

E N S T A L L

Project plan

Stonewick Lodge,
Roof 1

Location: Warninglid Ln, Warninglid, UK
Calculation date: 04-11-2025

ClickFit Evo

METAL ROOF

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Scan the code for the
product manual.

Overview

General

Generated by	Zak Trimmer (zak.trimmer@yesss.gg)*
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* This person can open this project in the calculator via <https://calculator.eu.enstall.com/3336744/4342204>.

Location

Address	Warninglid Ln, Warninglid, UK
Basic wind speed ($v_{b,map}$)	22.0 m/s*
Fundamental value of basic wind speed	24.4 m/s
Terrain category	Country*
Distance to coast	30.0 km*
Wind pressure	677.46 N/m ²
Snow zone	3*
Characteristic value of snow on the ground	0.52 kN/m ²
Snow load on the roof	455.09 N/m ²
Altitude above sea level	109.0 m*
Consequence class	CC1
Reference period	50 years
Calculation date	04-11-2025

* Automatically determined based on the address.

Roof specification

Roof height	4.0 m
Edge depth ridge and gutter	0.8 m
Edge depth side gable	0.5 m
Roof pitch	38.0°
Roofing material	Steel
Building type	Stand-alone
Steel type	Trapezoidal
Steel thickness	0.5 - 1.0 mm

System specification

Panel model	Jinko JKM435-460-54HL4R-(V) (425 - 450Wp) Tiger Neo
Panel dimensions	1762 mm x 1134 mm x 30 mm
Panel weight	21.0 kg

Panel count	9
Orientation	Portrait
Segment count	1
Panel power	450 Wp
Total power	4.050 kWp

Complete list of materials

Total roof bill of materials

Article number	Description	Amount
1008020-B	ClickFit EVO Module clamp universal black	20
1008049	ClickFit EVO mounting profile trapezoidal metal roof portrait	20
1008064*	ClickFit EVO auxiliary set	18
1008065-B	ClickFit EVO End clamp support black	4
1008085	Self-tapping sheet metal screw 6,0x25 mm SW10 HEX/T30	80

* Optional article

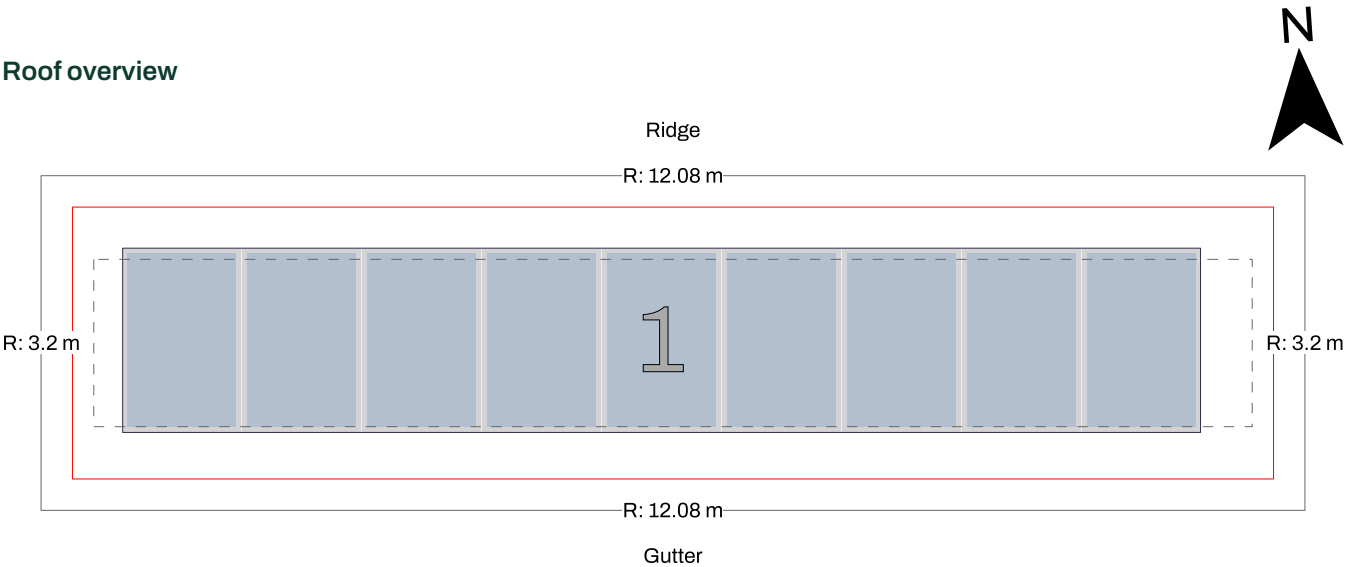
Assembly

General installation conditions

Warning!

⚠ To ensure the safe and efficient installation of PV systems, the work should be carried out by qualified personnel trained to do installations for the chosen roof material. The installation should be conform the general instructions in the user manual and the roof-specific instructions in this project plan.

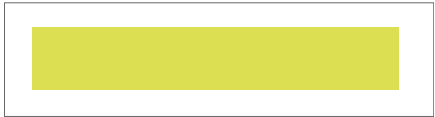
Roof overview



R: XXm	Length of outer roof side
—	No-Go zone width (30cm)

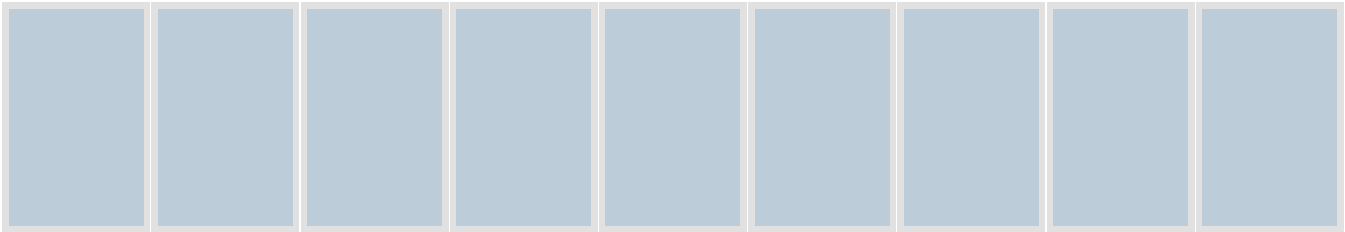
Segment 1

Panel count	9
Total power	4.050 kWp
Orientation	Portrait
Rail system	Horizontal

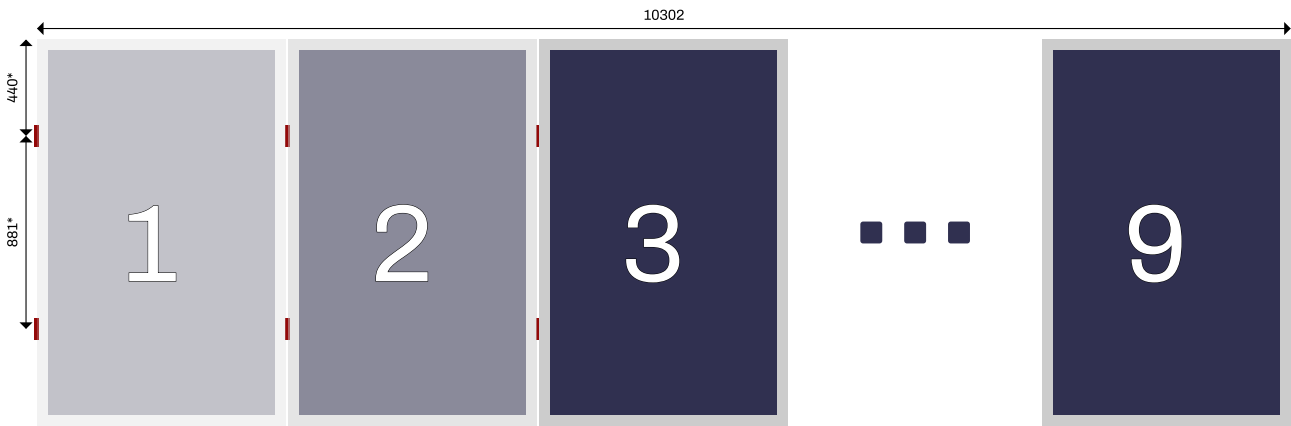


 This assembly plan is applicable for the highlighted segments

Assembly plan



Fixation plan



Units are in mm

* When needed, rail spacing can be extended to the previous or next tile, crest or seam, up to 400mm beyond the recommended distance.
Enstall recommends to always respect the module manufacturers rail spacing and clamping specifications.

Number of profiles on side of the panel	2
Number of screws per profile	4

Materials

Article number	Description	Amount
1008020-B	ClickFit EVO Module clamp universal black	20
1008049	ClickFit EVO mounting profile trapezoidal metal roof portrait	20
1008064	ClickFit EVO auxiliary set	18
1008065-B	ClickFit EVO End clamp support black	4
1008085	Self-tapping sheet metal screw 6,0x25 mm SW10 HEX/T30	80

Calculations

Input

Address	Warninglid Ln, Warninglid, UK
Basic wind speed ($v_{b,map}$)	22.0 m/s*
Altitude factor (c_{alt})	1.11
Fundamental value of basic wind speed	24.4 m/s
Terrain category	Country*
Distance to coast	30.0 km*
Air density	1.23 kg/m ³
Wind exposure factor (c_e)	1.86
Town terrain exposure correction factor ($c_{e,T}$)	1.0
Displacement height (h_{dis})	0.0 m
Orography factor	1.0
Wind pressure	677.46 N/m ²
Snow zone	3*
Characteristic value of snow on the ground	0.52 kN/m ²
Snow exposure factor C_e	1.0
Snow fences	No
Snow load form coefficient	0.88
Snow load on the roof	455.09 N/m ²
Altitude above sea level	109.0 m*
Consequence class	CC1
Reference period	50 years
Roof height	4.0 m
Edge depth ridge and gutter	0.8 m
Edge depth side gable	0.5 m
Roof pitch	38.0°
Roof area	38.66 m ²
Roofing material	Steel
Building type	Stand-alone
Steel type	Trapezoidal
Steel thickness	0.5 - 1.0 mm

Panel model	Jinko JKM435-460-54HL4R-(V) (425 - 450Wp) Tiger Neo
Panel dimensions	1762 mm x 1134 mm x 30 mm
Panel weight	21.0 kg
Panel count	9
Orientation	Portrait
Segment count	1
Panel power	450 Wp
Total power	4.050 kWp

* Automatically determined based on the address.

Roof loads

Total weight	195.71 kg
Total system weight	6.71 kg
Total panel weight	189.0 kg
Roof area (gross)	38.66 m ²
System area (projected area)	18.15 m ²
Average load over roof area	5.06 kg/m ²
Average load over system area	10.78 kg/m ²
Maximum downwards force per attachment	607 N (SLS), 808 N (ULS)
Maximum upwards force per attachment	-319 N (SLS), -461 N (ULS)
Maximum upwards force per screw	-160 N (SLS), -231 N (ULS)

Roof loads for segment 1

Total weight	195.71 kg
Total system weight	6.71 kg
Total panel weight	189.0 kg
System area (projected area)	18.15 m ²
Average roof load over system area	10.78 kg/m ²
Maximum downwards force per attachment	607 N (SLS), 808 N (ULS)
Maximum upwards force per attachment	-319 N (SLS), -461 N (ULS)
Maximum upwards force per screw	-160 N (SLS), -231 N (ULS)

* Irregularities in the roof can cause deviating point pressures

Disclaimer

Please read this information carefully before starting with the design and installation of the PV system.

The output for the design of the PV system is generated by using the calculator tool made available through the website of Enstall Europe B.V. ("Enstall") at www.enstall.com (the "Calculator"). The responsibility for the correct application of the output derived from the Calculator lies with the user of the Calculator and/or the installer or any other person responsible for the installation of the PV system, which output may be subject to or impacted by many different variables and factors. The installation of a PV system onto an existing building can for example impact the existing building loads (e.g., as a result of snow and wind) or the building construction. To avoid personal injury and/or property damages, the installer or any other person responsible for the installation of a PV system should ensure that the static calculations applicable to the existing building are reviewed and confirmed beforehand by a qualified technician. Any applicable regulations, including (but not limited to) NEN 7250, EN 1990, EN 1991-1-3, EN 1991-1-4 and relevant national annexes, should be observed and adhered to. Failure to obtain such confirmation or observe and adhere to applicable regulations may, amongst others, lead to failure of the roof load-bearing structure of the building. It is advisable to consult with the insurer of the building in case of the intention to install a PV system or in case of any other intended changes to the building.

The installer or any other person responsible for the installation of a PV system should also consider, confirm or control applicable design elements which include (but are not limited to):

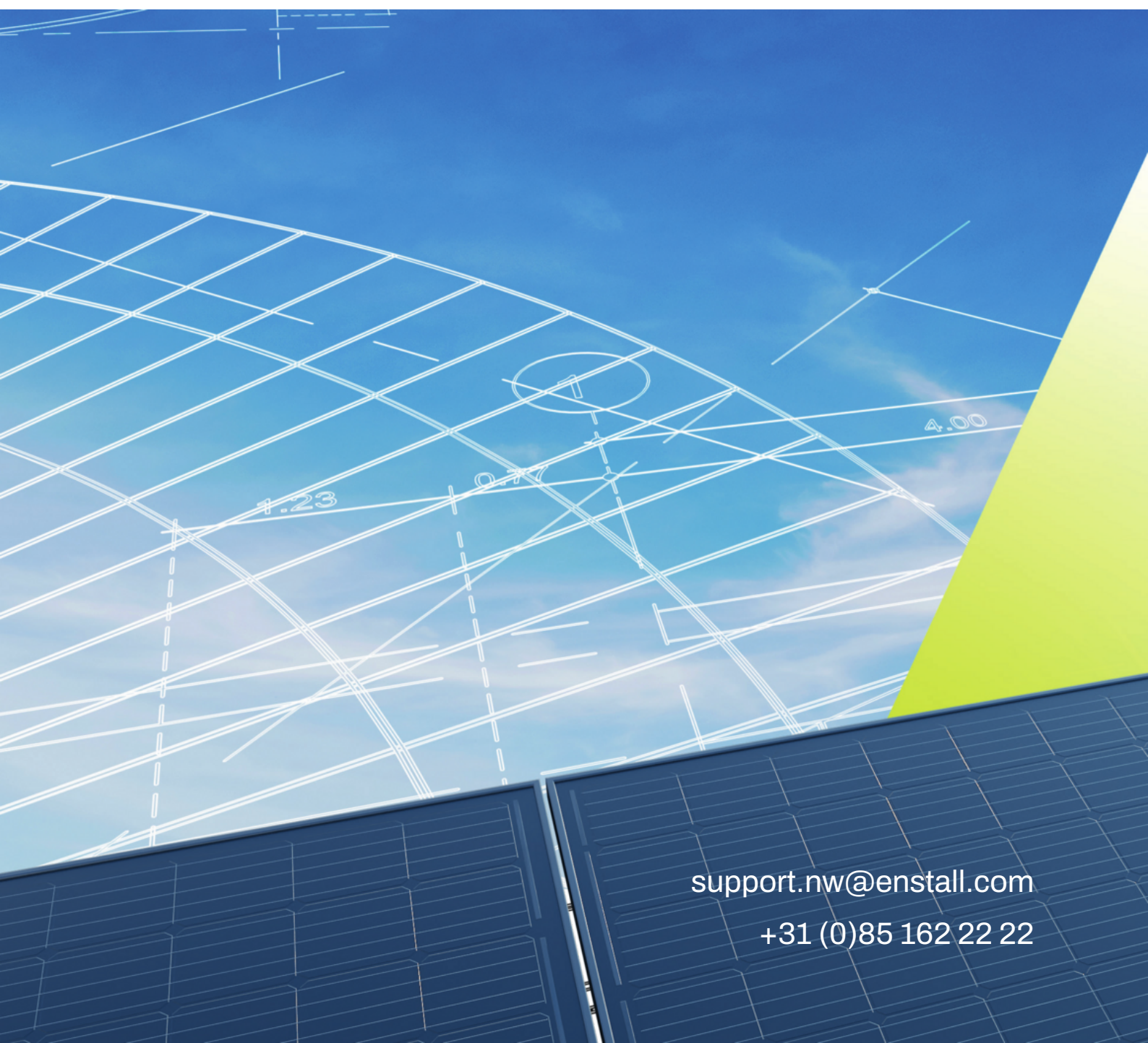
- a. changes as a result of the additional weight of the complete PV system on the building;
- b. changes as a result of the changed geometry of the building's roof;
- c. changes as a result of the dynamic wind pressure and possible accumulation of rain or any other precipitation on the building;
- d. the loads occurring during installation on the building, roofing material and insulation;
- e. the compatibility of the insulation and roofing material at the location of the contact points of the long-term PV-system's support structure, as a result of the pressure point;
- f. the compatibility of the roofing material in combination with the support structure at the location of the contact points;
- g. the effect of thermal performance of the building on the PV system and vice versa; and/or
- h. the effect of any movement and vibrations of the roof on the PV system and vice versa.

In addition, the installer or any other person responsible for the installation of a PV system should confirm the compatibility of any third party products, components or materials (including PV panels) used in conjunction with Enstall's products, if such third party products, components or materials have not been provided for such use by or on behalf of Enstall or the use of which has not been expressly authorized by Enstall. Reference to a third party product in the Calculator should not be deemed an express or implied authorization by Enstall. Enstall's products should always be used in accordance with instructions set out in the most recent version of the applicable manual, available via www.enstall.com.

Prices in the Calculator are indicative and are subject to change resulting from, amongst others, fluctuations in commodity prices.

To generate output from the Calculator Enstall relies solely on the input and information that was submitted by the user of the Calculator. Enstall is under no obligation to confirm or verify such input or information. Enstall assumes no responsibility or liability of any kind in relation to, or resulting from, such input and/or information, and/or any risks, consequences or damages (including, but not limited to, indirect or consequential losses) resulting from incorrect, inaccurate, or incomplete input and/or information that was submitted through the Calculator or resulting from the improper use of Enstall's products. Any such responsibilities and liabilities are solely for the account of the user of the Calculator and/or any other person responsible for the installation of a PV system, as applicable.

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