

INSPIRED

Inspired Energy Solutions

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Project Name: Aldi - Malmesbury

16/03/2026

Your PV system from Inspired Energy Solutions

Address of Installation

Malmesbury – Festival Way SN16 9GN



Project Overview



Figure: Overview Image, 3D Design

PV System

3D, Grid-connected PV System

Climate Data	Malmesbury, GBR (2005 - 2023)
Values source	PVGIS-SARAH3/ERA5
PV Generator Output	144.72 kWp
PV Generator Surface	604.8 m ²
Number of PV Modules	268
Number of Inverters	1

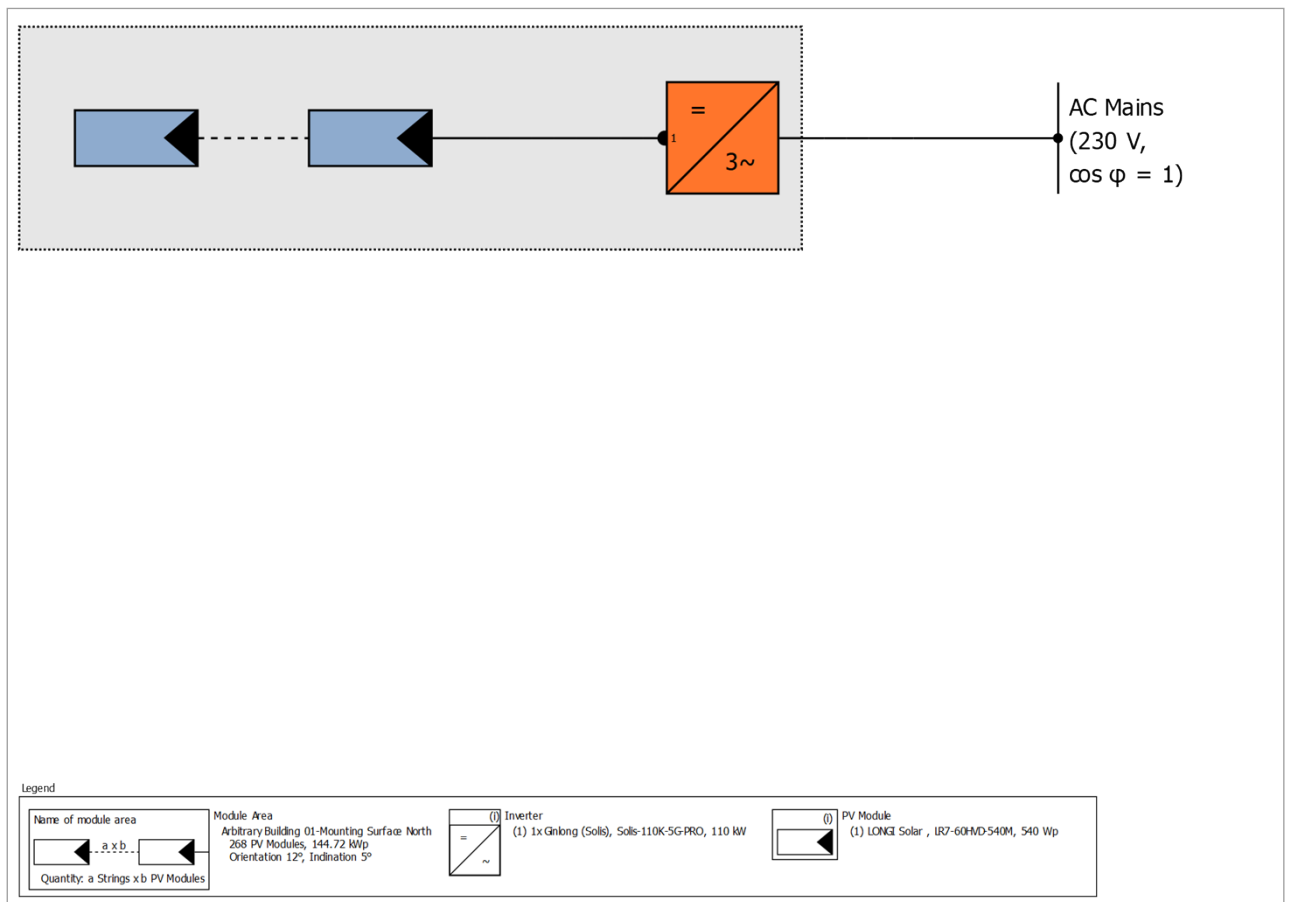


Figure: Schematic diagram

Production Forecast

Production Forecast

PV Generator Output	144.72 kWp
Spec. Annual Yield	900.41 kWh/kWp
Performance Ratio (PR)	88.71 %
Yield Reduction due to Shading	0.1 %
Grid Export	130,314 kWh/Year
Grid Export in the first year (incl. module degradation)	130,314 kWh/Year
Standby Consumption (Inverter)	7 kWh/Year
CO ₂ Emissions avoided	23,064 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
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Climate Data

Location	Malmesbury, GBR (2005 - 2023)
Values source	PVGIS-SARAH3/ERA5
Data resolution	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-Mounting Surface North

PV Generator, 1. Module Area - Arbitrary Building 01-Mounting Surface North

Name	Arbitrary Building 01-Mounting Surface North
PV Modules	268 x LR7-60HVD-540M (v1)
Manufacturer	LONGI Solar
Inclination	5 °
Orientation	North 12 °
Installation Type	Roof parallel
PV Generator Surface	604.8 m ²

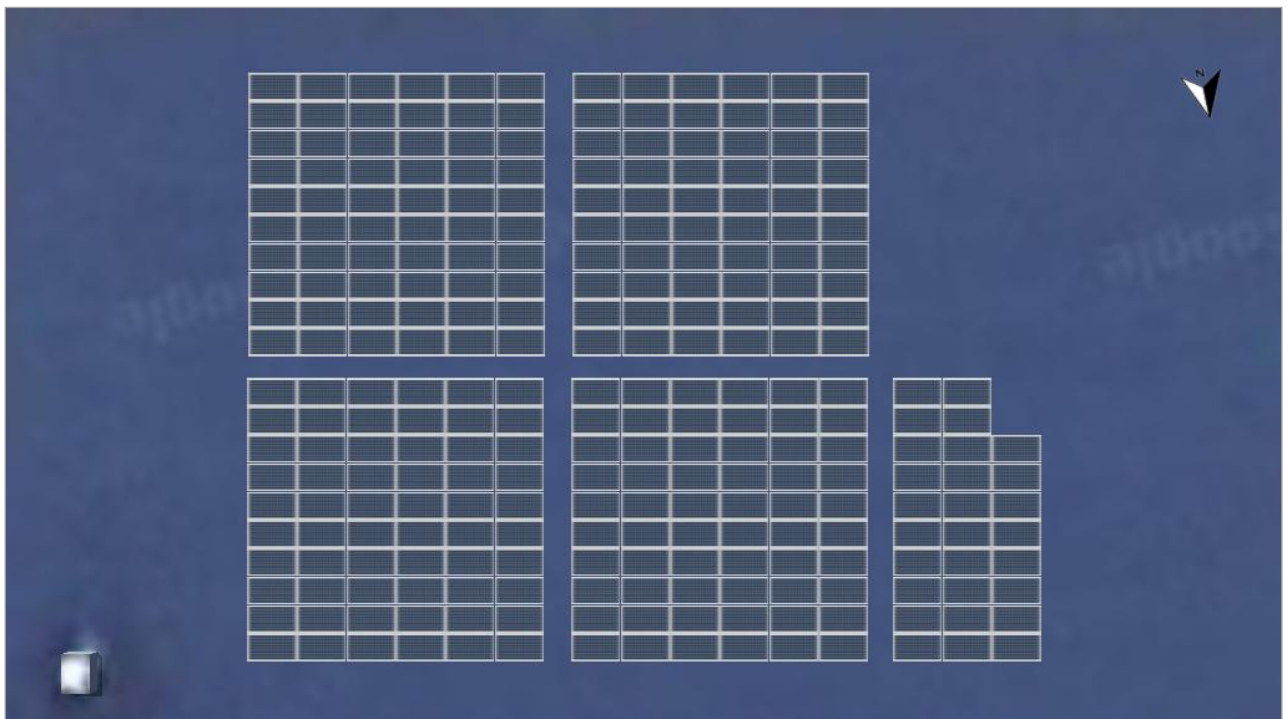


Figure: 1. Module Area - Arbitrary Building 01-Mounting Surface North

Horizon Line, 3D Design

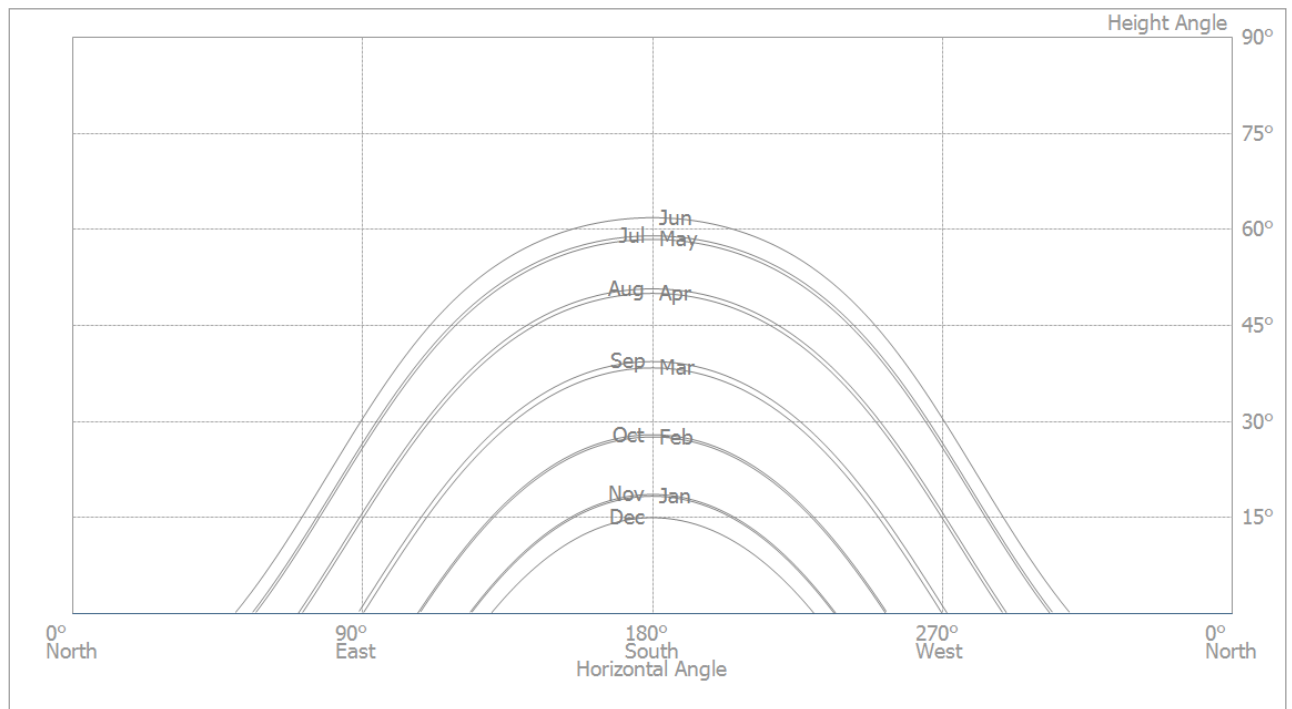


Figure: Horizon (3D Design)

Inverter configuration

Configuration 1

Module Area	Arbitrary Building 01-Mounting Surface North
Inverter 1	
Model	Solis-110K-5G-PRO (v1)
Manufacturer	Ginlong (Solis)
Quantity	1
Sizing Factor	131.6 %
Configuration	MPP 1: 2 x 17
	MPP 2: 2 x 17
	MPP 3: 2 x 17
	MPP 4: 2 x 17
	MPP 5: 2 x 17
	MPP 6: 2 x 17
	MPP 7: 2 x 16
	MPP 8: 2 x 16

AC Mains

AC Mains

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

Simulation Results

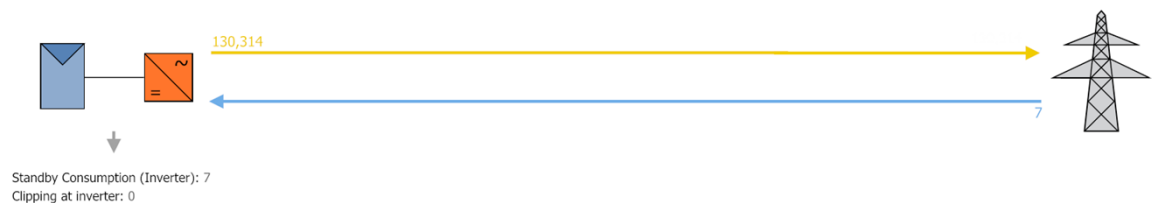
Results Total System

PV System

PV Generator Output	144.72 kWp
Spec. Annual Yield	900.41 kWh/kWp
Performance Ratio (PR)	88.71 %
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Energy Flow Graph

Project: Aldi - Malmesbury



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

Figure: Energy flow

Results per Module Area

Arbitrary Building 01-Mounting Surface North

PV Generator Output	144.72 kWp
PV Generator Surface	604.78 m ²
Global Radiation at the Module	1014.96 kWh/m ²
Global Radiation on Module without reflection	1014.96 kWh/m ²
Performance Ratio (PR)	88.72 %
PV Generator Energy (AC grid)	130313.86 kWh/Year
Spec. Annual Yield	900.46 kWh/kWp

Plans and parts list

Circuit Diagram

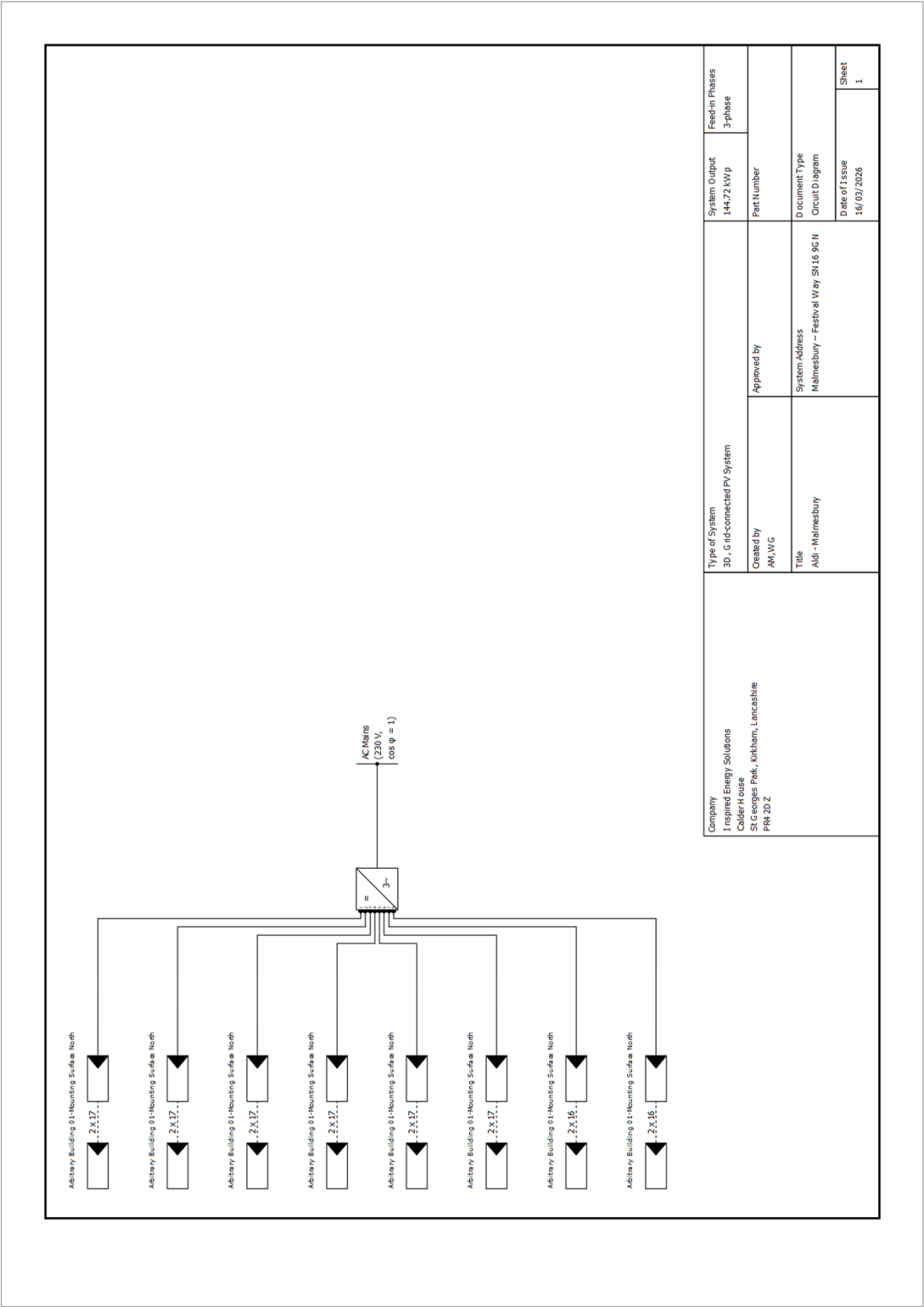


Figure: Circuit Diagram

Parts list

Parts list

#	Type	Item number	Manufacturer	Name	Quantity	Unit
1	PV Module		LONGI Solar	LR7-60HVD-540M	268	Piece
2	Inverter		Ginlong (Solis)	Solis-110K-5G-PRO	1	Piece

Screenshots, 3D Design Environment



Figure: Screenshot05

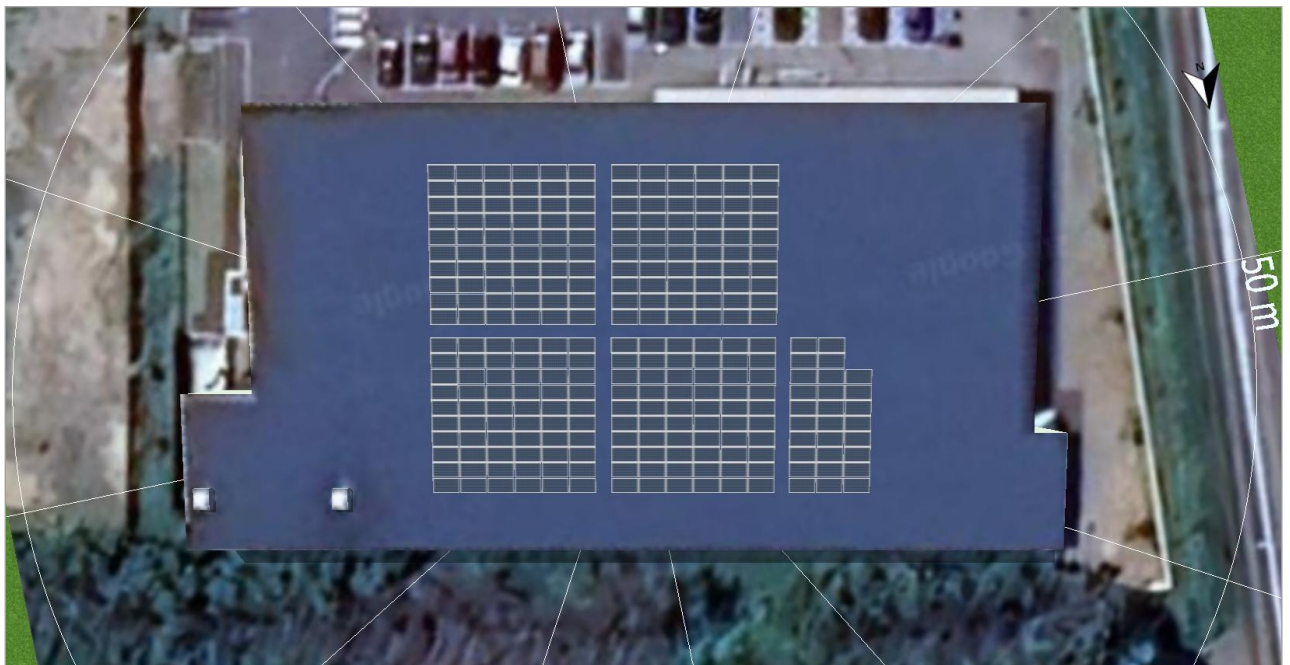


Figure: Screenshot06

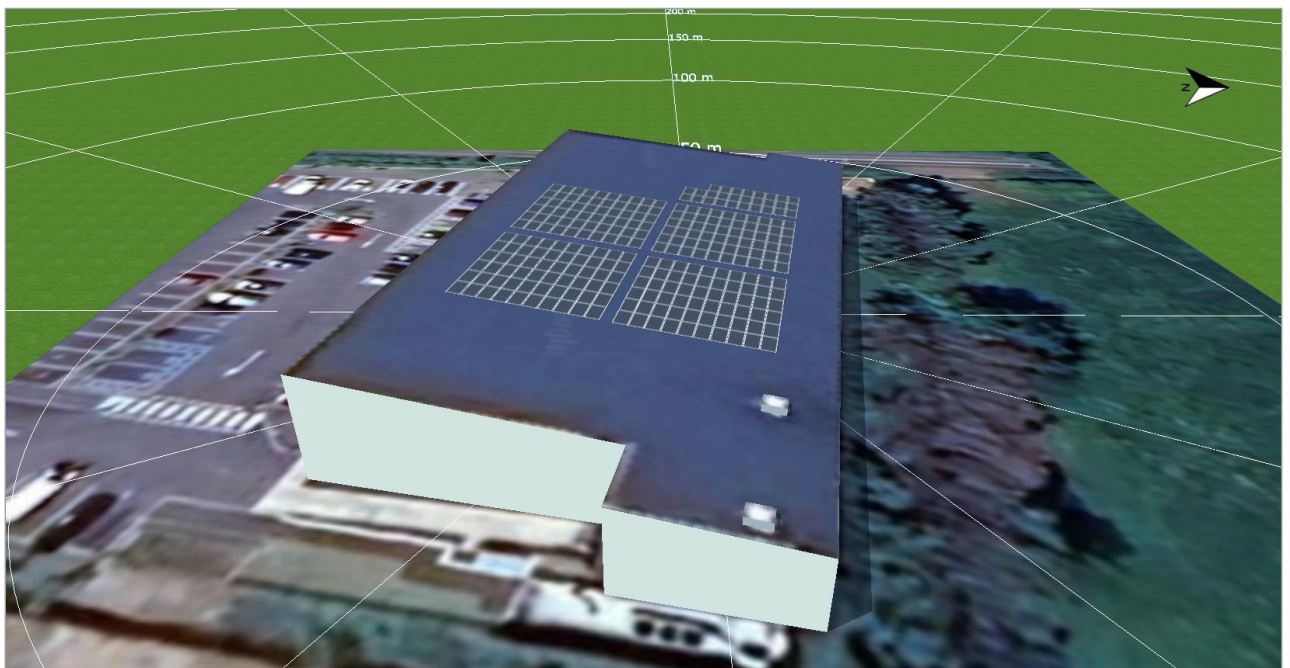


Figure: Screenshot03

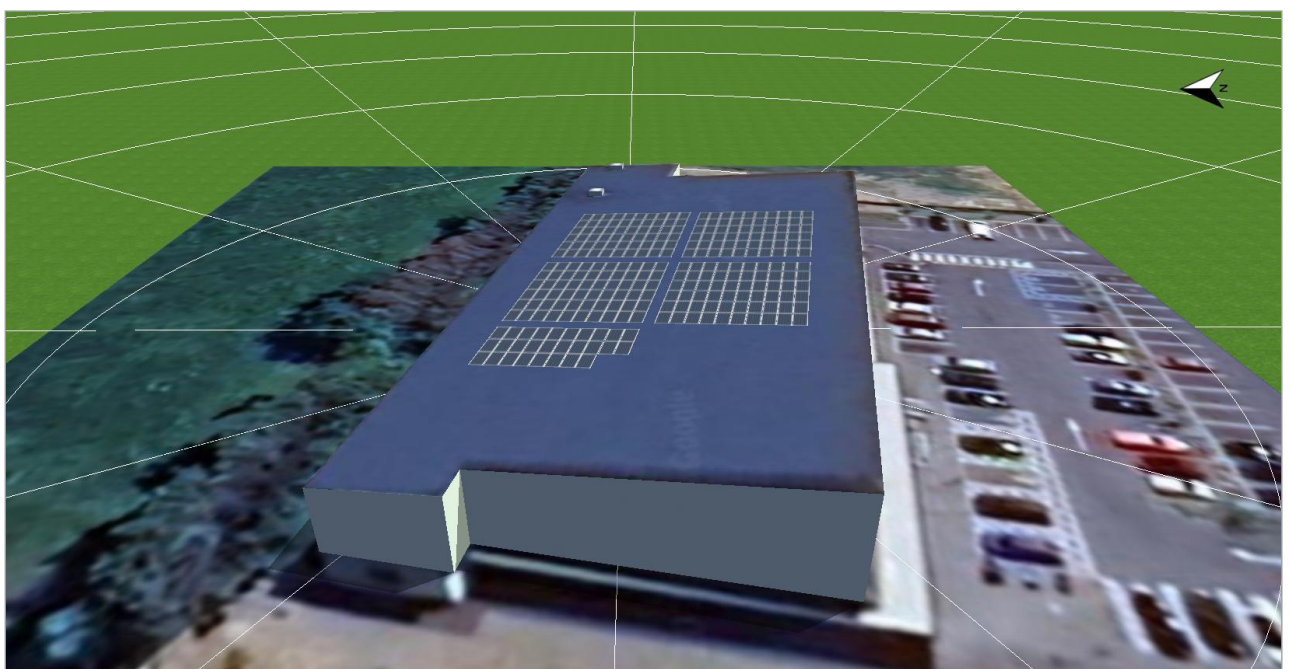


Figure: Screenshot04