Waxman Energy
Grove Mills, Elland Lane
HX5 9DZ

Contact person:
Will Jones

Beazer
John

Project Name: WEL18426 - Beazer, Box Tractor Shed, SN13 8NJ
Offer no.: WEL18426

03/08/2023

Your PV system from Waxman Energy

Address of Installation

SN13 8NJ



Project Description:
Box Tractor Shed

Project Overview



Figure: Overview Image, 3D Design

PV System

3D, Grid-connected PV System

Climate Data	Bath, GBR (1996 - 2015)	
Values source	Meteonorm 8.1(i)	
PV Generator Output	2.52	kWp
PV Generator Surface	12.0	m²
Number of PV Modules	6	
Number of Inverters	1	

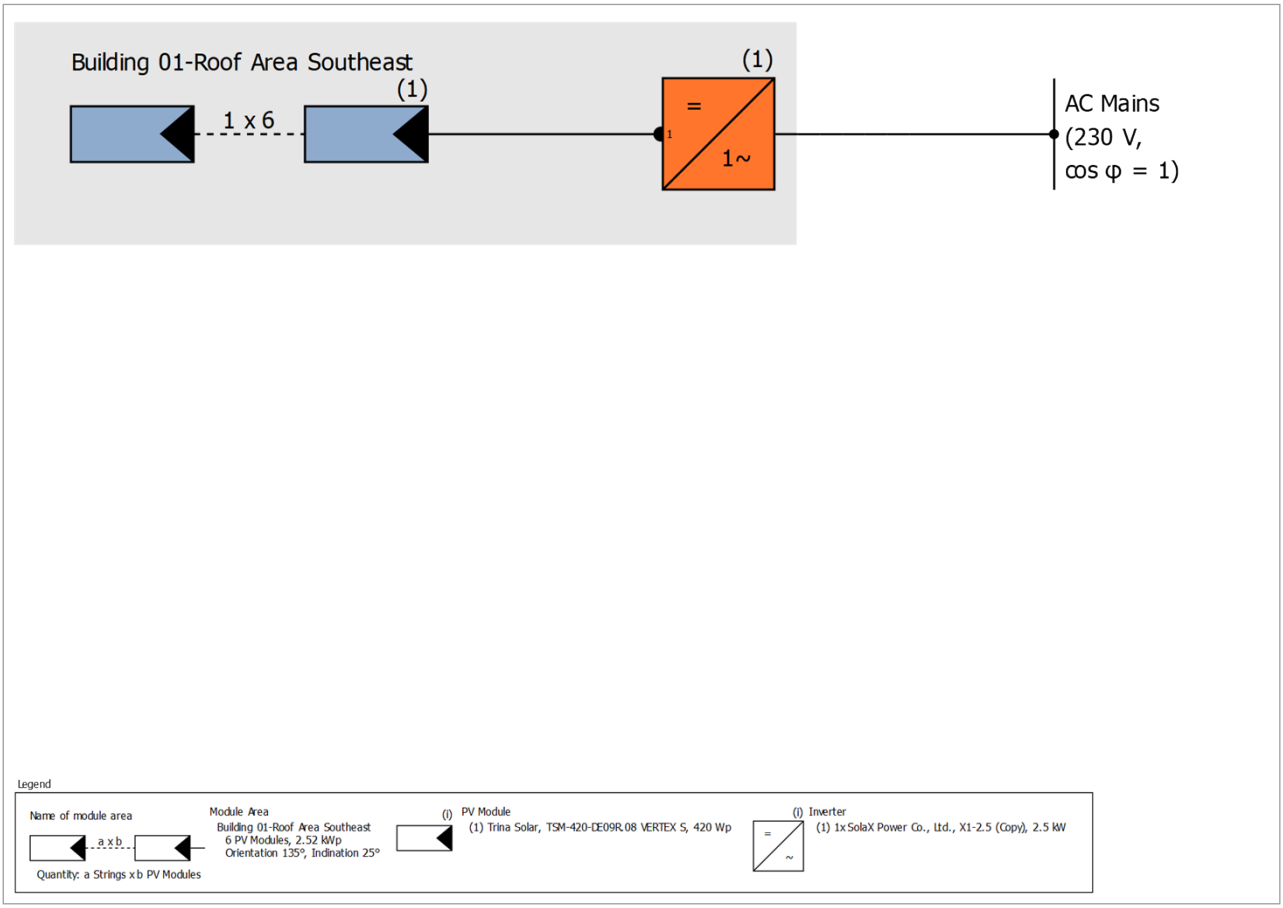

Figure: Schematic diagram

Production Forecast

Production Forecast

PV Generator Output	2.52	kWp
Spec. Annual Yield	1,051.51	kWh/kWp
Performance Ratio (PR)	91.84	%
Yield Reduction due to Shading	0.0	%
Grid Export	2,650	kWh/Year
Grid Export in the first year (incl. module degradation)	2,650	kWh/Year
Standby Consumption (Inverter)	0	kWh/Year
CO_2 Emissions avoided	1,245	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	Bath, 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 Southeast

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

Name	Building 01-Roof Area Southeast
PV Modules	6 x TSM-420-DE09R.08 VERTEX S (v1)
Manufacturer	Trina Solar
Inclination	25 °
Orientation	Southeast 135 °
Installation Type	Roof parallel
PV Generator Surface	12.0 m²

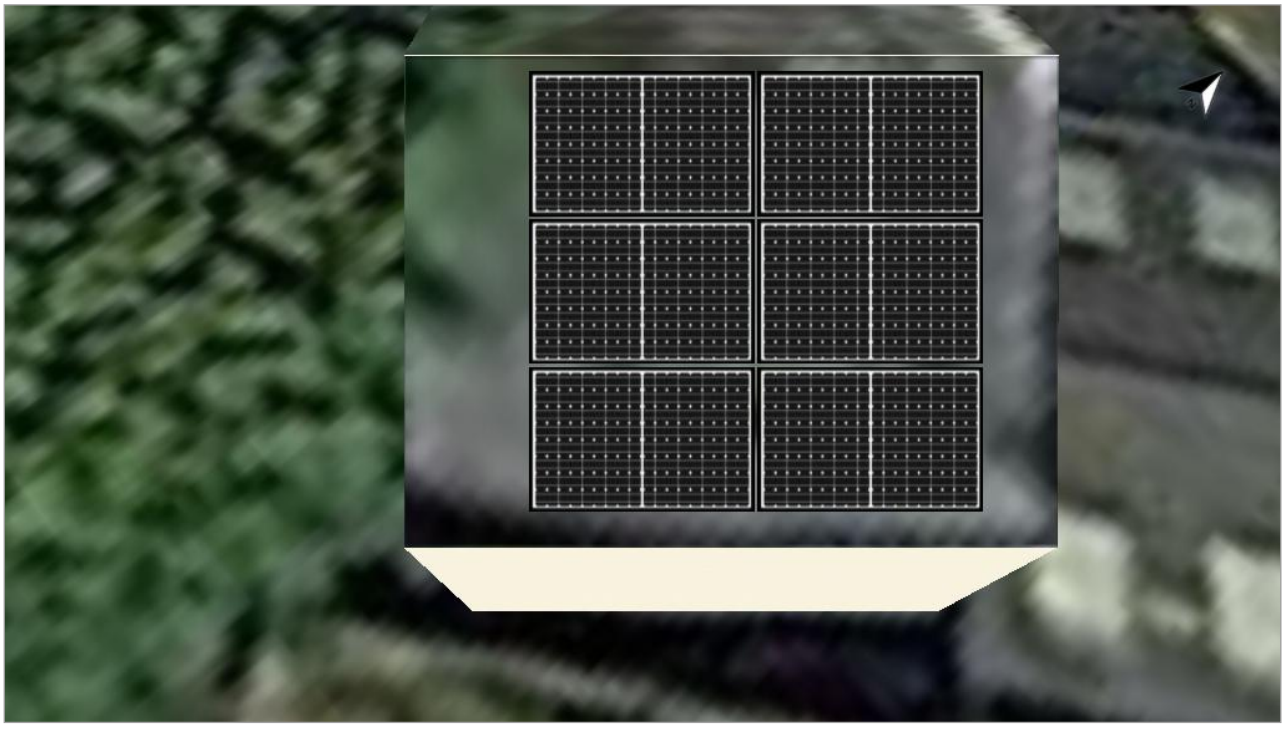

Figure: 1. Module Area - Building 01-Roof Area Southeast

Horizon Line, 3D Design

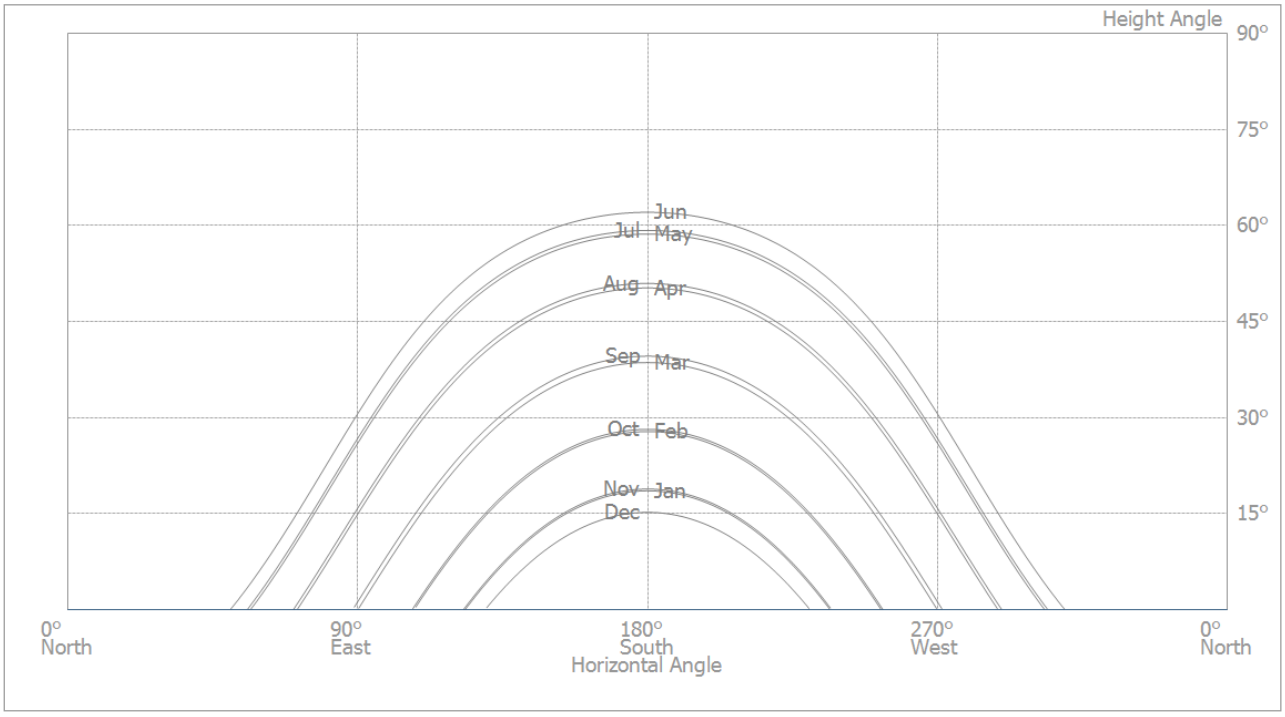

Figure: Horizon (3D Design)

Inverter configuration

Configuration 1	
Module Area	Building 01-Roof Area Southeast
Inverter 1	
Model	X1-2.5 (Copy) (v1)
Manufacturer	SolaX Power Co., Ltd.
Quantity	1
Sizing Factor	100.8 %
Configuration	MPP 1: 1 x 6

AC Mains

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

Simulation Results

Results Total System

PV System

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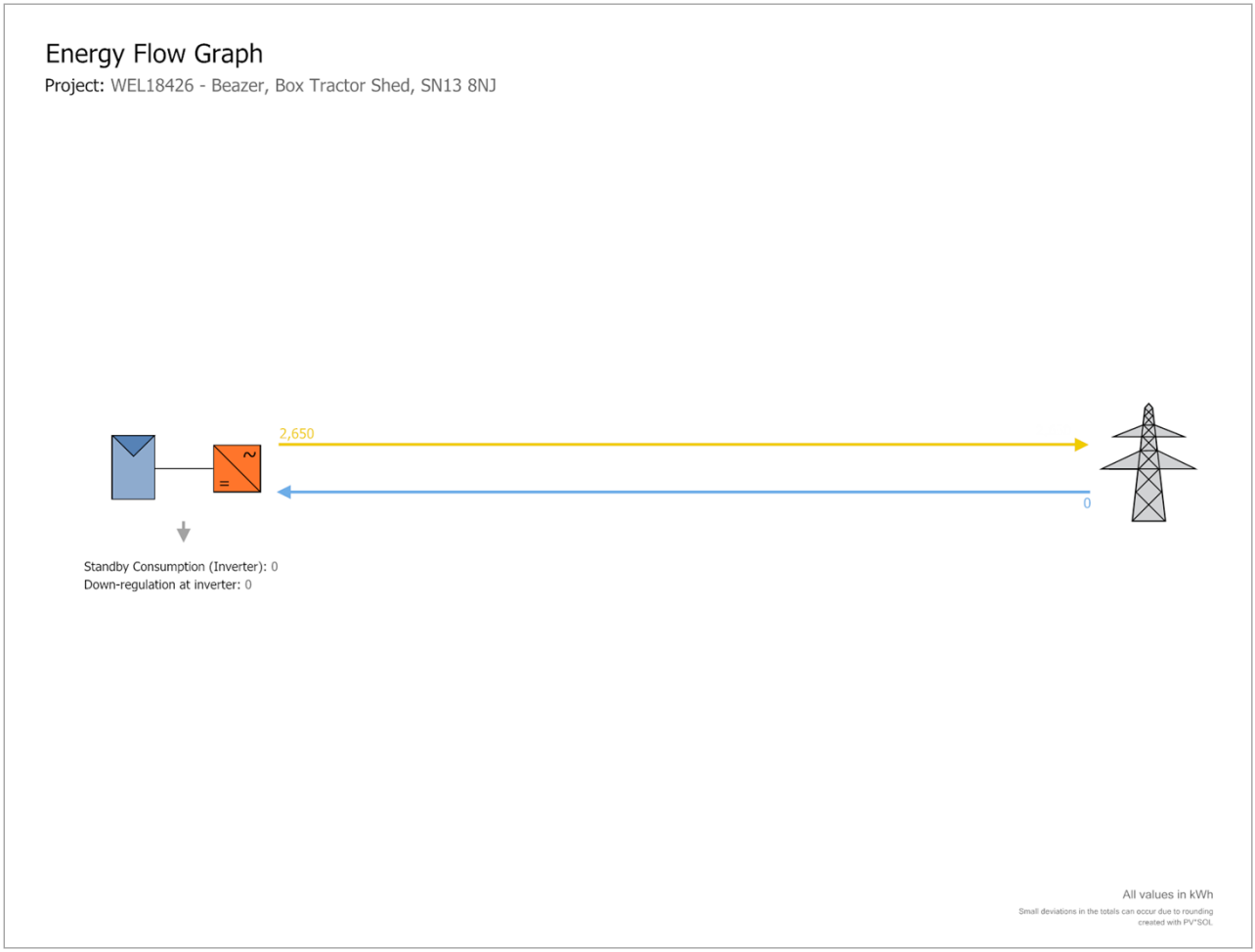

Figure: Energy flow

Plans and parts list

Circuit Diagram

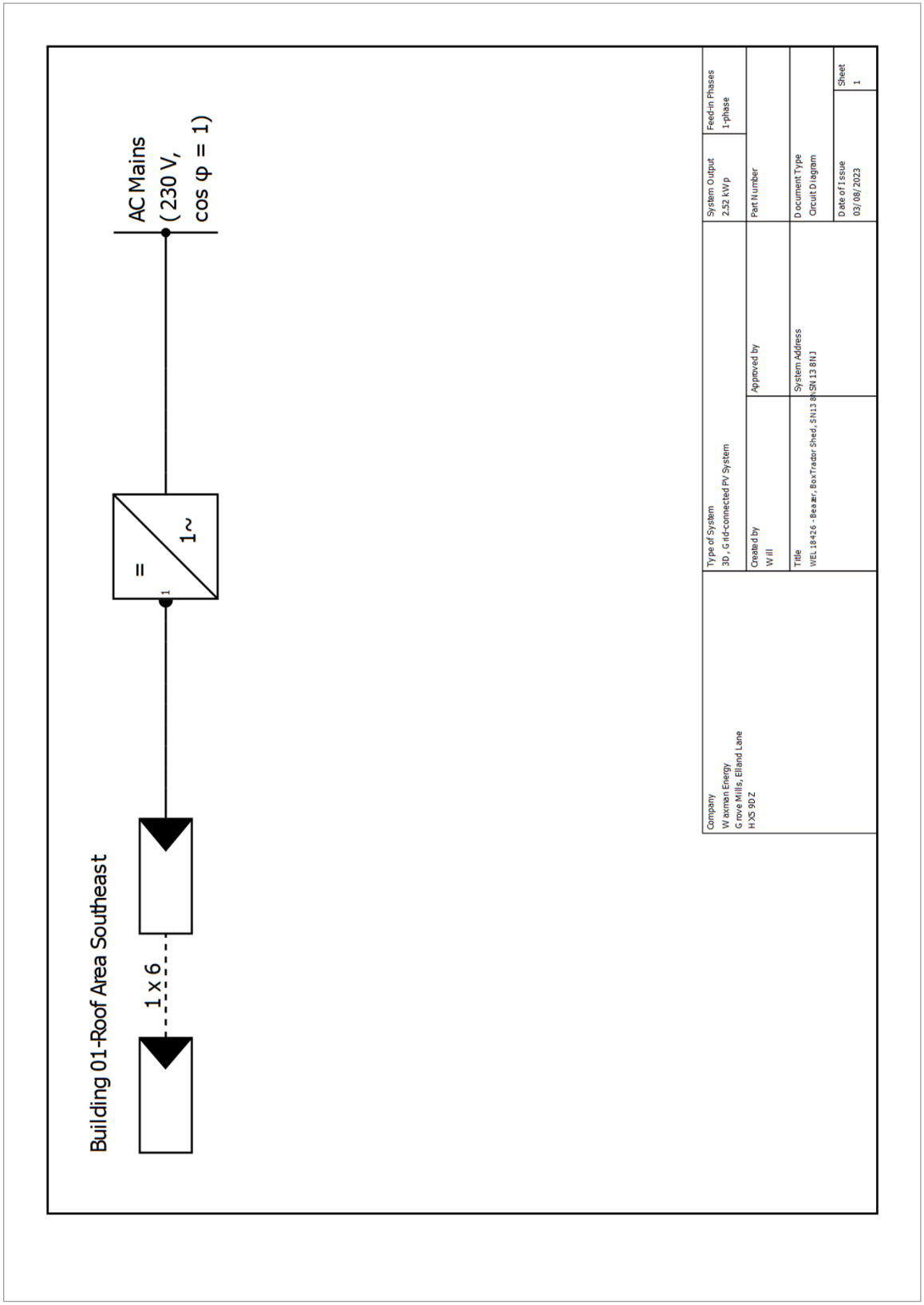

Figure: Circuit Diagram

Overview plan

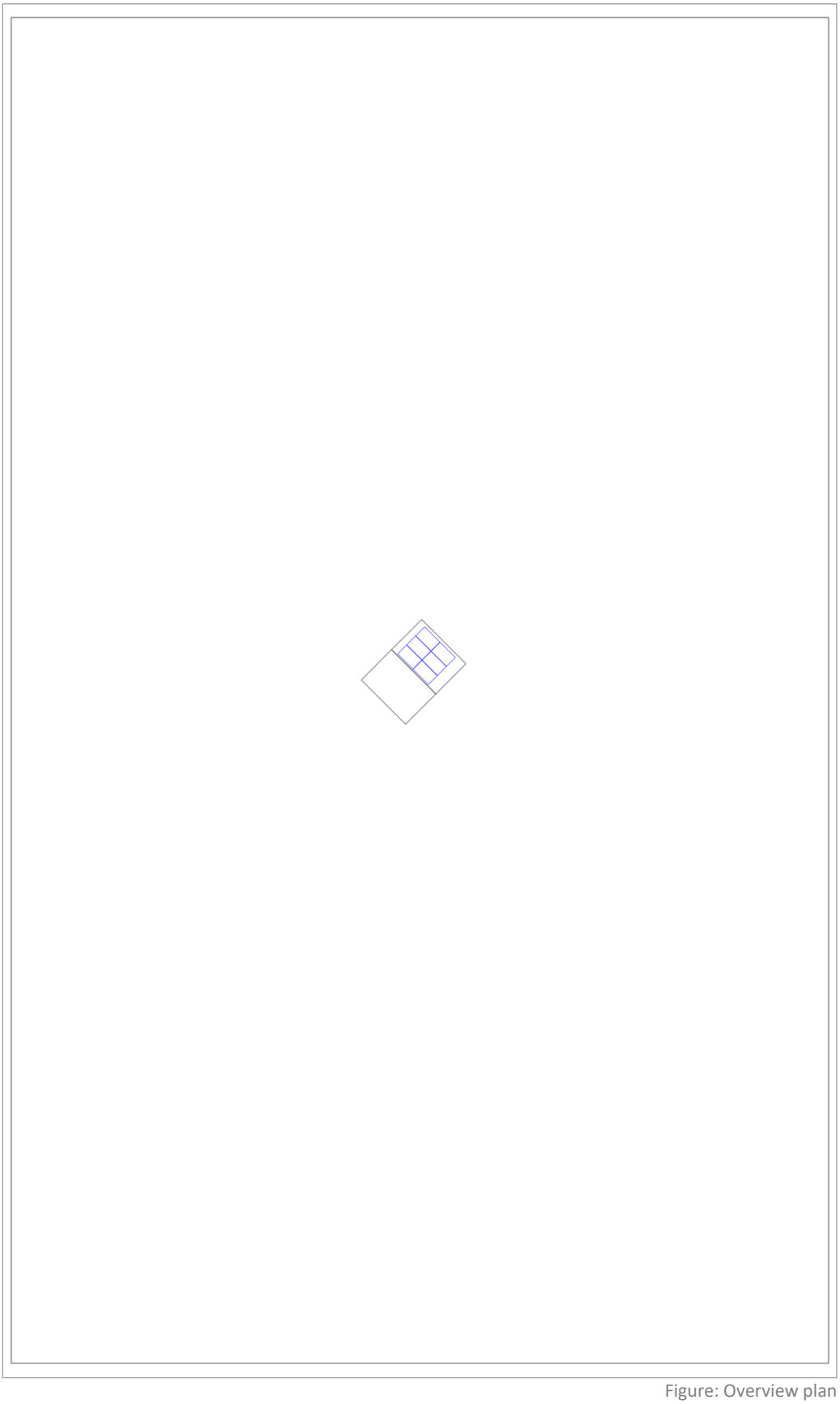

Figure: Overview plan

Dimensioning Plan

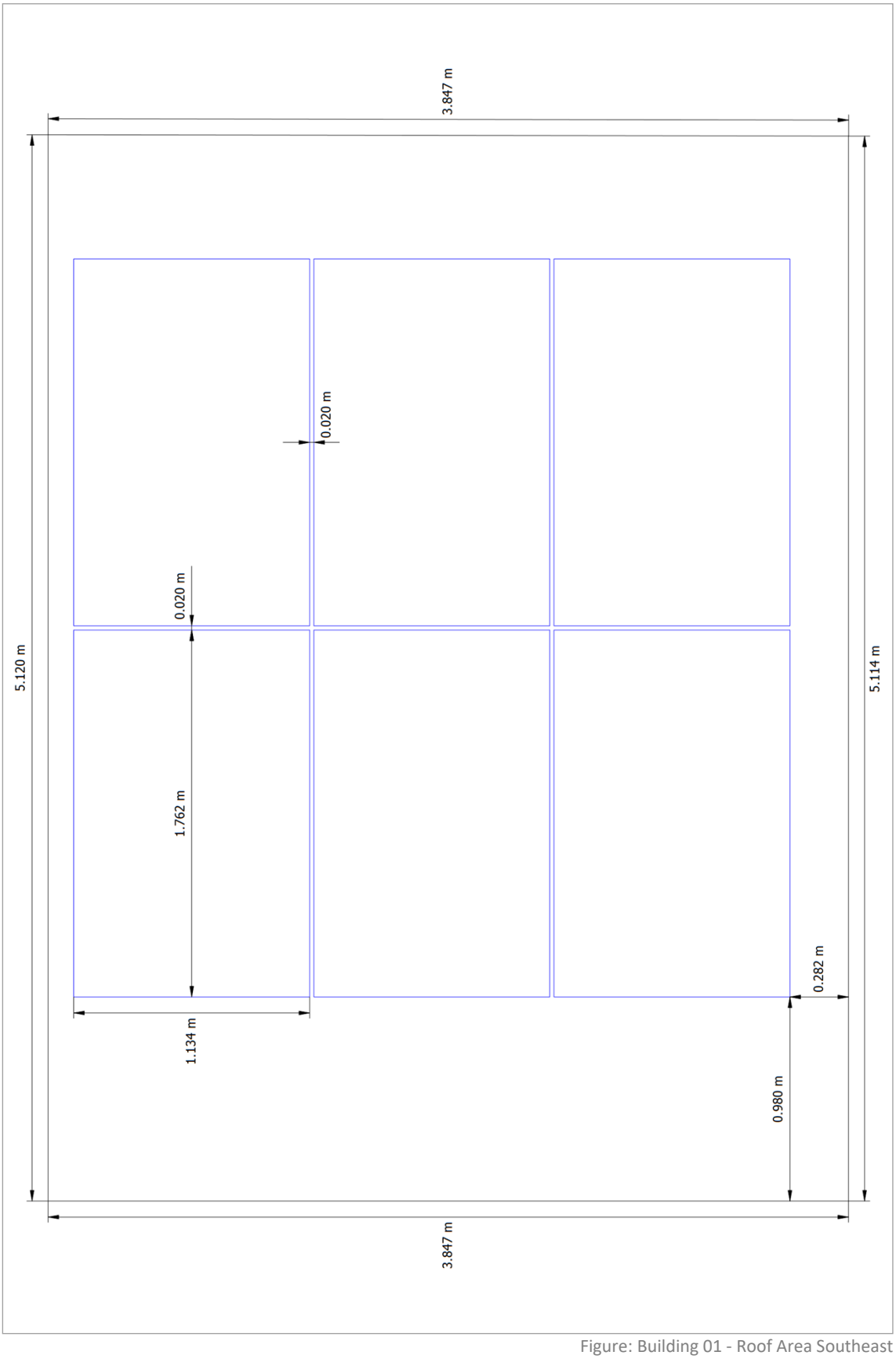

Figure: Building 01 - Roof Area Southeast

String Plan

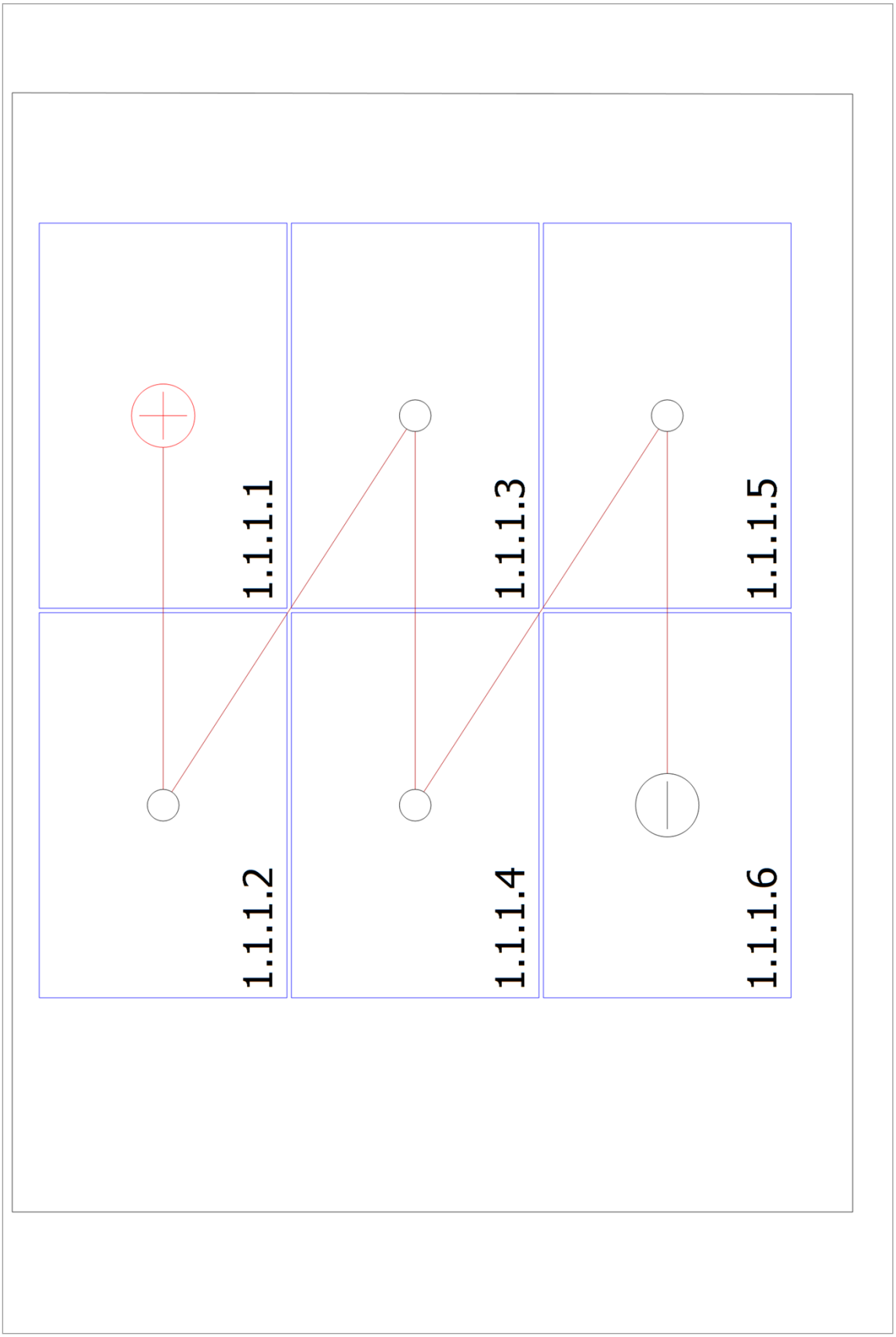

Figure: Building 01 - Roof Area Southeast

Parts list

Parts list

#	Type	Item number	Manufacturer	Name	Quantity	Unit
1	PV Module		Trina Solar	TSM-420-DE09R.08 VERTEX S	6	Piece
2	Inverter		SolaX Power Co., Ltd.	X1-2.5 (Copy)	1	Piece

Screenshots, 3D Design

Configuration



Figure: Screenshot01