Project Name: Reliance Worldwide Company

23/12/2022

Your PV system

Address of Installation

west drayton
UB7 8JL

Project Overview

Figure: Overview Image, 3D Design

PV System

3D, Grid-connected PV System with Electrical Appliances

Climate Data	Uxbridge, GBR (1996 - 2015)	
Values source	Meteonorm 8.1(i)	
PV Generator Output	71.3	kWp
PV Generator Surface	345.7	m²
Number of PV Modules	155	
Number of Inverters	2	

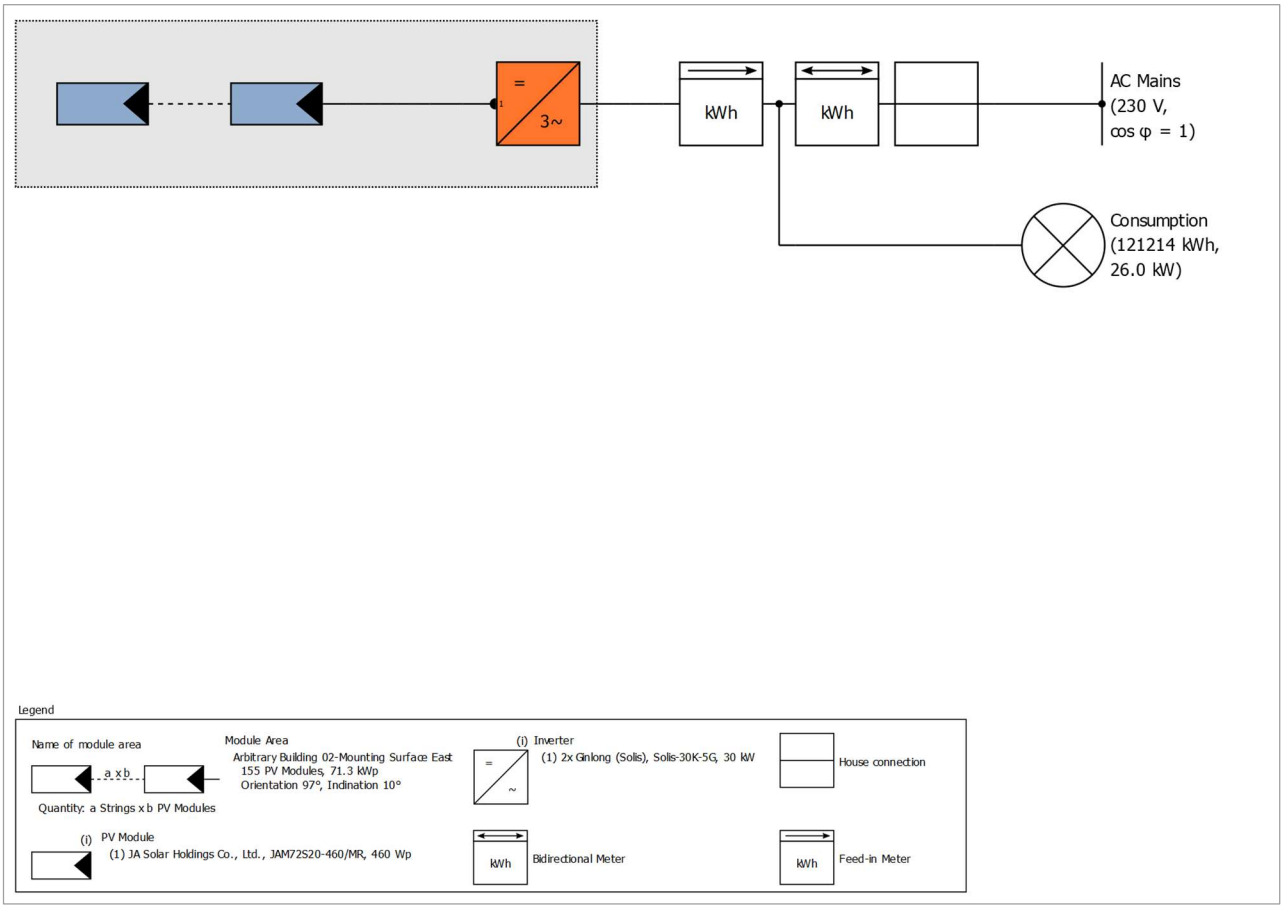

Figure: Schematic diagram

Production Forecast

Production Forecast		
PV Generator Output	71.30	kWp
Spec. Annual Yield	861.70	kWh/kWp
Performance Ratio (PR)	86.03	%
Yield Reduction due to Shading	0.0	%
PV Generator Energy (AC grid)	61,487	kWh/Year
Own Consumption	38,048	kWh/Year
Down-regulation at Feed-in Point	0	kWh/Year
Grid Feed-in	23,439	kWh/Year
Own Power Consumption	61.8	%
CO_2 Emissions avoided	11,919	kg / year
Level of Self-sufficiency	31.4	%

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 with Electrical Appliances

Climate Data

Location	Uxbridge, 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

Consumption

Total Consumption	121214 kWh
RWC MPAN 2000051950359 YE 31-10-2022 CSV	121214 kWh
Load Peak	26 kW

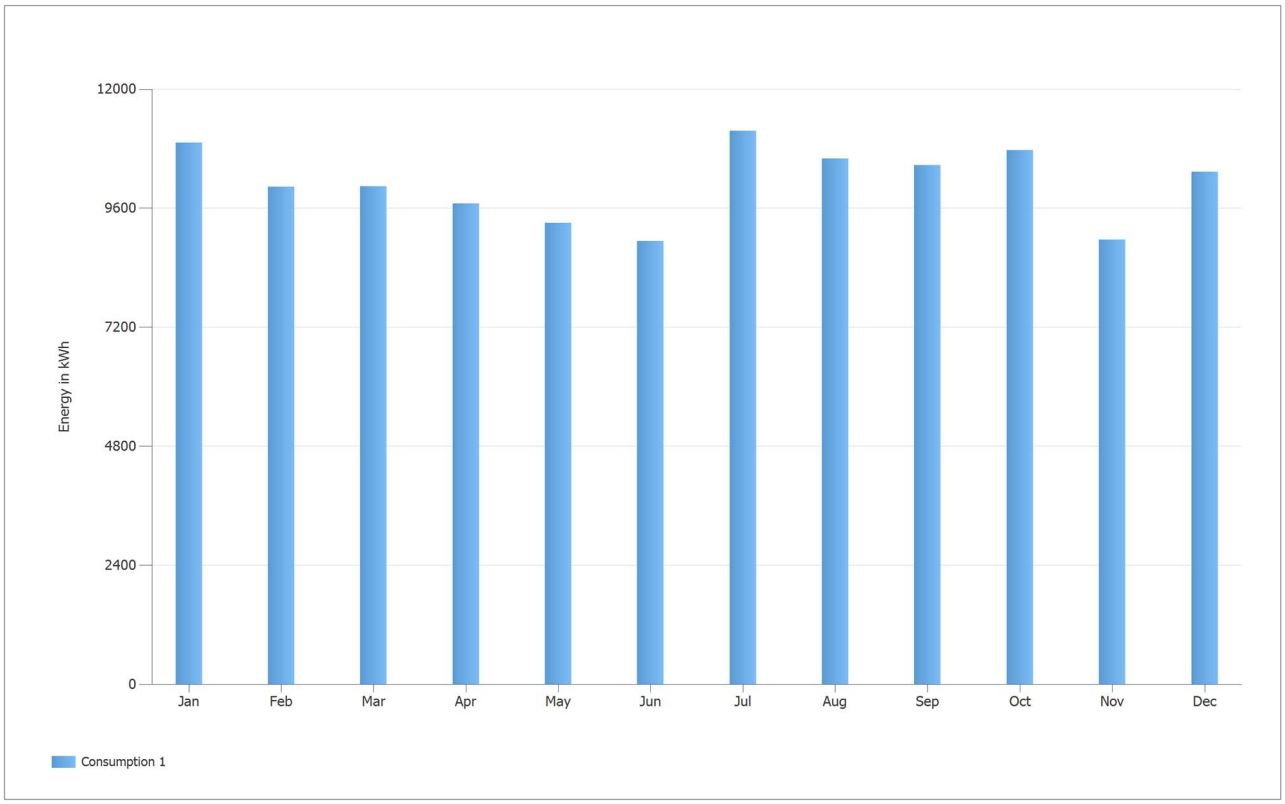

Figure: Consumption

Module Areas

1. Module Area - Arbitrary Building 02-Mounting Surface East

PV Generator, 1. Module Area - Arbitrary Building 02-Mounting Surface East

Name	Arbitrary Building 02-Mounting Surface East
PV Modules	155 x JAM72S20-460/MR (v5)
Manufacturer	JA Solar Holdings Co., Ltd.
Inclination	10 °
Orientation	East 97 °
Installation Type	Roof parallel
PV Generator Surface	345.7 m²

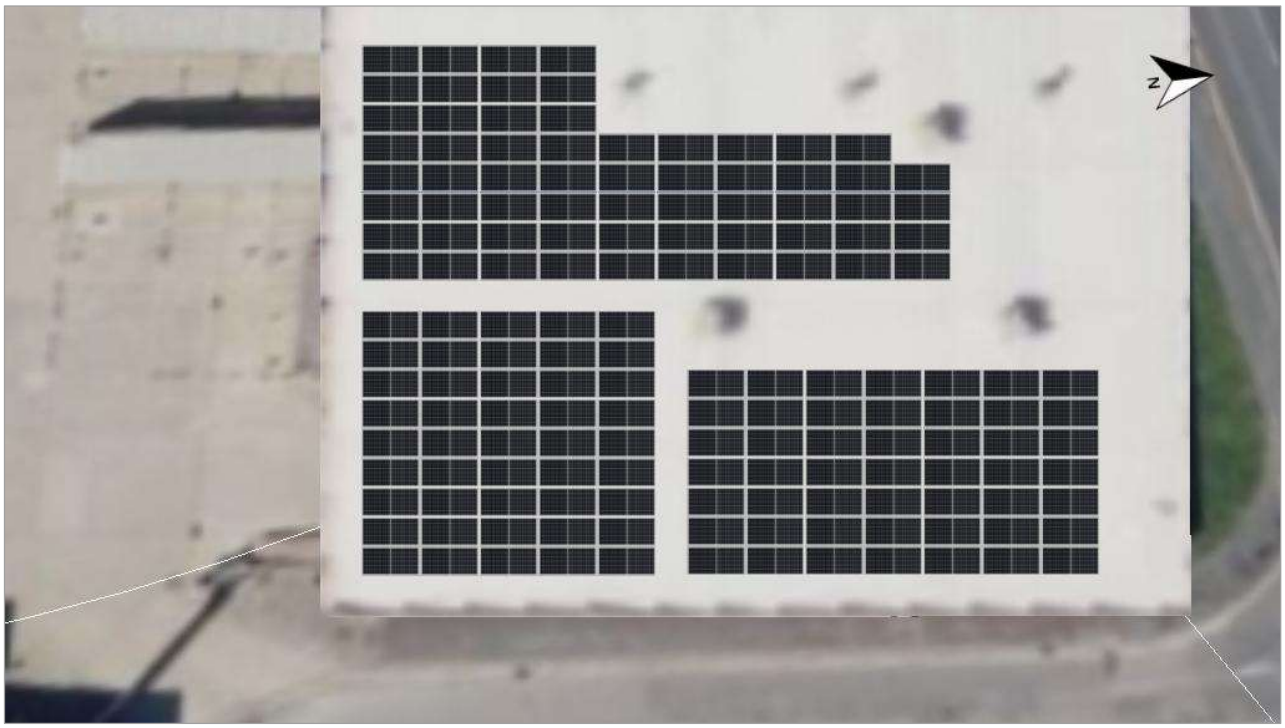

Figure: 1. Module Area - Arbitrary Building 02-Mounting Surface East

Horizon Line, 3D Design

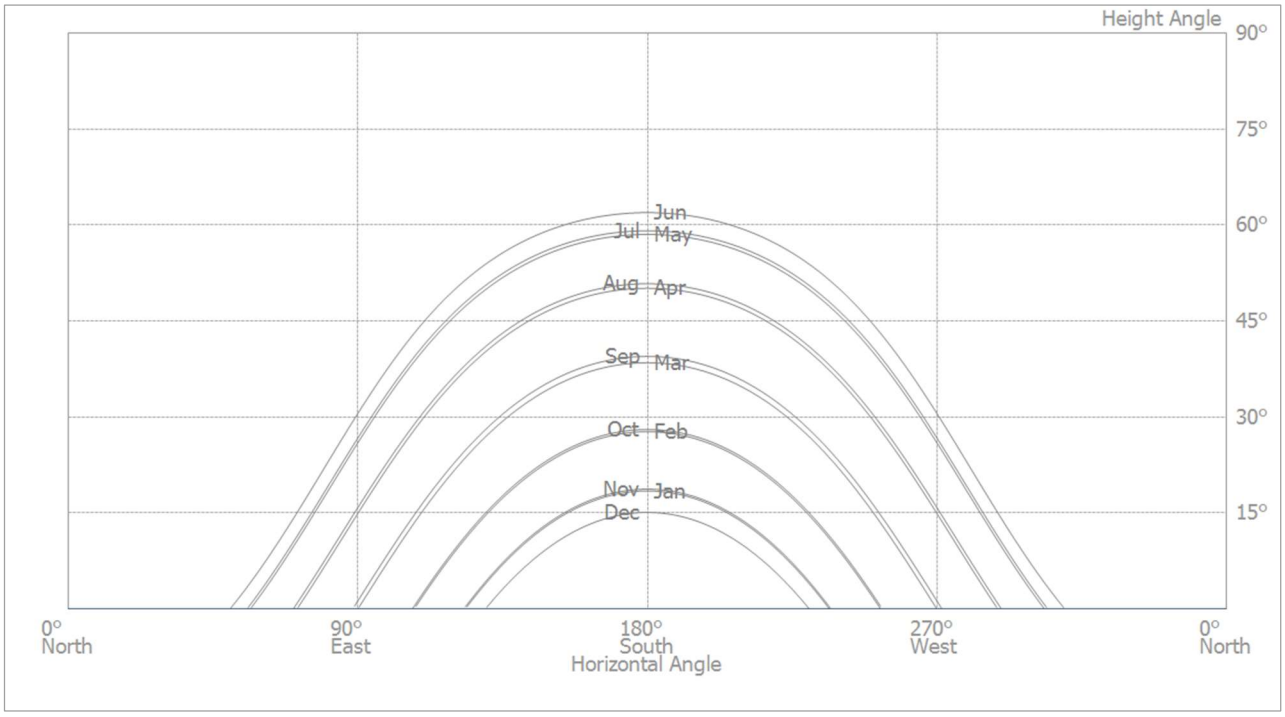

Figure: Horizon (3D Design)

Inverter configuration

Configuration 1	
Module Area	Arbitrary Building 02-Mounting Surface East
Inverter 1	
Model	Solis-30K-5G (v1)
Manufacturer	Ginlong (Solis)
Quantity	1
Sizing Factor	119.6 %
Configuration	MPP 1: 2 x 13
	MPP 2: 2 x 13
	MPP 3: 2 x 13
Inverter 2	
Model	Solis-30K-5G (v1)
Manufacturer	Ginlong (Solis)
Quantity	1
Sizing Factor	118.1 %
Configuration	MPP 1: 2 x 16
	MPP 2: 2 x 13
	MPP 3: 1 x 19

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	71.30	kWp
Spec. Annual Yield	861.70	kWh/kWp
Performance Ratio (PR)	86.03	%
Yield Reduction due to Shading	0.0	%
PV Generator Energy (AC grid)	61,487	kWh/Year
Own Consumption	38,048	kWh/Year
Down-regulation at Feed-in Point	0	kWh/Year
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Own Power Consumption	61.8	%
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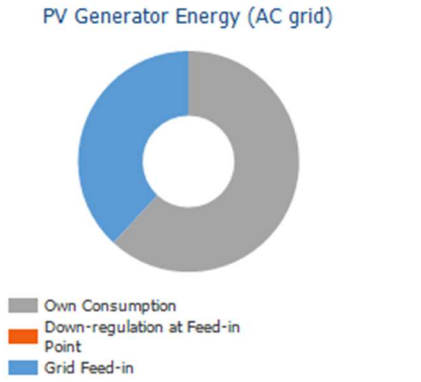
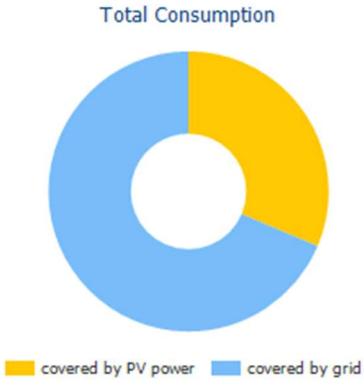


Appliances

Appliances	121,214	kWh/Year
Standby Consumption (Inverter)	48	kWh/Year
Total Consumption	121,262	kWh/Year
covered by PV power	38,048	kWh/Year
covered by grid	83,214	kWh/Year
Solar Fraction	31.4	%



Level of Self-sufficiency

Total Consumption	121,262	kWh/Year
covered by grid	83,214	kWh/Year
Level of Self-sufficiency	31.4	%

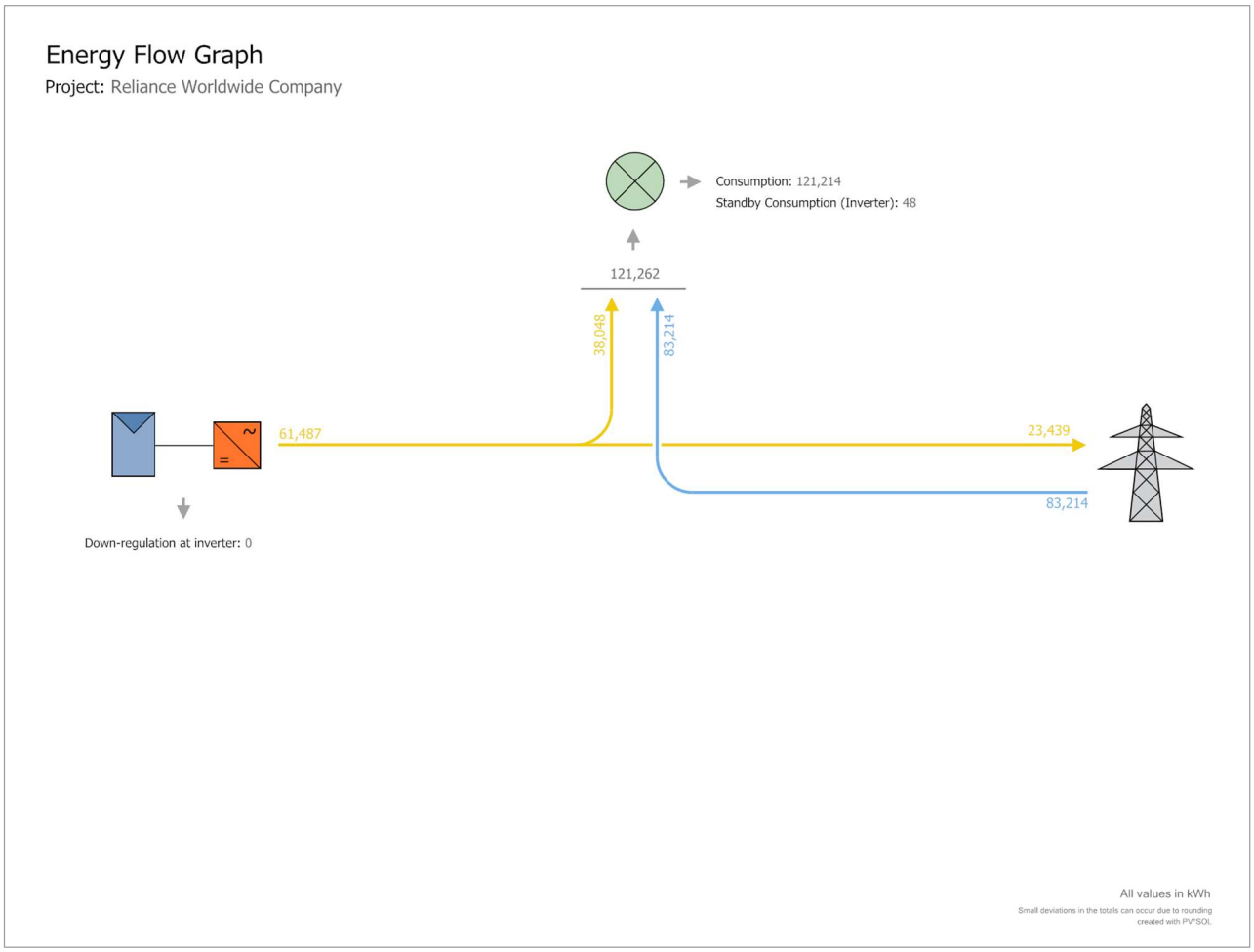


Figure: Energy flow

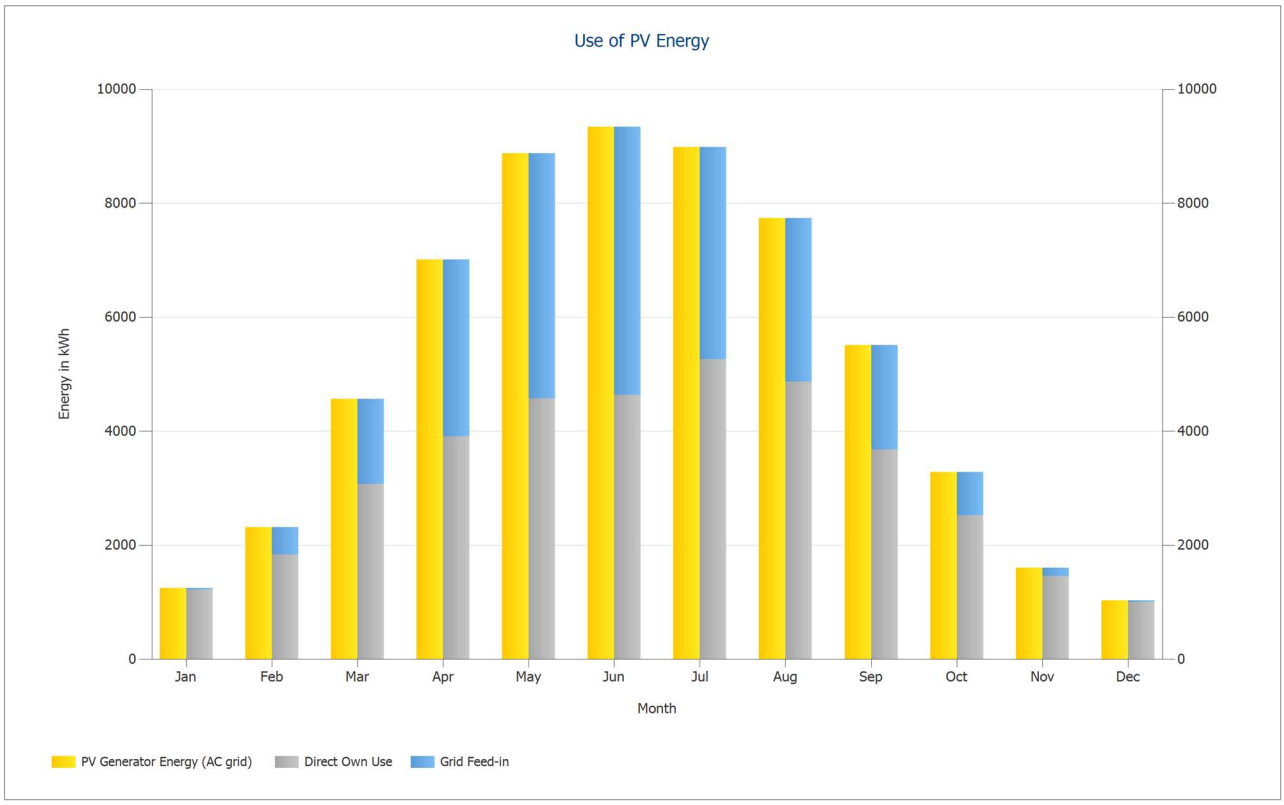


Figure: Use of PV Energy

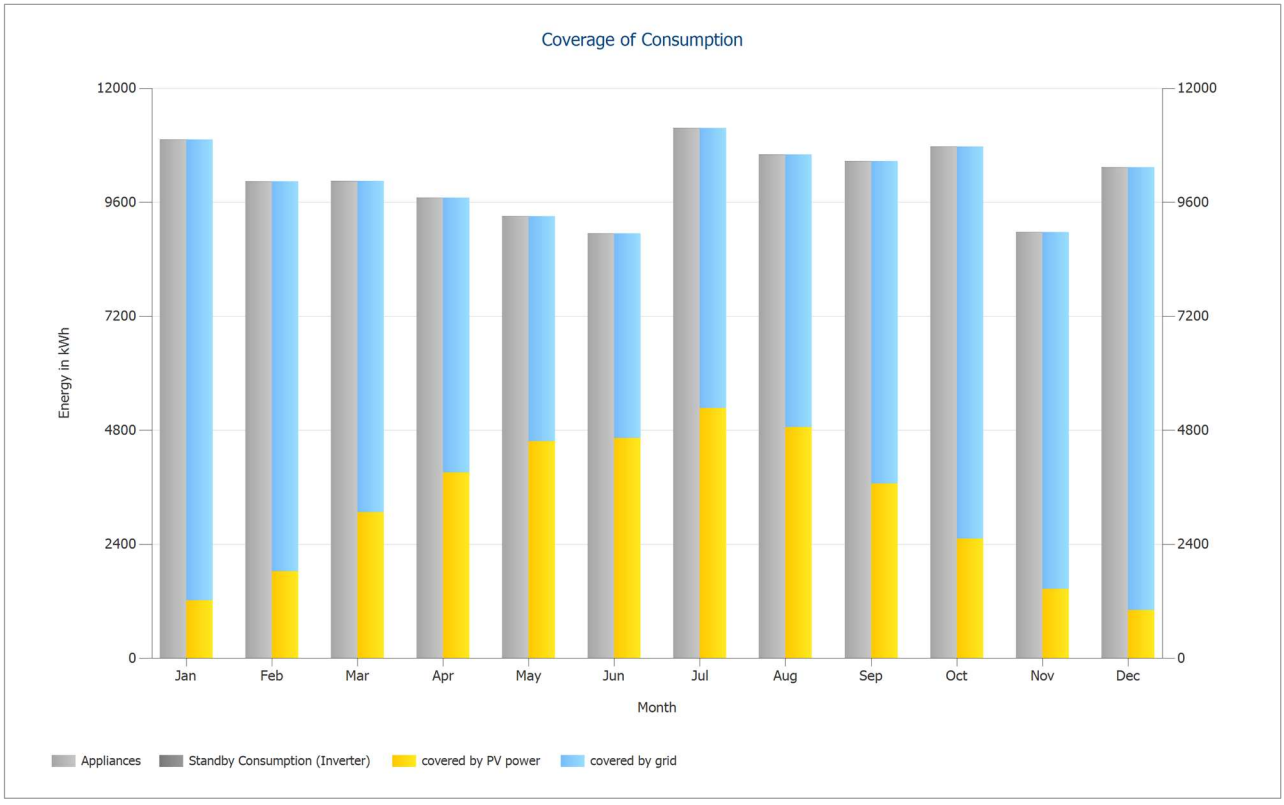


Figure: Coverage of Consumption

Plans and parts list

Circuit Diagram

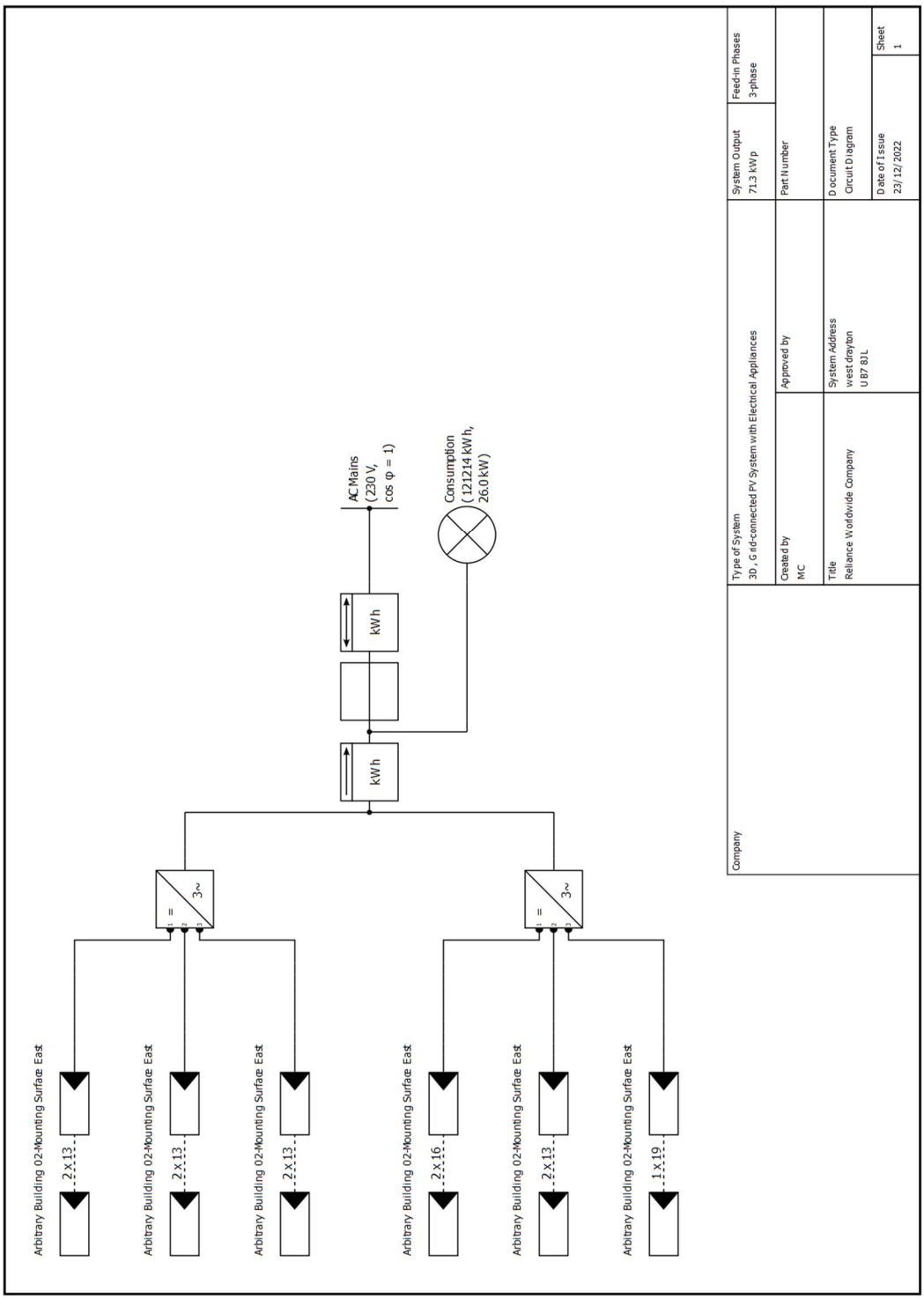


Figure: Circuit Diagram

Overview plan

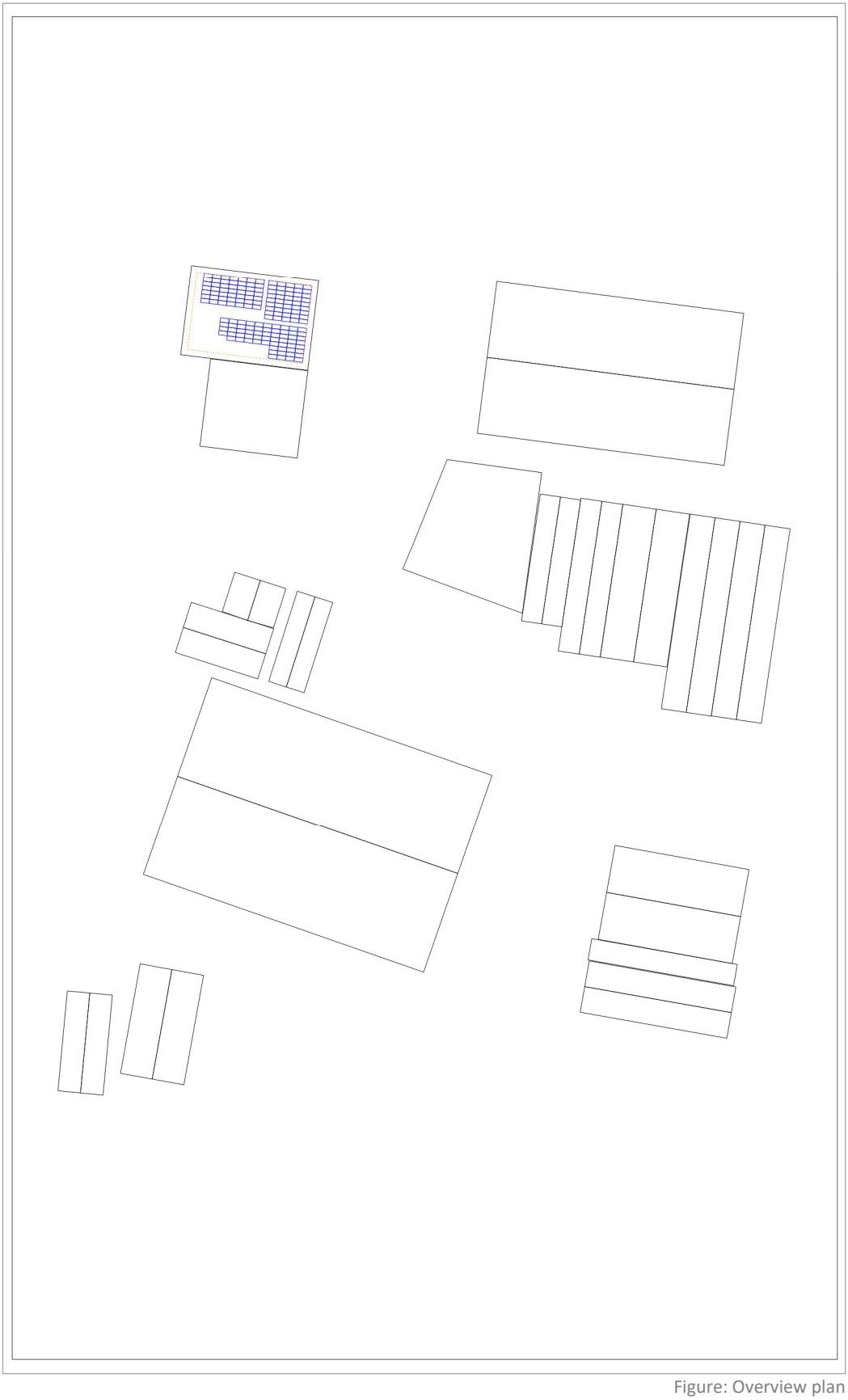


Figure: Overview plan

Dimensioning Plan

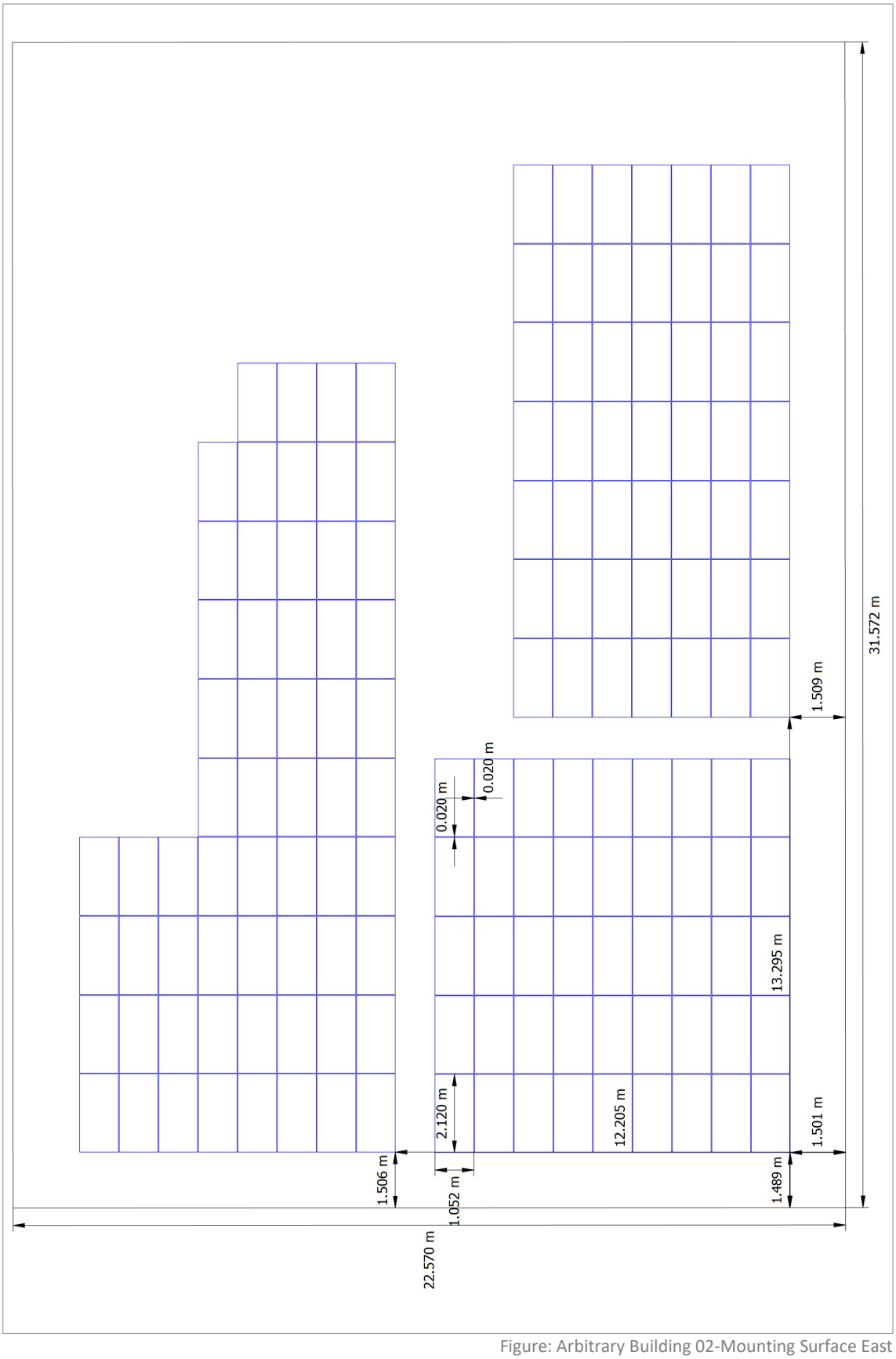


Figure: Arbitrary Building 02-Mounting Surface East

String Plan

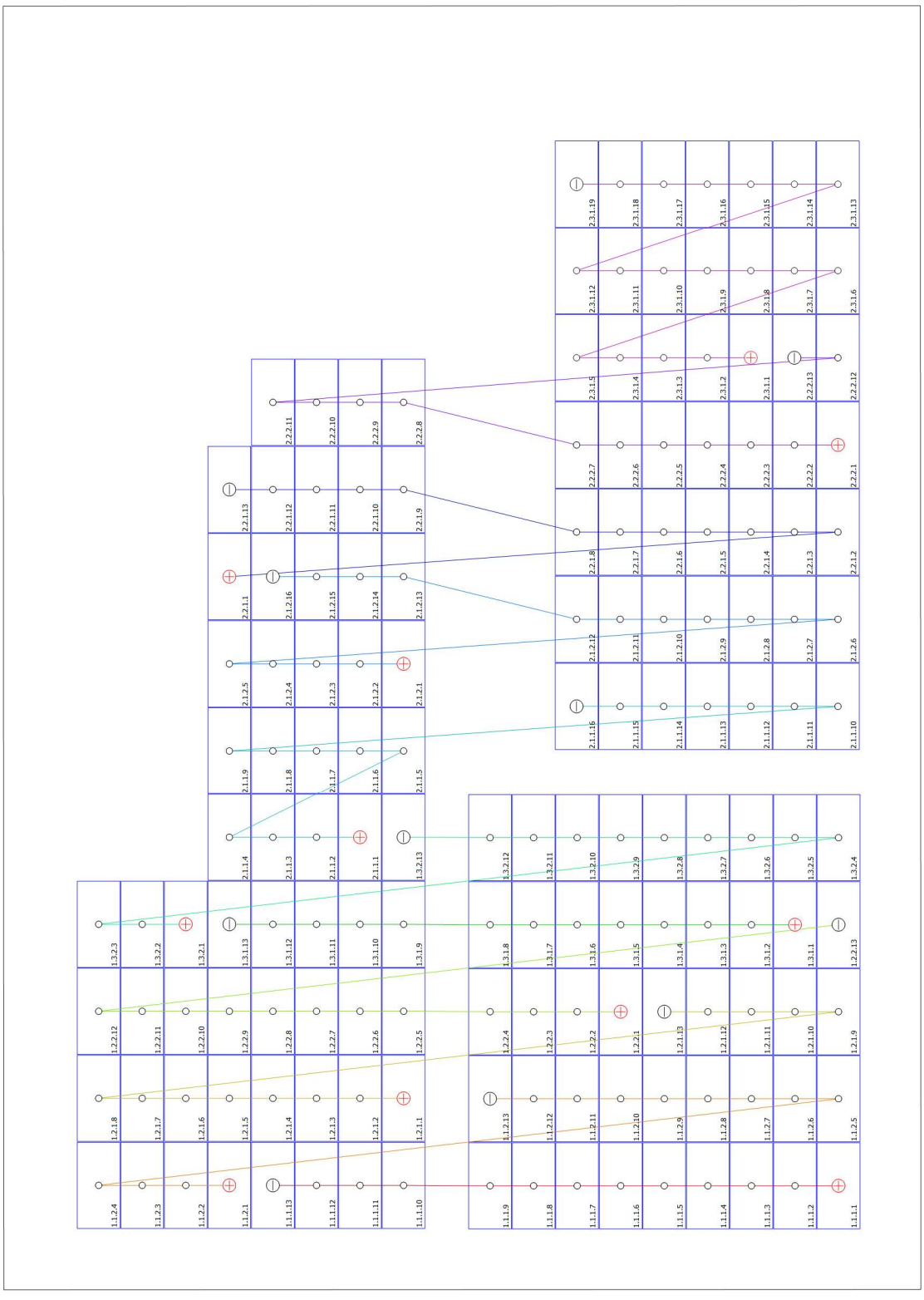


Figure: Arbitrary Building 02-Mounting Surface East

Parts list

Parts list

#	Type	Item number	Manufacturer	Name	Quantity	Unit
1	PV Module		JA Solar Holdings Co., Ltd.	JAM72S20-460/MR	155	Piece
2	Inverter		Ginlong (Solis)	Solis-30K-5G	2	Piece
3	Components			Feed-in Meter	1	Piece
4	Components			House connection	1	Piece
5	Components			Bidirectional Meter	1	Piece

Screenshots, 3D Design

Environment

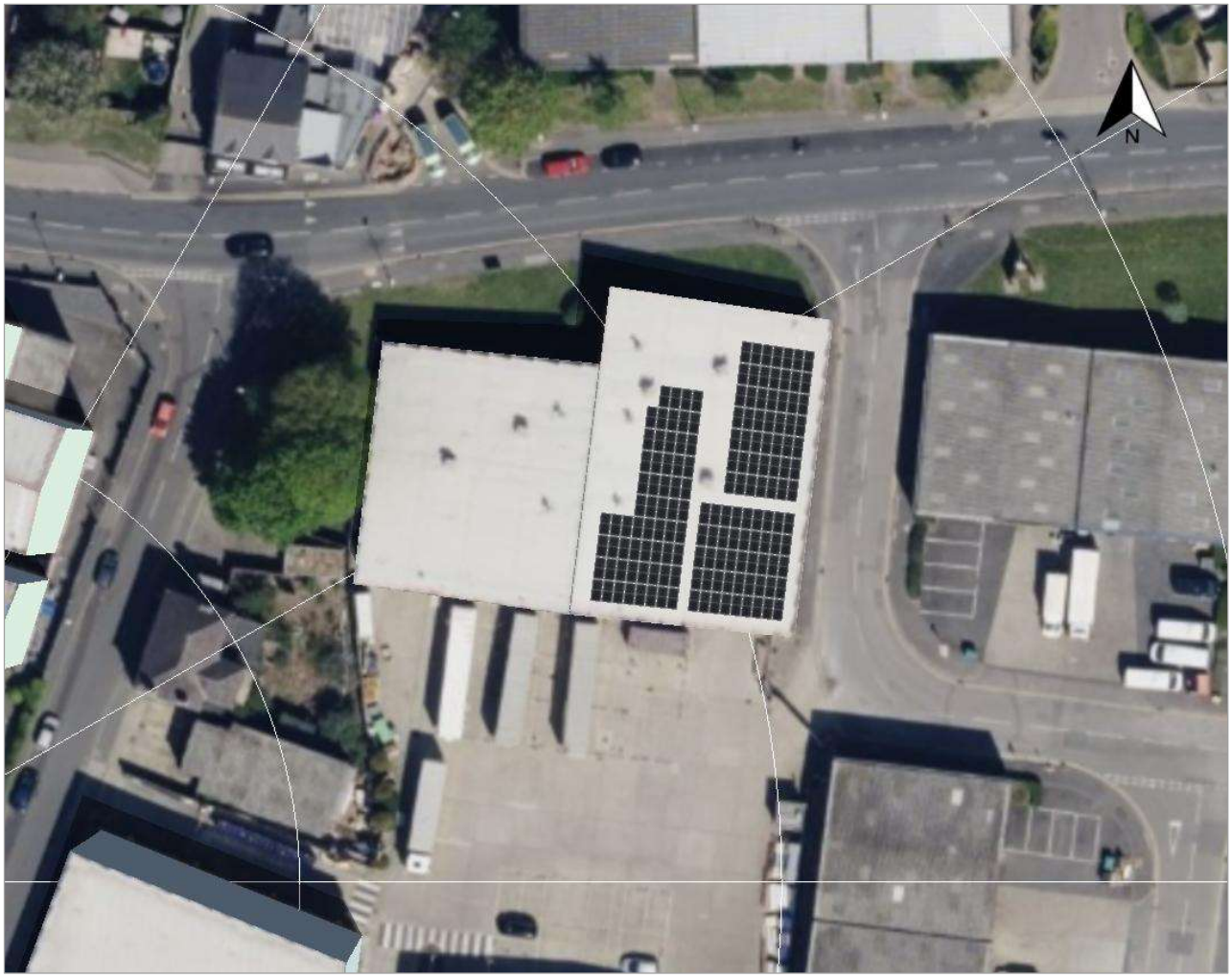


Figure: Screenshot01