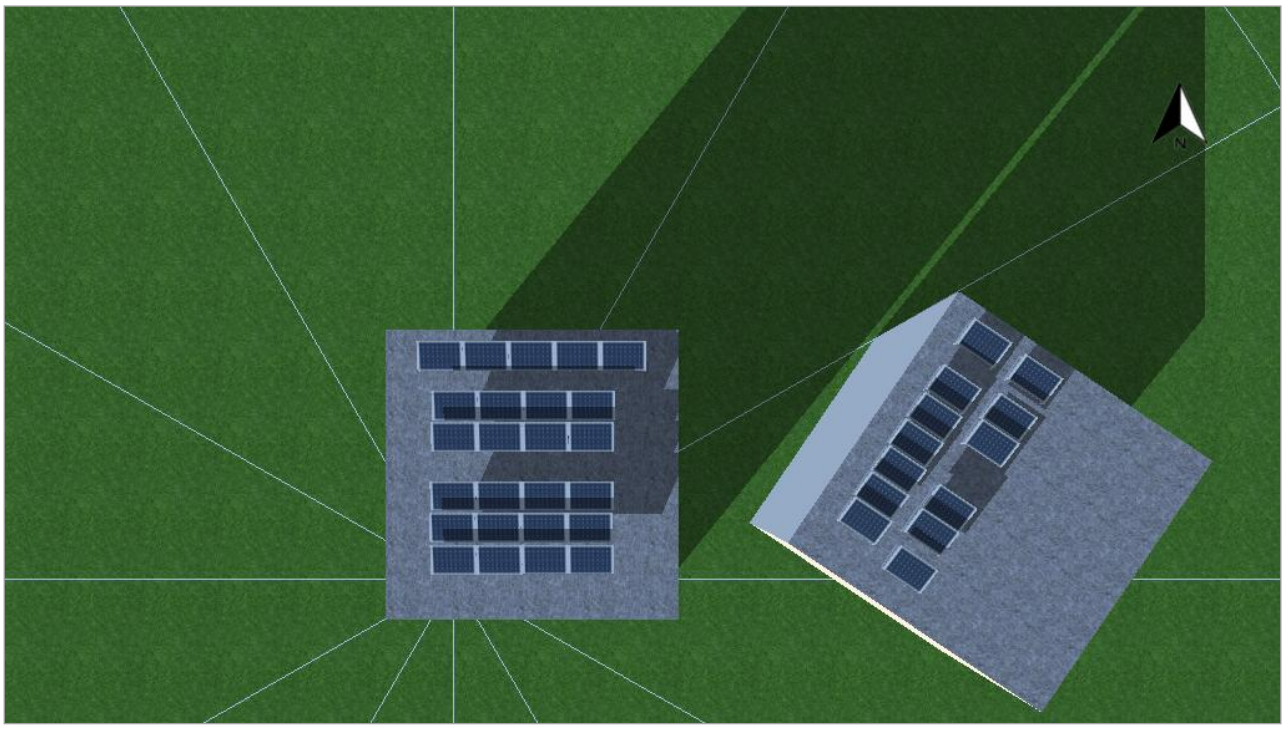


Figure: Overview Image, 3D Design

PV System

3D, Grid-connected PV System

Climate Data	Gospel Oak, GBR (1996 - 2015)	
Values source	Meteonorm 8.1(i)	
PV Generator Output	15.58	kWp
PV Generator Surface	74.3	m²
Number of PV Modules	38	
Number of Inverters	2	

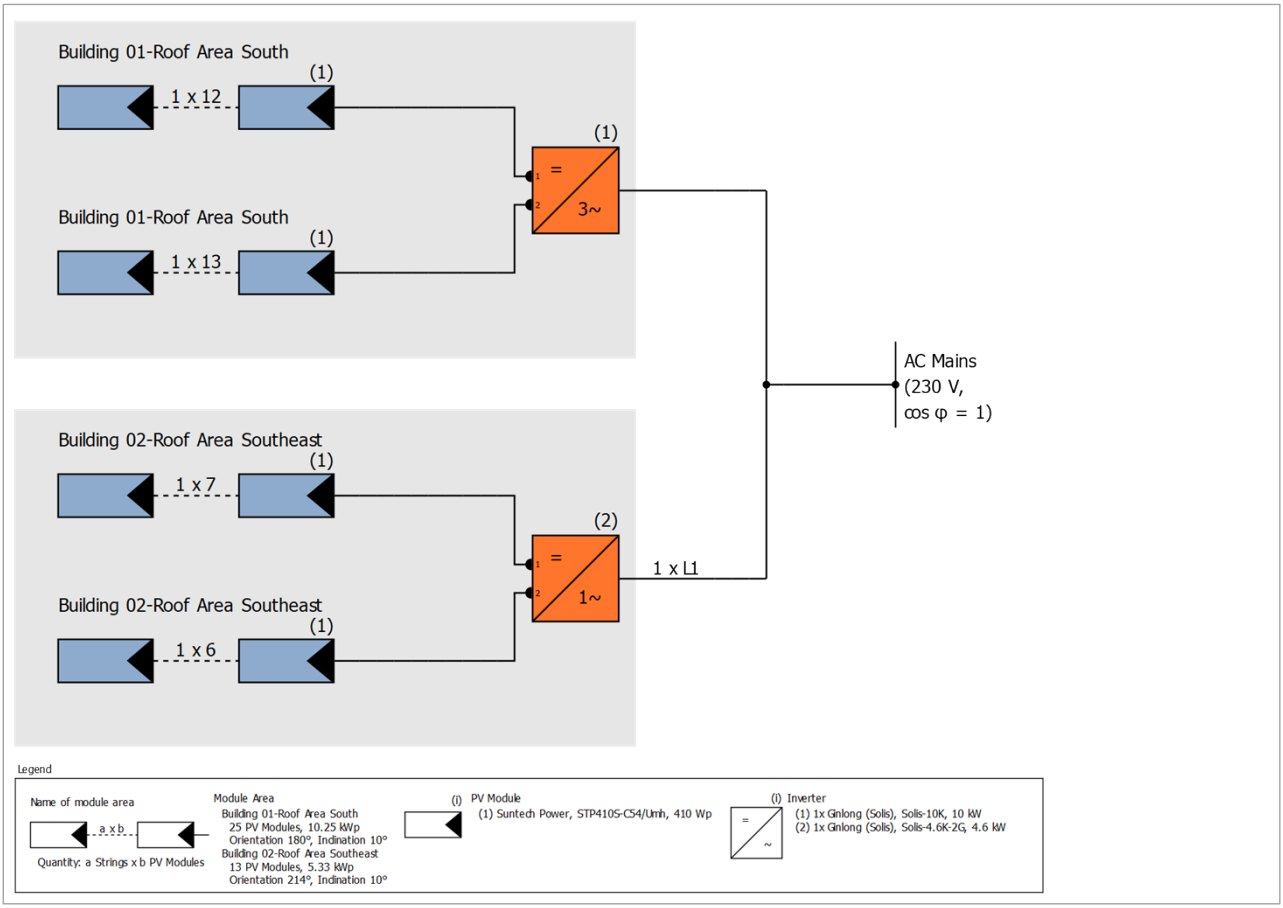


Figure: Schematic diagram

Production Forecast

Production Forecast

PV Generator Output	15.58	kWp
Spec. Annual Yield	839.19	kWh/kWp
Performance Ratio (PR)	80.58	%
Yield Reduction due to Shading	11.0	%/Year
Grid Feed-in	13,087	kWh/Year
Grid Feed-in in the first year (incl. module degradation)	13,033	kWh/Year
Standby Consumption (Inverter)	12	kWh/Year
CO_2 Emissions avoided	6,145	kg / year

The results have been calculated with a mathematical model calculation from Valentin Software GmbH (PV*SOL algorithms). The actual yields from the solar power system may differ as a result of weather variations, the efficiency of the modules and inverter, and other factors.

Set-up of the System

Overview

System Data

Type of System	3D, Grid-connected PV System

Climate Data

Location	Gospel Oak, GBR (1996 - 2015)
Values source	Meteonorm 8.1(i)
Resolution of the data	1 h
Simulation models used:	
- Diffuse Irradiation onto Horizontal Plane	Hofmann
- Irradiance onto tilted surface	Hay & Davies

Module Areas

1. Module Area - Building 01-Roof Area South

PV Generator, 1. Module Area - Building 01-Roof Area South

Name	Building 01-Roof Area South
PV Modules	25 x STP410S-C54/Umh (v1)
Manufacturer	Suntech Power
Inclination	10 °
Orientation	South 180 °
Installation Type	Mounted - Roof
PV Generator Surface	48.9 m²

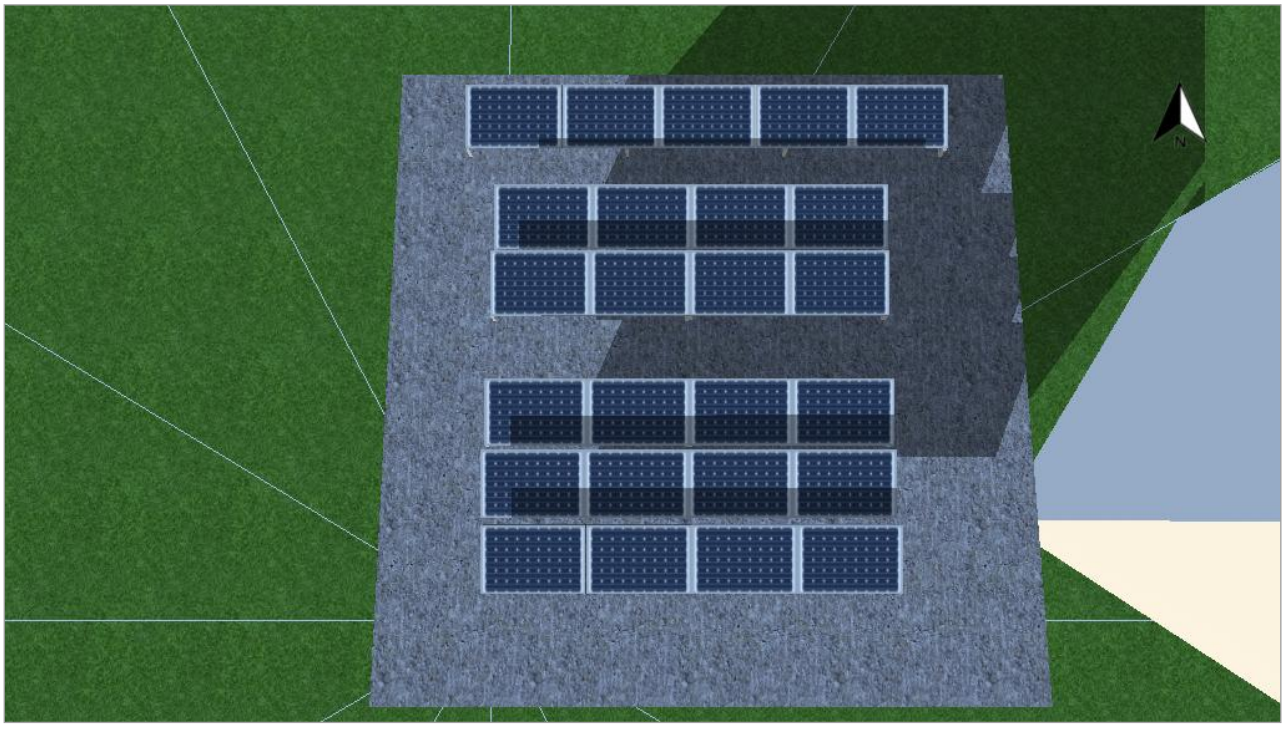


Figure: 1. Module Area - Building 01-Roof Area South

2. Module Area - Building 02-Roof Area Southeast

PV Generator, 2. Module Area - Building 02-Roof Area Southeast

Name	Building 02-Roof Area Southeast
PV Modules	13 x STP410S-C54/Umh (v1)
Manufacturer	Suntech Power
Inclination	10 °
Orientation	Southwest 214 °
Installation Type	Mounted - Roof
PV Generator Surface	25.4 m²

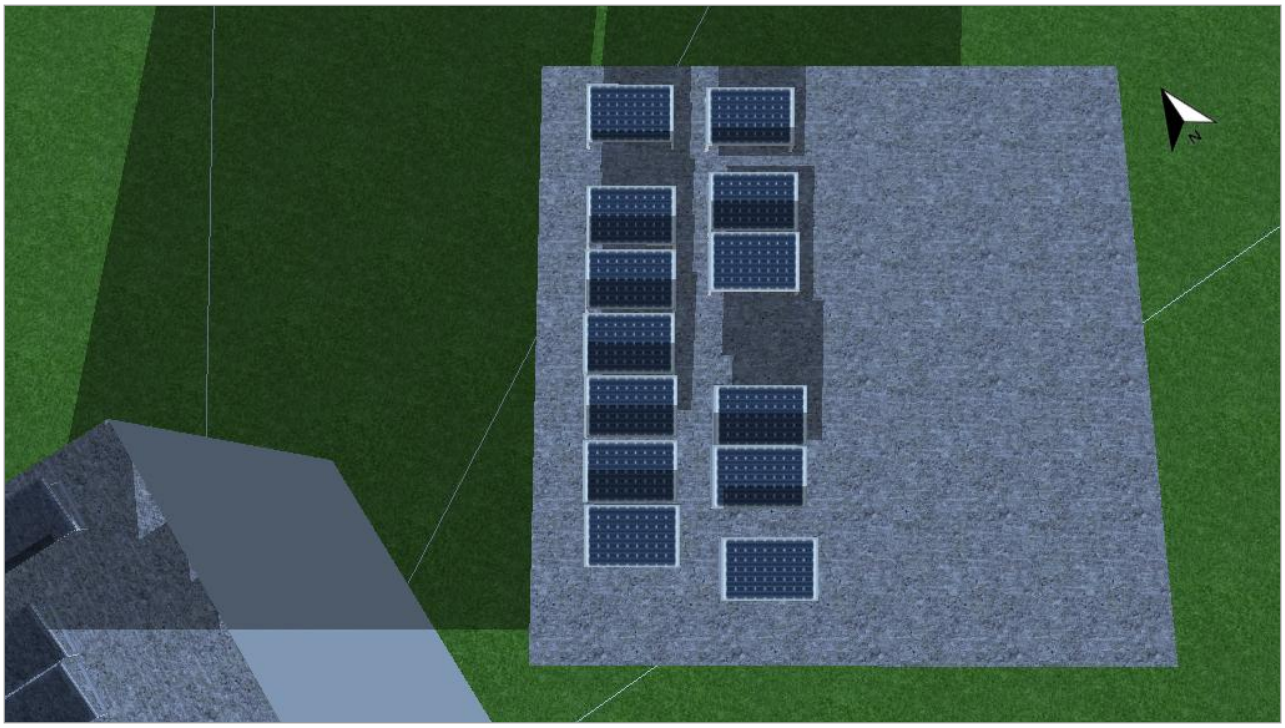


Figure: 2. Module Area - Building 02-Roof Area Southeast

Horizon Line, 3D Design

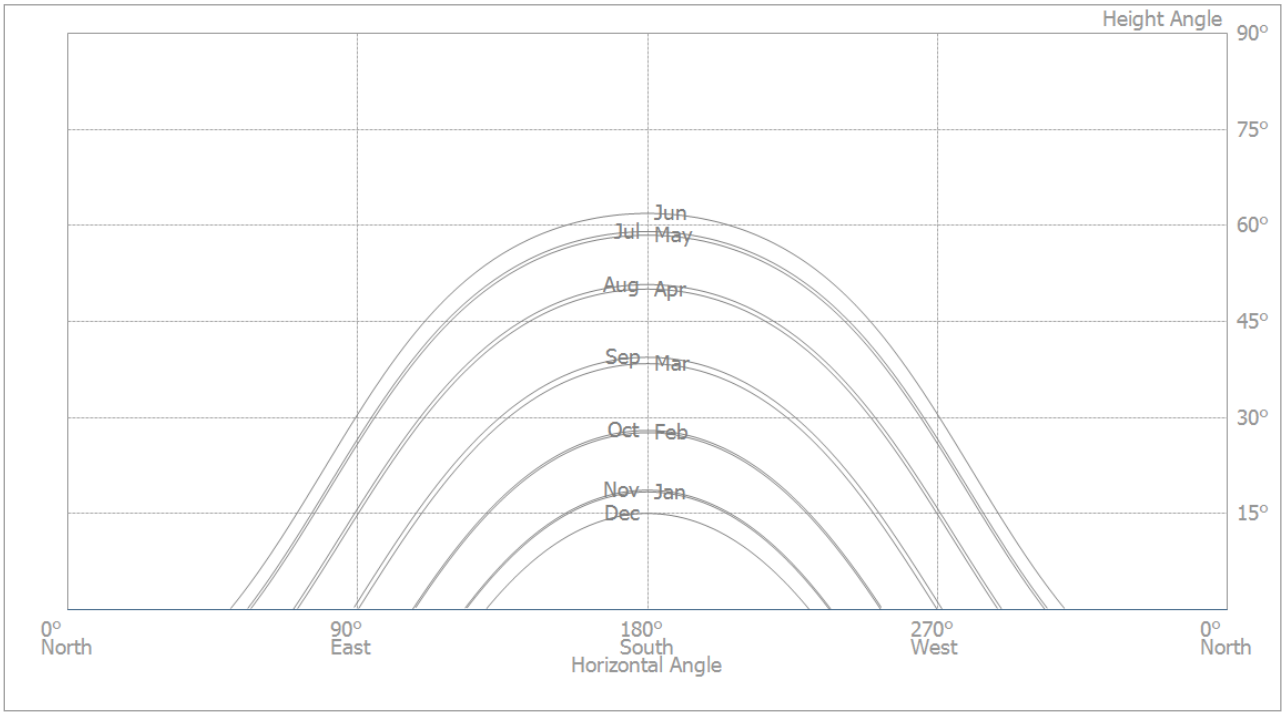


Figure: Horizon (3D Design)

Inverter configuration

Configuration 1

Module Area	Building 01-Roof Area South
Inverter 1	
Model	Solis-10K (v1)
Manufacturer	Ginlong (Solis)
Quantity	1
Sizing Factor	102.5 %
Configuration	MPP 1: 1 x 12
	MPP 2: 1 x 13

Configuration 2

Module Area	Building 02-Roof Area Southeast
Inverter 1	
Model	Solis-4.6K-2G (v1)
Manufacturer	Ginlong (Solis)
Quantity	1
Sizing Factor	115.9 %
Configuration	MPP 1: 1 x 7
	MPP 2: 1 x 6

AC Mains

AC Mains

Number of Phases	3
Mains voltage between phase and neutral	230 V
Displacement Power Factor (cos phi)	+/- 1

Simulation Results

Results Total System

PV System

PV Generator Output	15.58	kWp
Spec. Annual Yield	839.19	kWh/kWp
Performance Ratio (PR)	80.58	%
Yield Reduction due to Shading	11.0	%/Year
Grid Feed-in	13,087	kWh/Year
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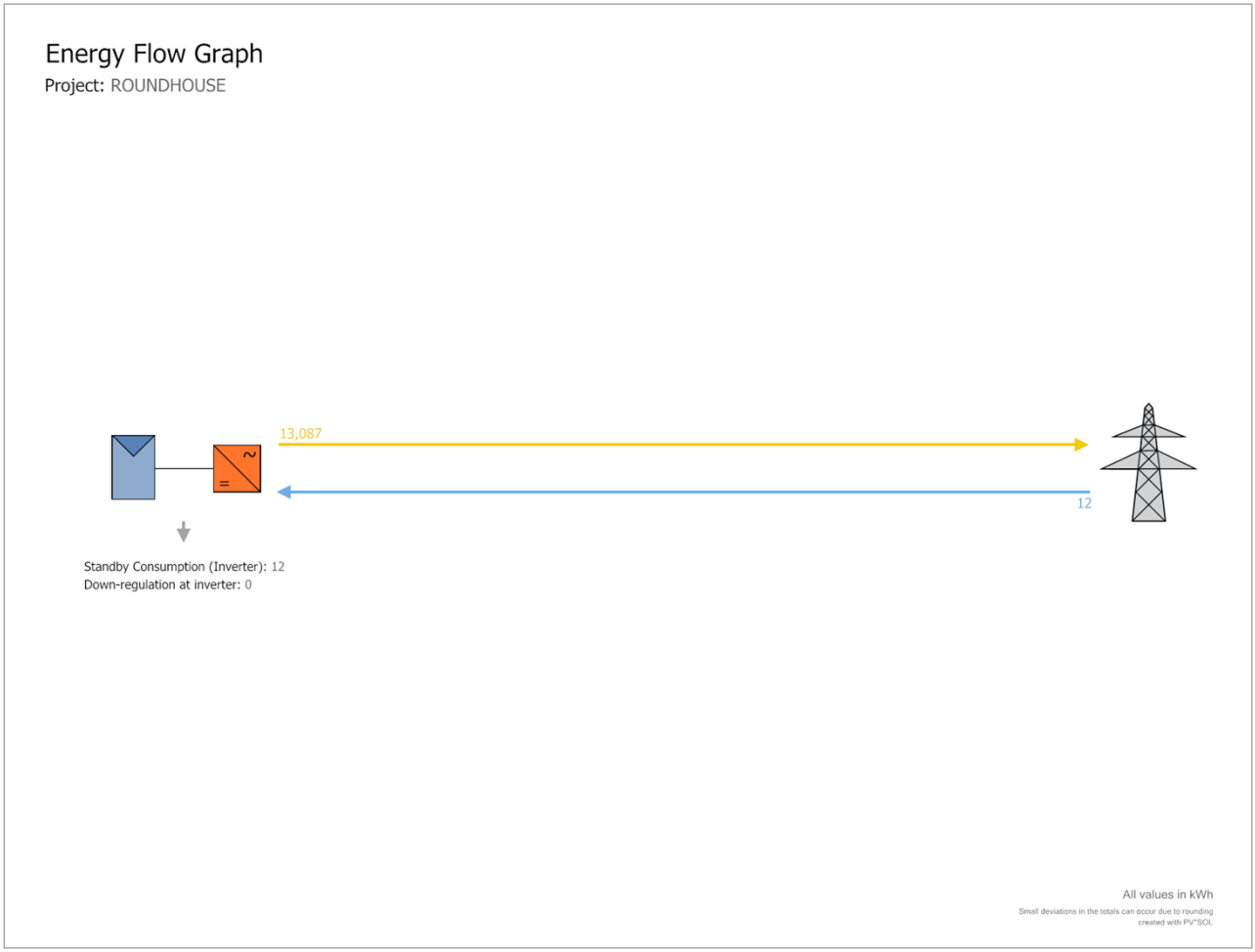

Figure: Energy flow