



EG Solar

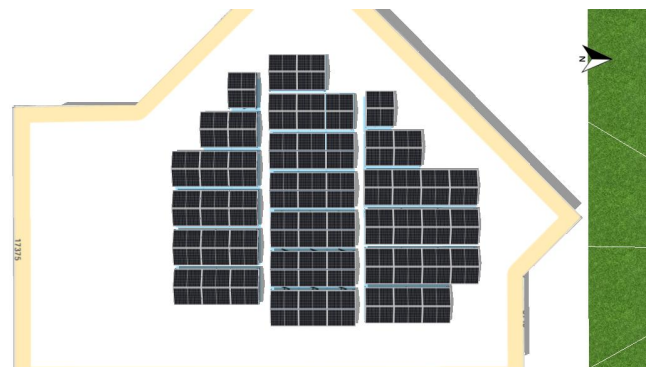


Project Name: man city roof 1

18/09/2025

Your PV system from EG Solar

Address of Installation



Project Overview

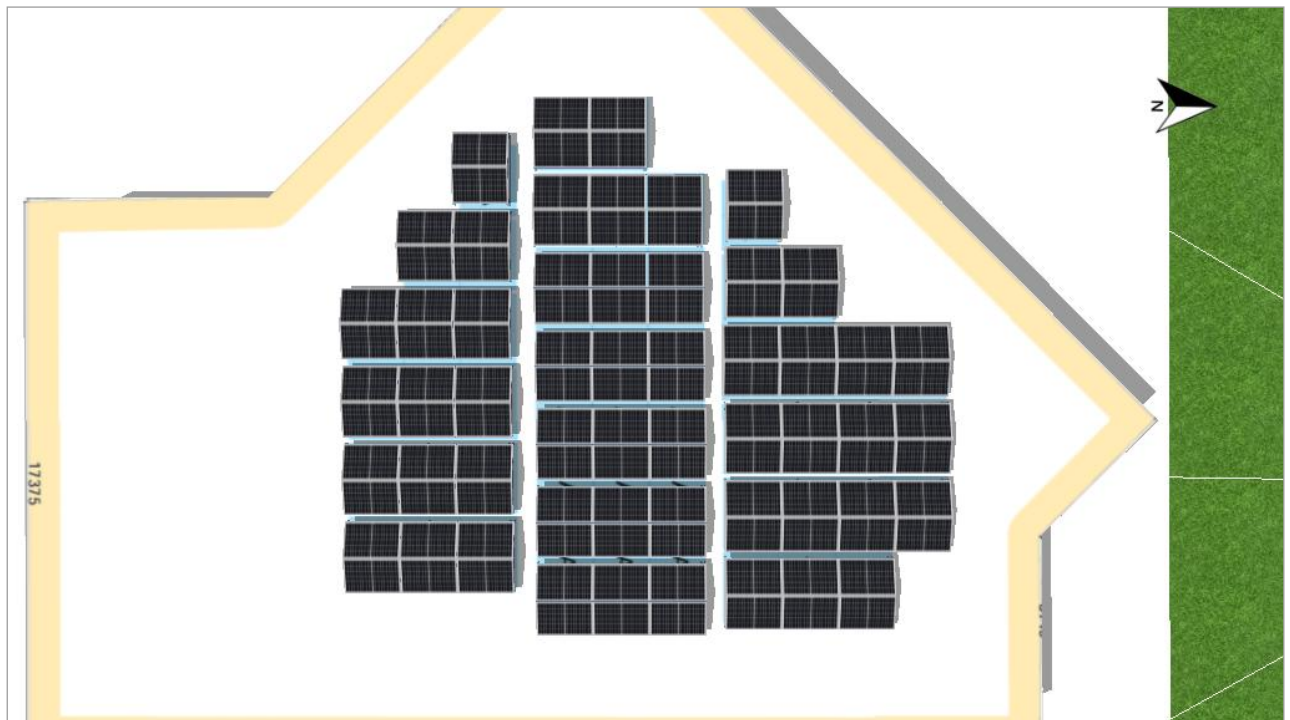


Figure: Overview Image, 3D Design

PV System

3D, Grid-connected PV System

Climate Data	Manchester-Ringway, GBR (2001 - 2020)
Values source	Meteonorm 8.2
PV Generator Output	49.29 kWp
PV Generator Surface	211.8 m ²
Number of PV Modules	106
Number of Inverters	1

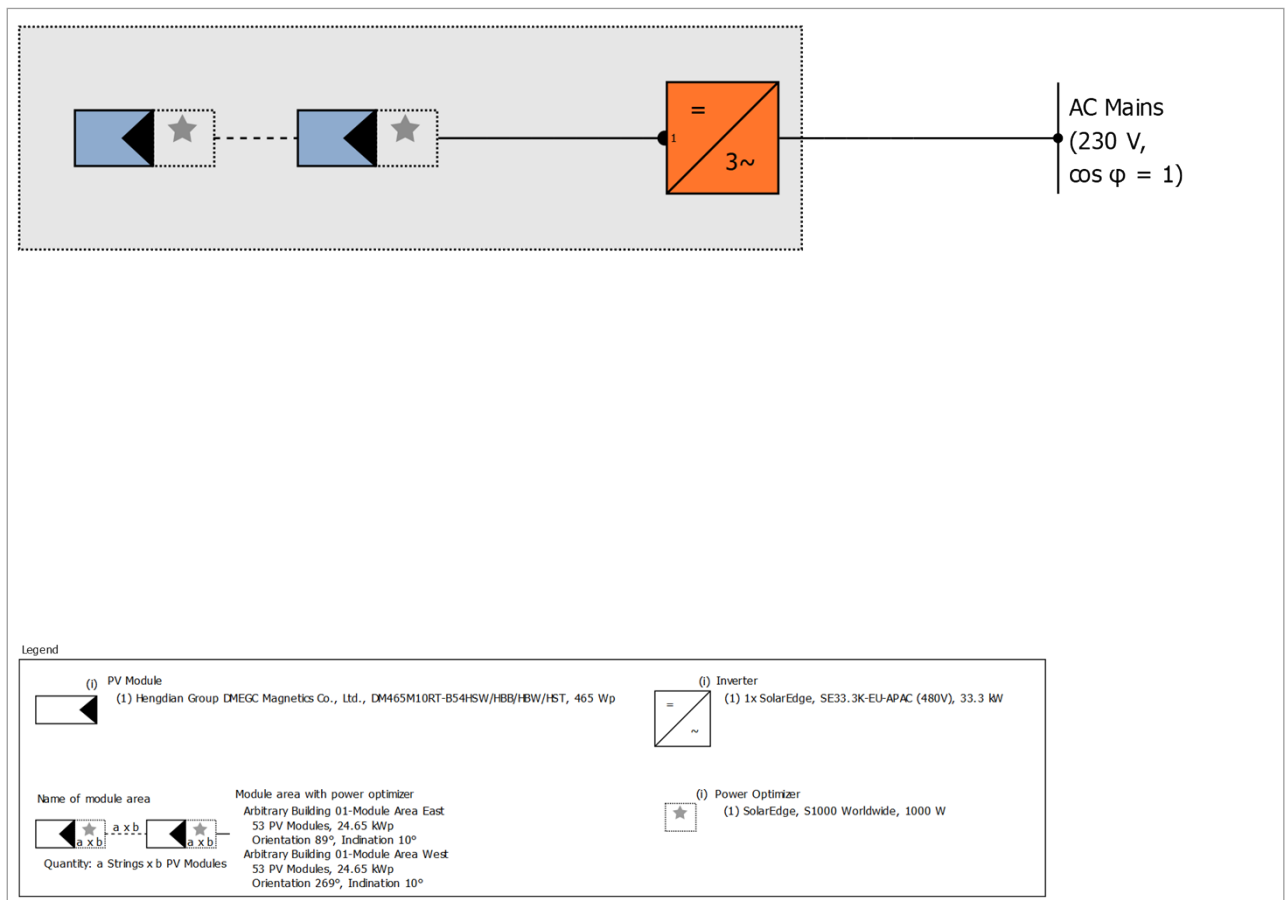


Figure: Schematic diagram

Production Forecast

Production Forecast

PV Generator Output	49.29 kWp
Spec. Annual Yield	885.31 kWh/kWp
Performance Ratio (PR)	91.05 %
Yield Reduction due to Shading	1.0 %
Grid Export	43,655 kWh/Year
Grid Export in the first year (incl. module degradation)	43,655 kWh/Year
Standby Consumption (Inverter)	18 kWh/Year
CO ₂ Emissions avoided	20,509 kg / year

Financial Analysis

Your Gain

Total investment costs	0.00 £
Internal Rate of Return (IRR)	299.80 %
Amortization Period	More than 25 Years
Electricity Production Costs	0 £/kWh
Energy Balance/Feed-in Concept	Full Feed-in

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
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Climate Data

Location	Manchester-Ringway, GBR (2001 - 2020)
Values source	Meteonorm 8.2
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 - Arbitrary Building 01-Module Area East

PV Generator, 1. Module Area - Arbitrary Building 01-Module Area East

Name	Arbitrary Building 01-Module Area East
PV Modules	53 x DM465M10RT-B54HSW/HBB/HBW/HST (v1)
Manufacturer	Hengdian Group DMEGC Magnetics Co., Ltd.
Inclination	10 °
Orientation	East 89 °
Installation Type	Mounted - Roof
PV Generator Surface	105.9 m²

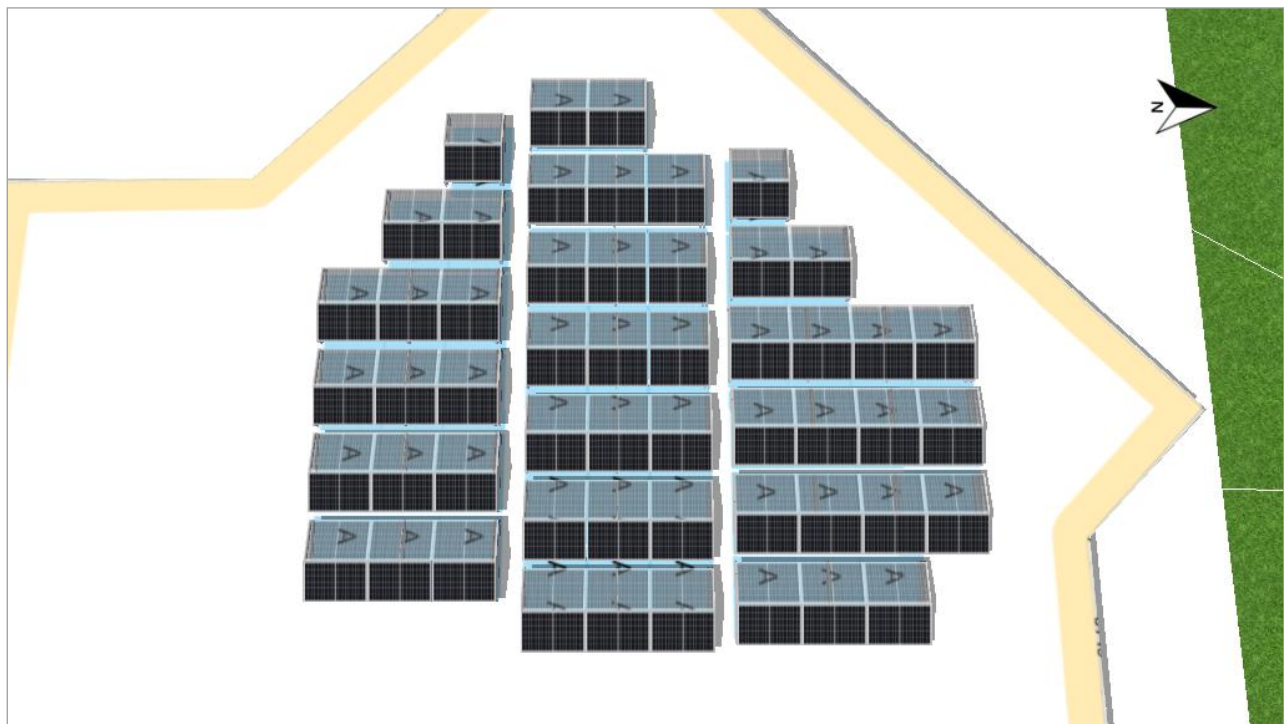


Figure: 1. Module Area - Arbitrary Building 01-Module Area East



2. Module Area - Arbitrary Building 01-Module Area West

PV Generator, 2. Module Area - Arbitrary Building 01-Module Area West

Name	Arbitrary Building 01-Module Area West
PV Modules	53 x DM465M10RT-B54HSW/HBB/HBW/HST (v1)
Manufacturer	Hengdian Group DMEGC Magnetics Co., Ltd.
Inclination	10 °
Orientation	West 269 °
Installation Type	Mounted - Roof
PV Generator Surface	105.9 m²

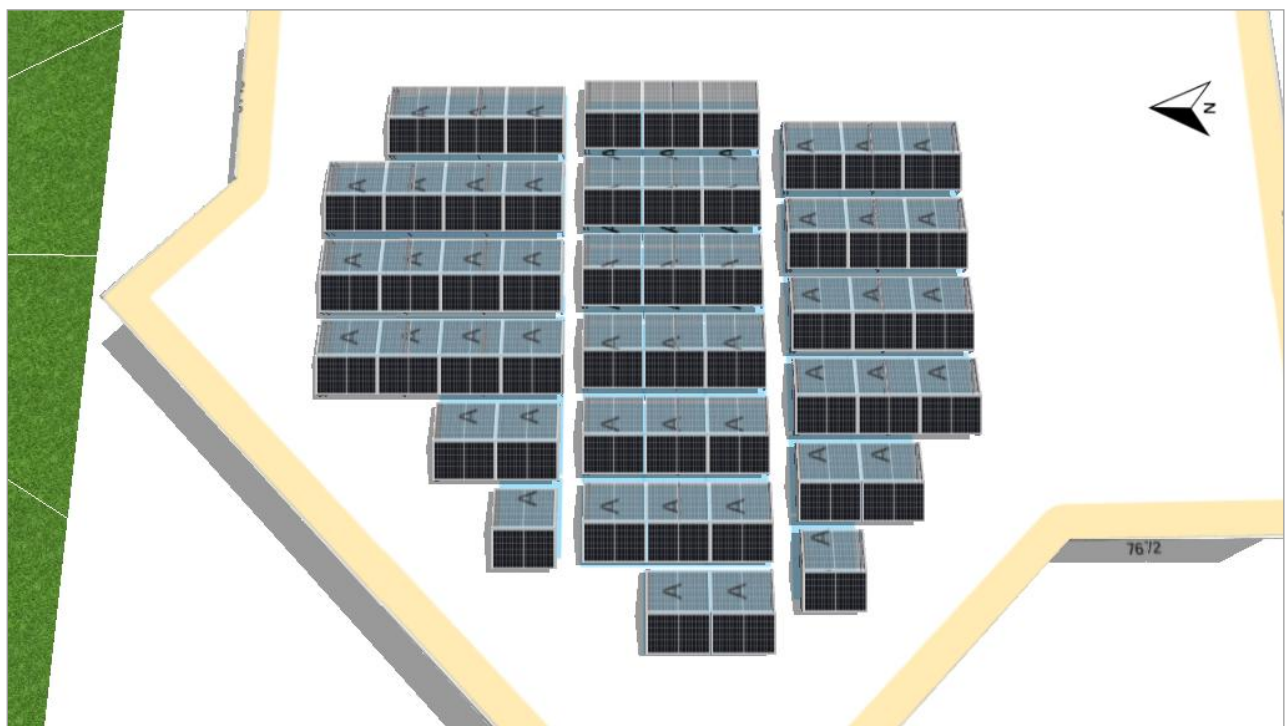


Figure: 2. Module Area - Arbitrary Building 01-Module Area West

Horizon Line, 3D Design

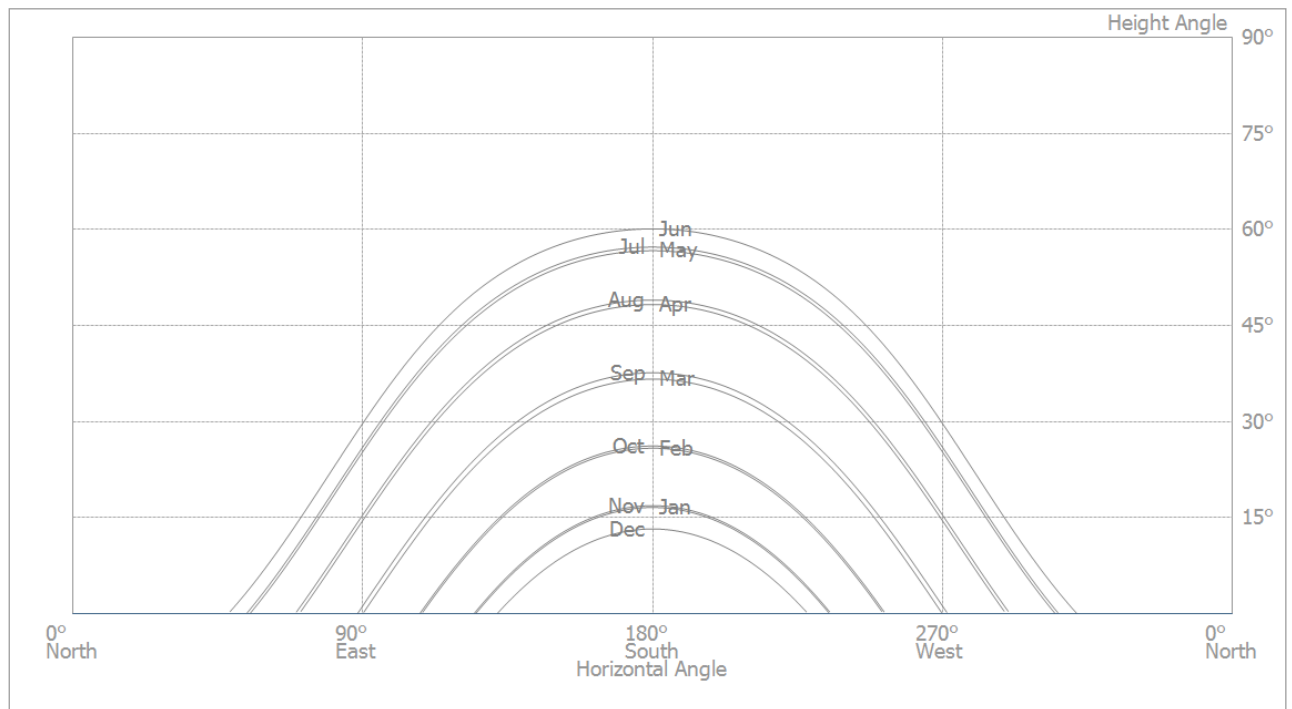


Figure: Horizon (3D Design)

Inverter configuration

Configuration 1

Module Areas	Arbitrary Building 01-Module Area East + Arbitrary Building 01-Module Area West
Inverter 1	
Model	SE33.3K-EU-APAC (480V) (v3)
Manufacturer	SolarEdge
Quantity	1
Sizing Factor	148 %
Configuration	MPP 1: 1 x 13 ☆ [1 x 1] + 1 x 13 ☆ [1 x 1] + 1 x 13 ☆ [1 x 1] + 1 x 14 ☆ [1 x 1] + 1 x 13 ☆ [1 x 1] + 1 x 13 ☆ [1 x 1] + 1 x 13 ☆ [1 x 1] + 1 x 13 ☆ [1 x 1] + 1 x 14 ☆ [1 x 1]
Power Optimizer	106x SolarEdge, S1000 Worldwide (v2)

AC Mains

AC Mains

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

Simulation Results

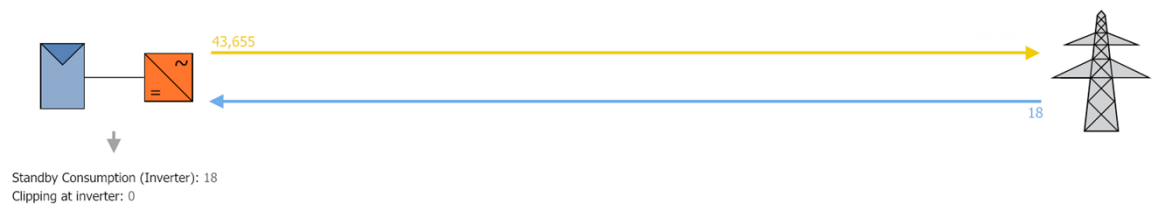
Results Total System

PV System

PV Generator Output	49.29 kWp
Spec. Annual Yield	885.31 kWh/kWp
Performance Ratio (PR)	91.05 %
Yield Reduction due to Shading	1.0 %
Grid Export	43,655 kWh/Year
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CO ₂ Emissions avoided	20,509 kg / year

Energy Flow Graph

Project: man city roof 1



All values in kWh
Small deviations in the totals can occur due to rounding
created with PV*SOL

Figure: Energy flow

Financial Analysis

Overview

System Data

Grid Export in the first year (incl. module degradation)	43,655 kWh/Year
PV Generator Output	49.3 kWp
Start of Operation of the System	18/09/2025
Assessment Period	25 Years
Interest on Capital	1 %

Economic Parameters

Internal Rate of Return (IRR)	299.80 %
Accrued Cash Flow (Cash Balance)	0.00 £
Amortization Period	More than 25 Years
Electricity Production Costs	0 £/kWh

Payment Overview

Specific Investment Costs	0.00 £/kWp
Investment Costs	0.00 £
One-off Payments	0.00 £
Incoming Subsidies	0.00 £
Annual Costs	0.00 £/Year
Other Revenue or Savings	0.00 £/Year

Remuneration and Savings

Total Payment from Utility in First Year	0.00 £/Year
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Cash flow

Cash flow

Degradation and inflation rates are applied on a monthly basis over the entire observation period. This is done in the first year.

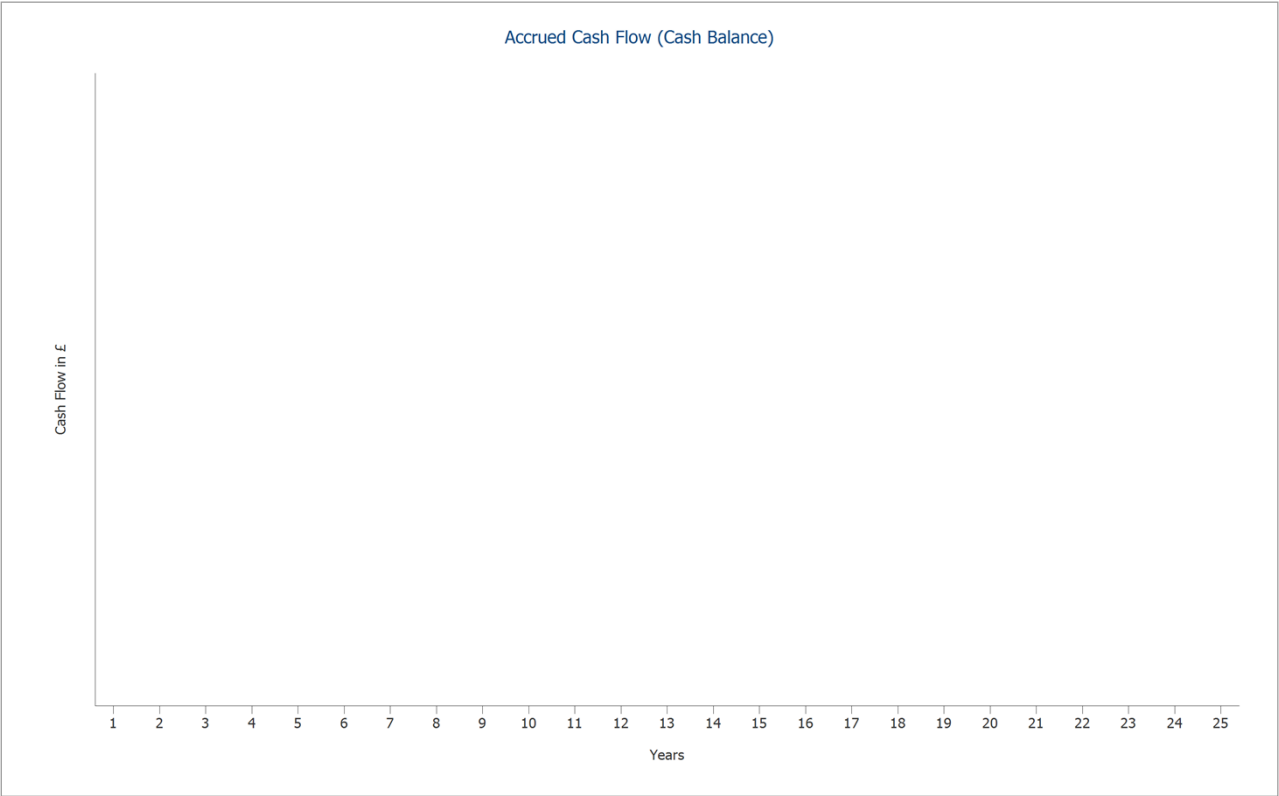


Figure: Accrued Cash Flow (Cash Balance)



Plans and parts list

Circuit Diagram

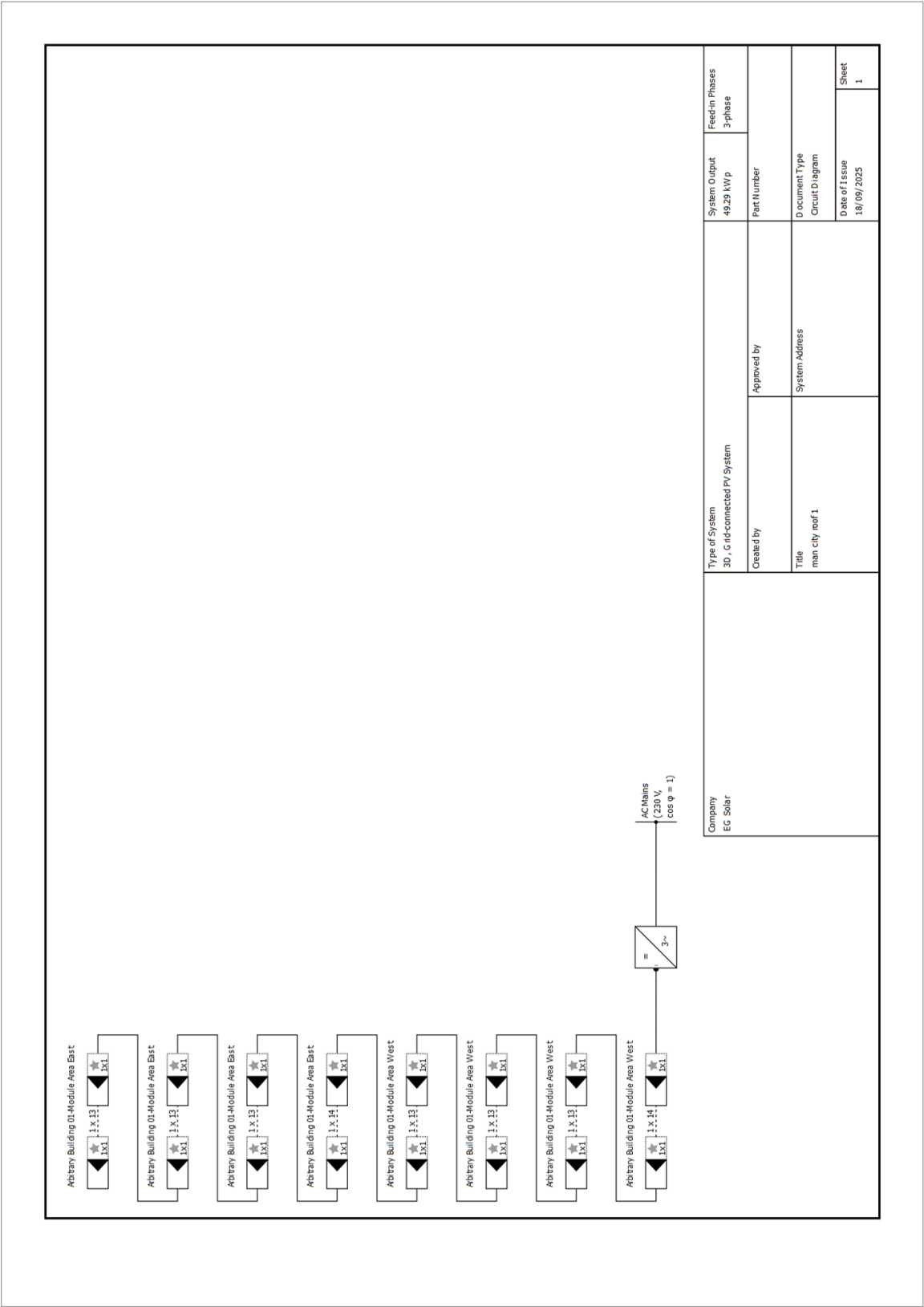


Figure: Circuit Diagram

Overview plan

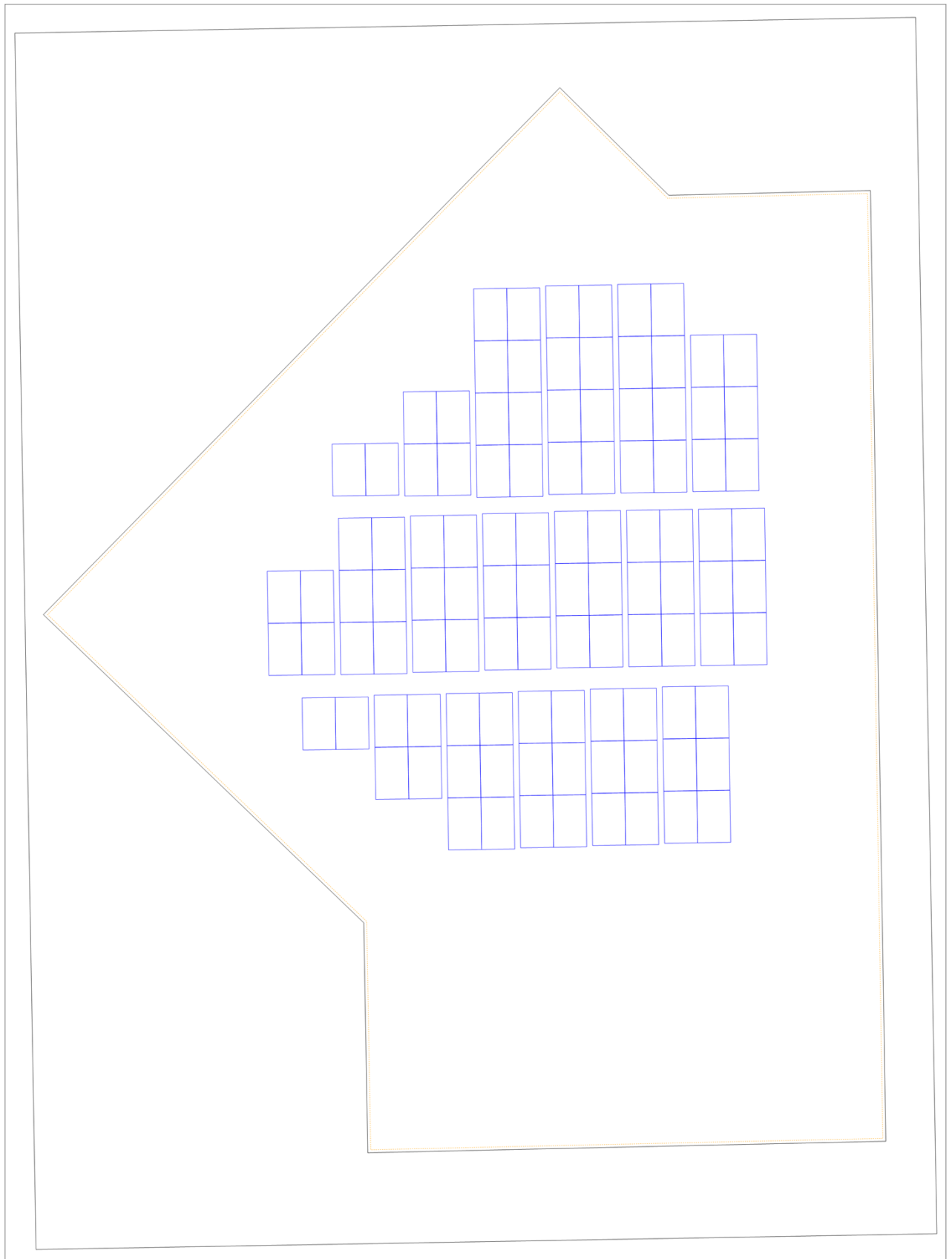


Figure: Overview plan

Dimensioning Plan

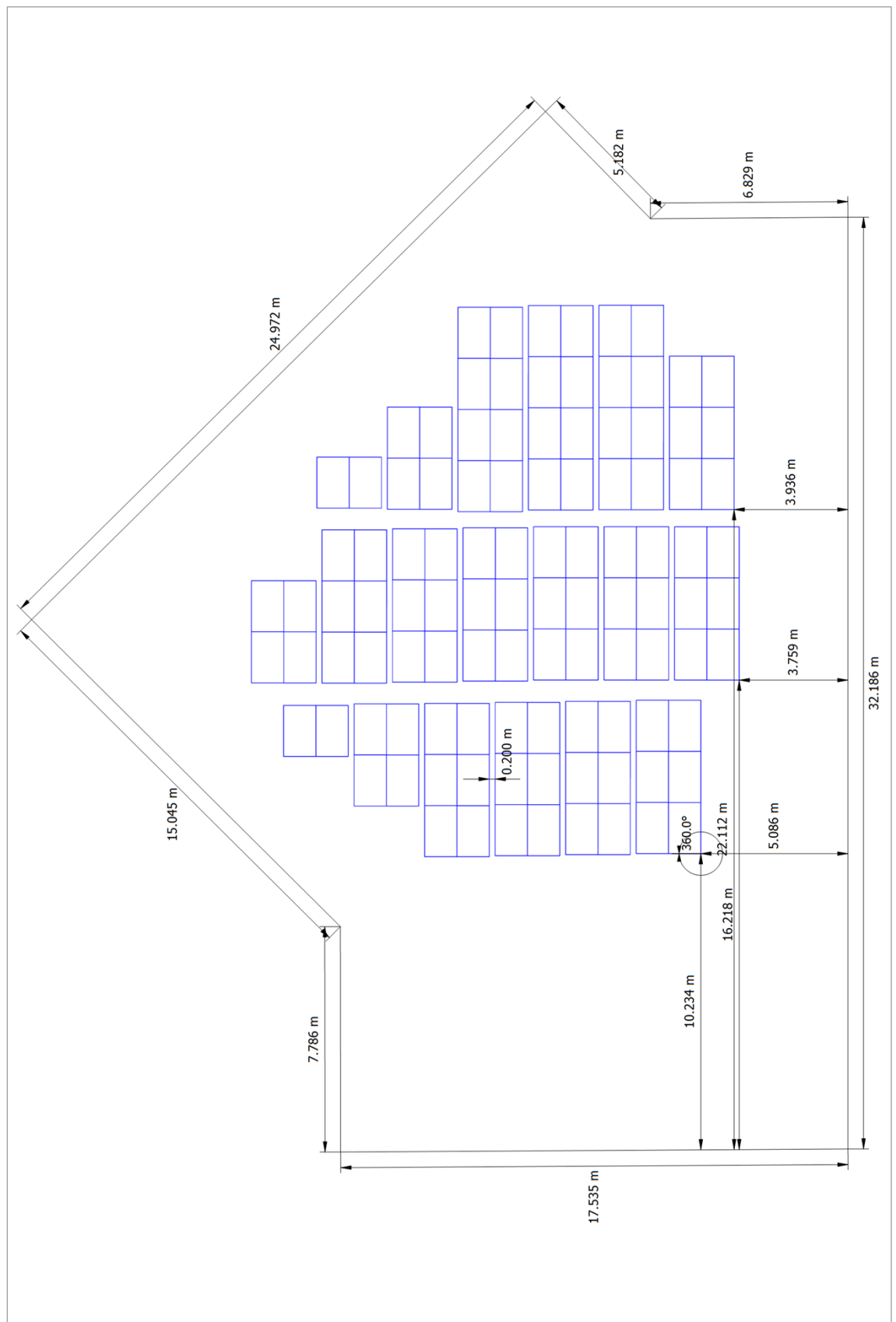


Figure: Arbitrary Building 01 - Mounting Surface East

String Plan

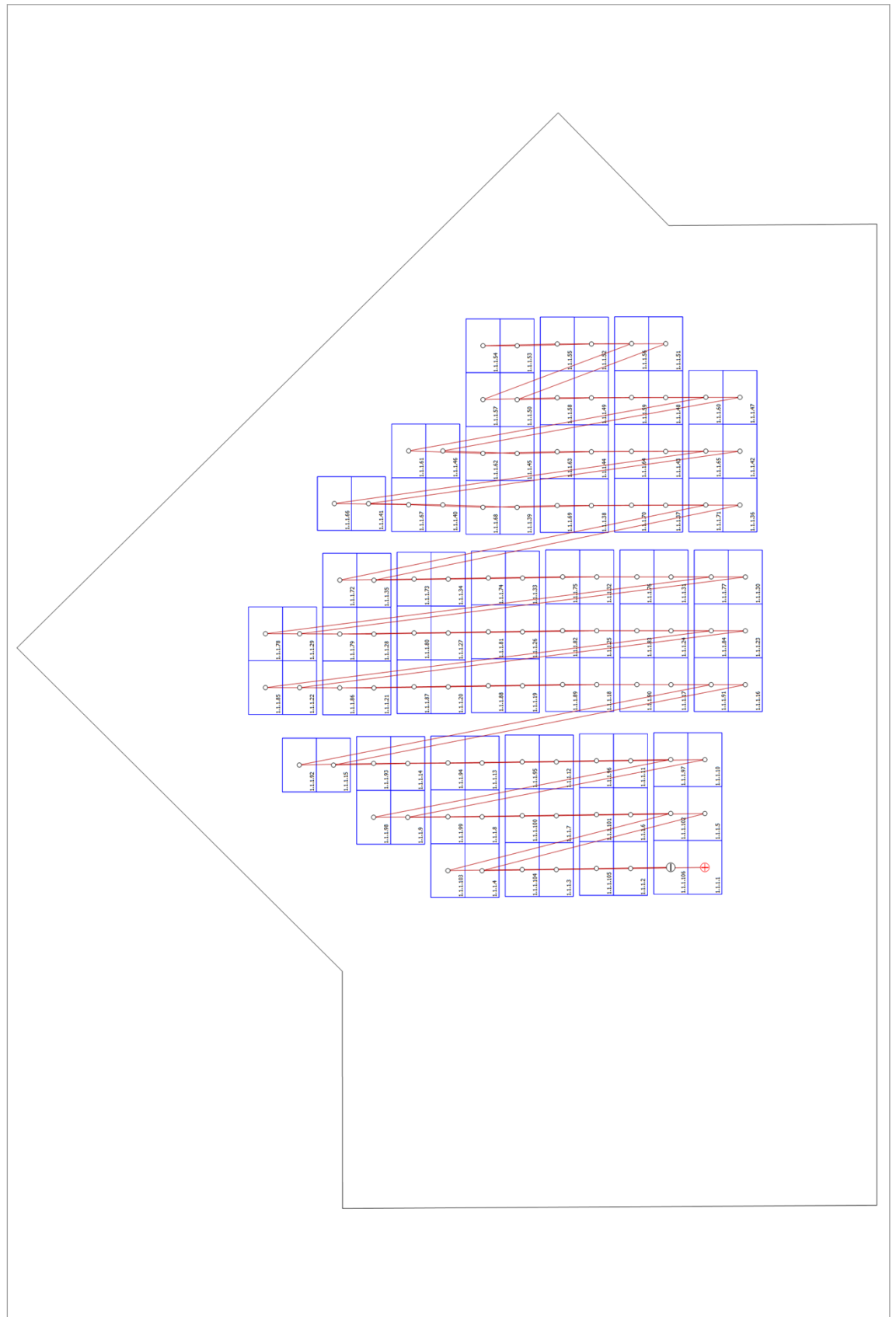


Figure: Arbitrary Building 01 - Mounting Surface East



Parts list

Parts list

#	Type	Item number	Manufacturer	Name	Quantity	Unit
1	PV Module		Hengdian Group DMEGC Magnetics Co., Ltd.	DM465M10RT- B54HSW/HBB/HBW/ HST	106	Piece
2	Inverter		SolarEdge	SE33.3K-EU-APAC (480V)	1	Piece
3	Power Optimizer		SolarEdge	S1000 Worldwide	106	Piece