



Bluefin Developments LLP

Details of proposed PV panels

Phase 2e, Keymer Tile works, Kilnwood Avenue, Burgess Hill, West Sussex.

Revision B - January 2025

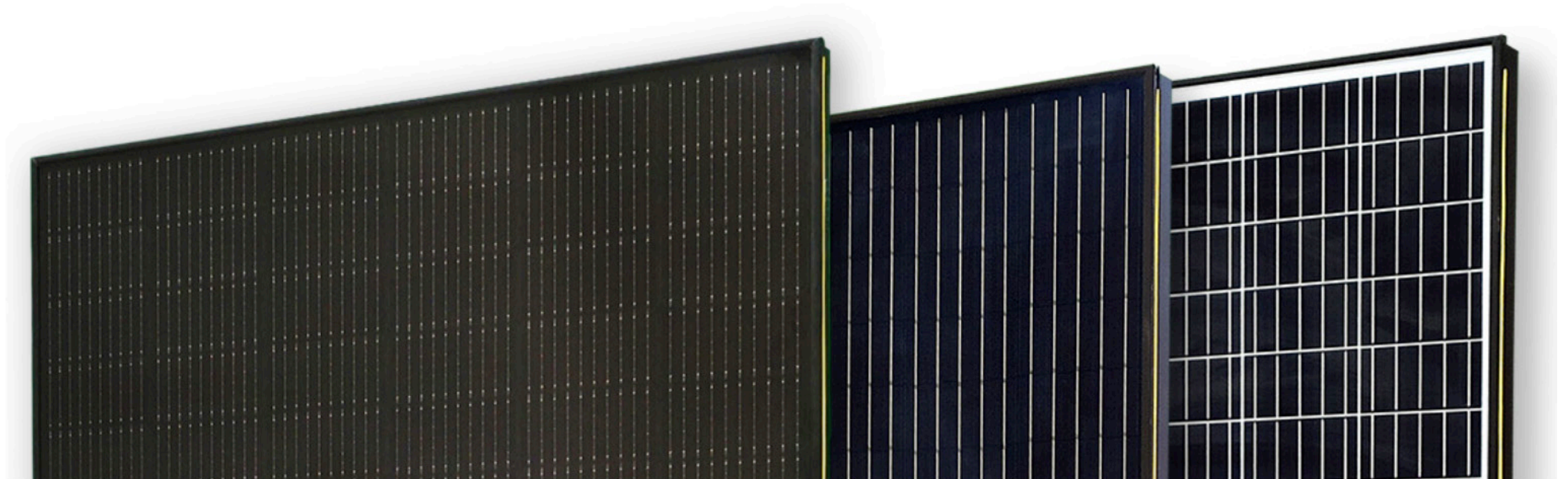
Introduction.

To be read in conjunction with drawing reference 24001-GEN-010-PI - APARTMENT ELEVATIONS that shows the extent of solar panels required to the roofs

This document has been prepared to accompany the above listed drawing to discharge planning condition 6 of approval reference DM/23/0941.

The approved planning scheme showed 42 panels to the roof but 108 are required to meet the buildings SAP assessment calculations.

The nature of the PV panels is based upon information in the public domain in relation to the approved scheme for earlier phases of the Keymer Tile Works that have not been realised to ensure consistency.



Installation method.

It would appear that all areas of the overall Keymer tile works development where PV panels have been installed are integrated systems rather than roof mounted. Therefore, to remain consistent the proposal will be for an integrated system.

Viridian Solar is a UK-based manufacturer of roof integrated solar panels. Their clearline Fusion range of photovoltaic (electric) solar panels fit in the roof rather than projecting beyond the roof plane and are the proposed tried and tested installation method we would propose to implement.



Above: Photograph of Clearline Fusion integrated PV system.

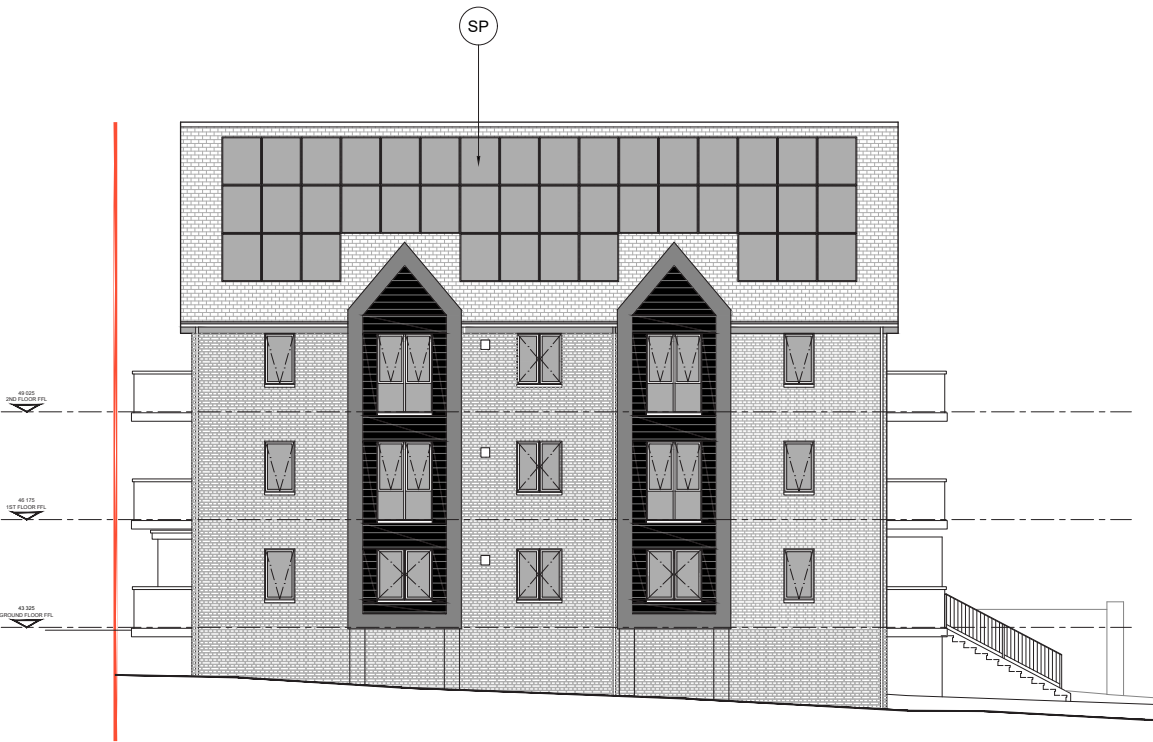


Above: Photograph apartment block directly in front (north) of the proposed block of flats

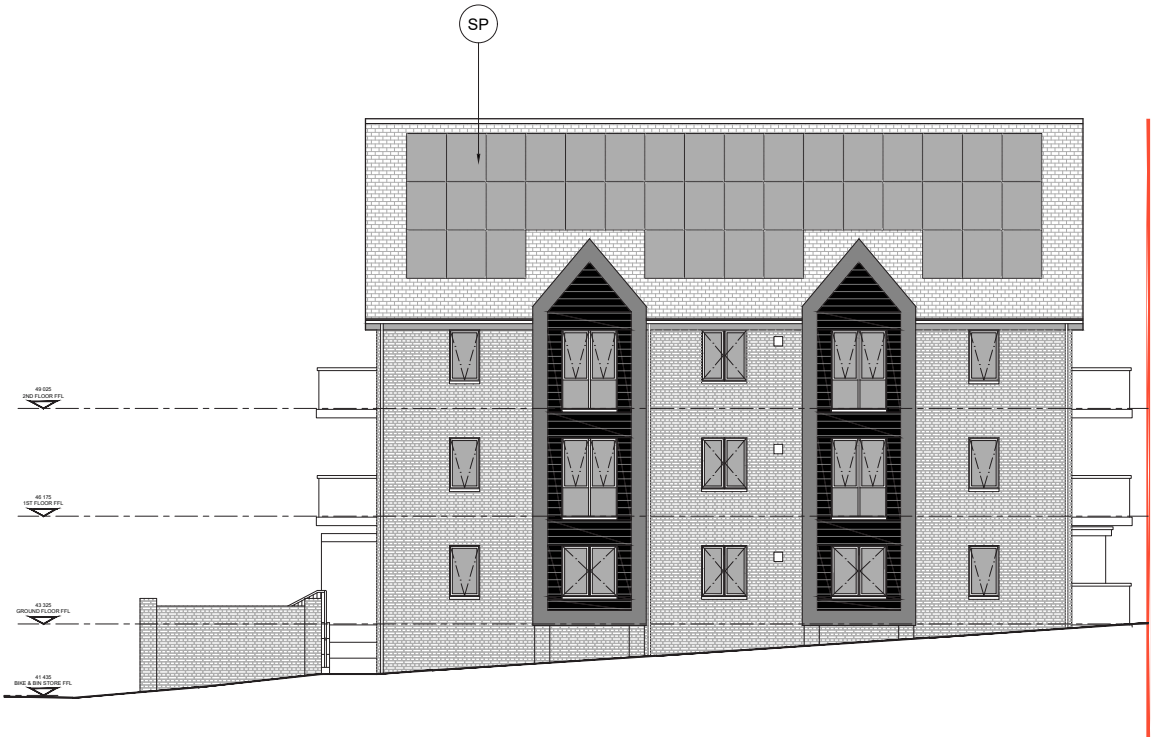
Arrangement, Size and Type of PV.

To the right are the approved east and west elevations.

- Each elevation contains 42 PV panels.
- The panels are 1000mm wide x 1686mm high and are installed vertically with the shorter edges closest to the ridge and eaves.
- The panels themselves are proposed to be Viridian solar G1 Monocrystalline panels.
- The G1 modules will be 335Wp with a black backing sheet.
- Efficiency 20.7% / 21.0%
- How the power generated is shared between the 15 flats is still being developed by the clients mechanical engineer.



2 ELEVATION
WEST ELEVATION - APARTMENTS
SCALE 1: 100

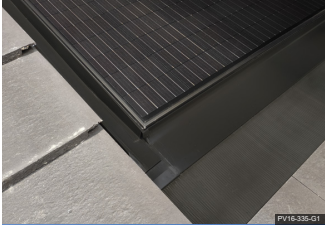


4 ELEVATION
EAST ELEVATION - APARTMENTS
SCALE 1: 100

EN

Clearline fusion

G1 Solar Photovoltaic Panels



PV16-335-G1

- Simple roof integration with clean, low-profile aesthetic for new build and retrofit
- Rapid installation times of less than 45 min/kWp easily achieved
- Compatible with the widest range of slate and tile including special fixings for different batten thickness
- Fitted during the normal roofing programme, enabling clarity of responsibility and safe working practices
- Achieves highest fire rating and wind resistance without modifications to the roof

1686

1000

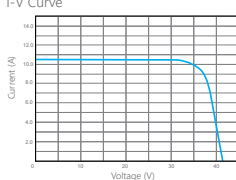
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PV16-335-G1

PV16-340-G1W

Mechanical Specification		PV16-xxx-G1	
Aperture Area	m ²	1.622	
Width	mm	1000	
Length	mm	1686	
Thickness	mm	69	
Weight	kg	21.7	
Static roof loading (distributed)	kg/m ²	12.9	
Characteristic Wind Resistance	kPa	5.32	
Ultimate Design Load ¹	kPa	5.32	
Positive Design Load	EC 6025	5.40	
Roofing System Fire Rating	EN 13501-5	B _{sl} (T1, T2, T3, T4)	
Power Warranty	% rated	90% 10 years, 80% 25 years	
Product Warranty		15 years	
Standards		BS6320, 6703, TIA, MCS5, MCS2, BBA	
Structural Durability		Equivalent to roof structure	

Electrical Specification		Clearline fusion PV16-XXX-G1	
Peak Power ²	Wp	335	340
Module Efficiency ³	%	20.7	21.0
Number of Cells		60x2	60x2
Maximum Power Voltage (V _{mp})	V	34.7	35.0
Maximum Power Current (I _{mp})	A	9.7	9.7
Open Circuit Voltage (V _{oc})	V	42.0	42.4
Short Circuit Current (I _{sc})	A	10.3	10.4
NOCT ⁴	°C	44.0	
Cell Type		Monocrystalline Silicon	
Power Temperature Coefficient	%/°C	-0.38	
Current Temperature Coefficient	%/°C	0.05	
Voltage Temperature Coefficient	%/°C	-0.30	
Maximum System Voltage	VDC	1,000	
Maximum Fuse Rating	A	20	
Safety Classification		Class 2	
Electrical Connectors		Genuine Solukit MC4 PV-K3T4, PV-K3T4	



Current (A)

Voltage (V)

BBA

BBA

TCV

1. Design resistance to ultimate loads includes a partial material safety factor of 1.0

2. Subject to a manufacturing tolerance of +/- 2%

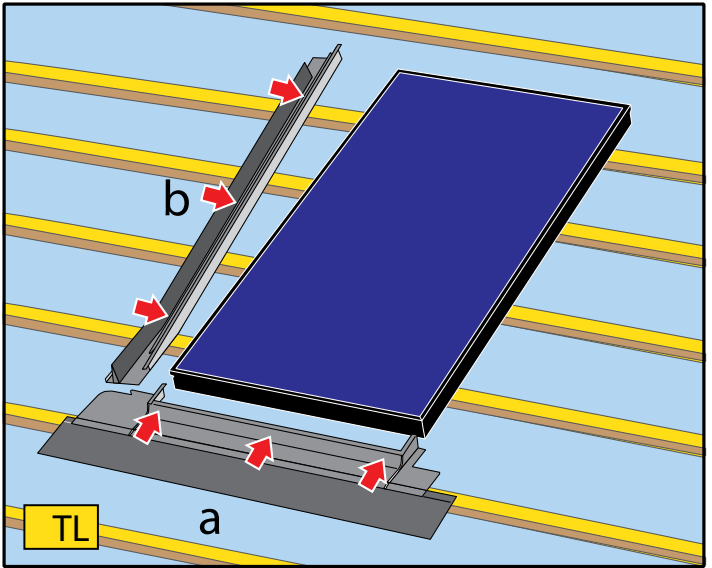
3. Based on aperture area

4. Nominal Operating Cell Temperature

Electrical specification measured under standard test conditions: Irradiation 1 kW/m² with light spectrum AM 1.5 and a cell temperature of 25°C.

viridian solar

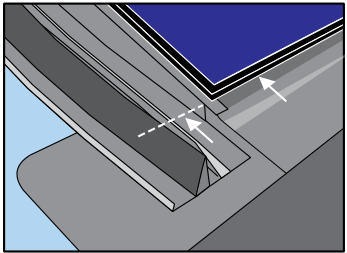
Clearline fusion



TL

a

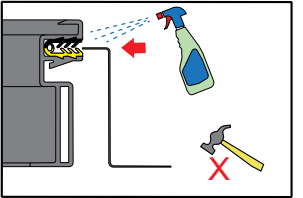
b



TL

a

b



TL

a

b

January 2025

24001-PV details - rev B.pdf

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