



---

## **Bluefin Developments LLP**

---

## **Details of proposed PV panels**

---

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

---

Revision C - July 2025

---

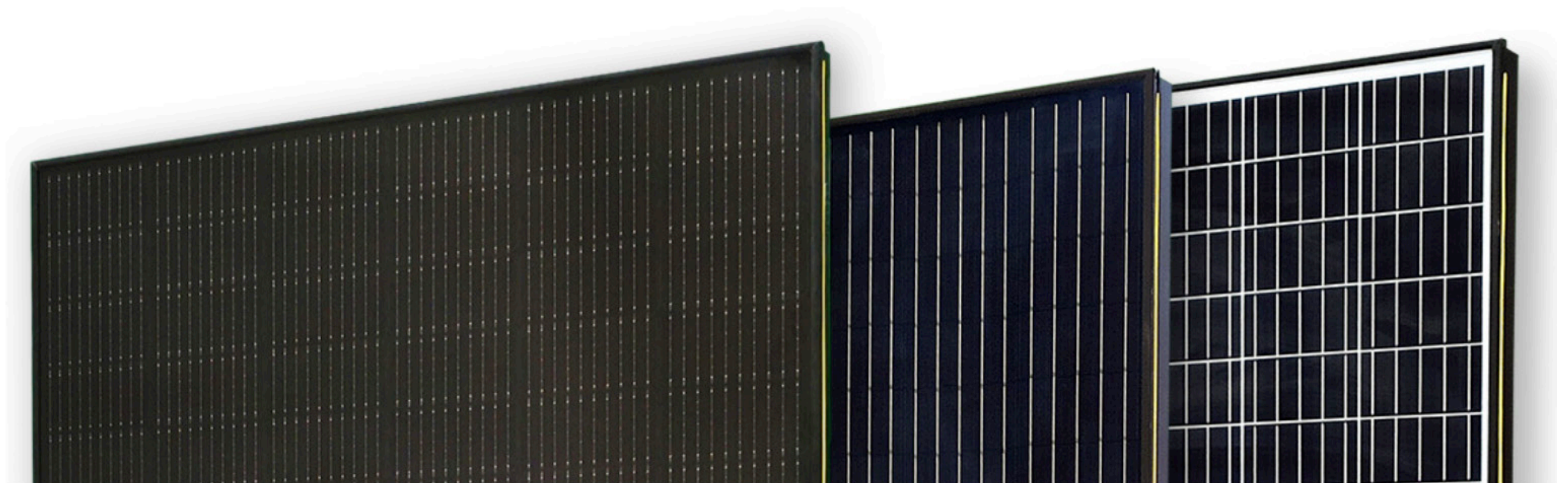
# Introduction.

To be read in conjunction with drawing reference 24001-GEN-010-P2 - APARTMENT ELEVATIONS and 24001-SOL-001-P1 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 98 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.

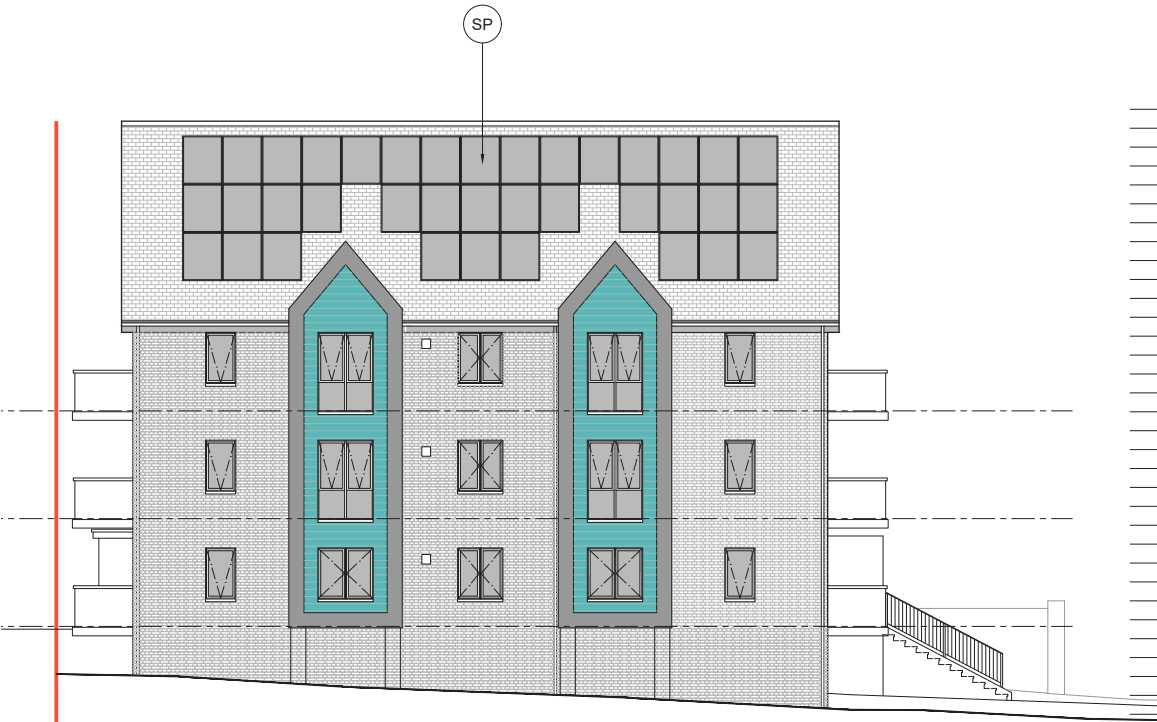


Above: Photograph apartment block directly in front (north) of the proposed block of flats

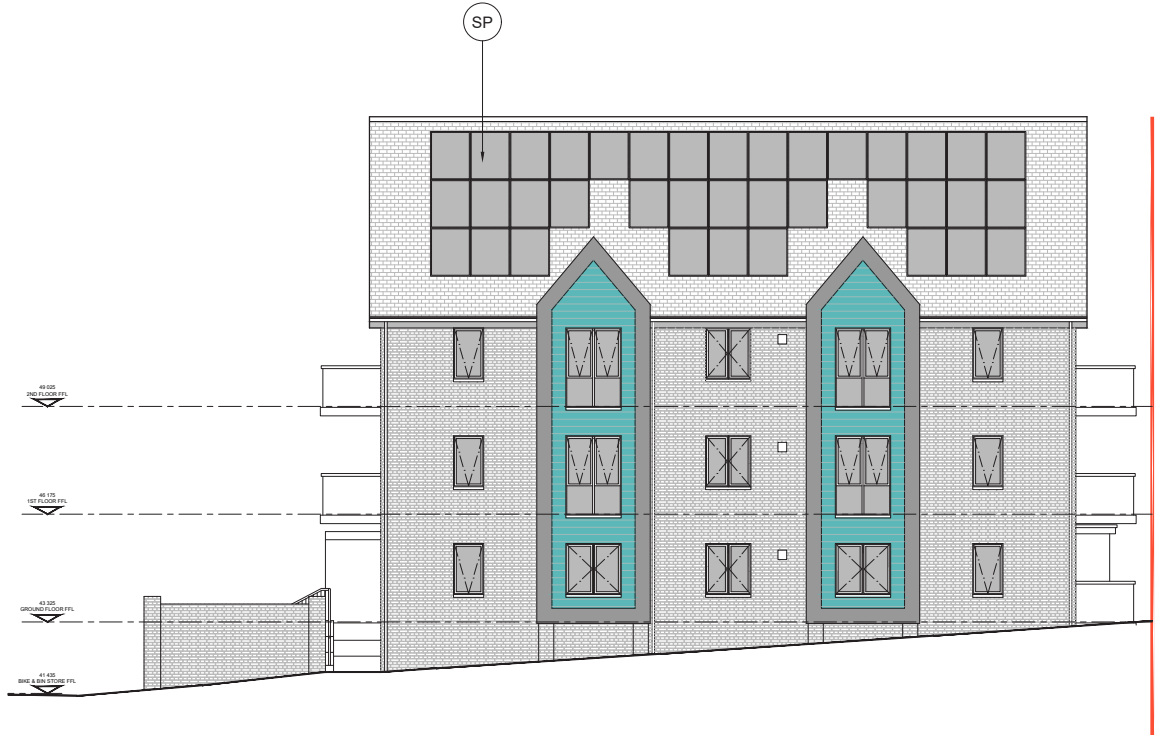
# Arrangement, Size and Type of PV.

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

69

PV16-335-G1

PV16-340-G1W

| Mechanical Specification          |                                                                            |
|-----------------------------------|----------------------------------------------------------------------------|
| Model                             | PV16-335-G1                                                                |
| Aperture Area                     | m <sup>2</sup> 1.622                                                       |
| Width                             | mm 1000                                                                    |
| Length                            | mm 1686                                                                    |
| Thickness                         | mm 69                                                                      |
| Weight                            | kg 21.7                                                                    |
| Static roof loading (distributed) | kg/m <sup>2</sup> 12.9                                                     |
| Characteristic Wind Resistance    | kPa 5.32                                                                   |
| Ultimate Design Load <sup>1</sup> | kPa 5.32                                                                   |
| Positive Design Load              | EC 6205 5.40                                                               |
| Roofing System Fire Rating        | EN 13501-5 B <sub>sl</sub> (T1, T2, T3, T4)                                |
| Power Warranty                    | % rated 90% 10 years, 80% 25 years                                         |
| Product Warranty                  | 15 years                                                                   |
| Standards                         | BS6121S, BS703, TIA, MCS5, MCS2, BS4, BS6121S, BS703, TIA, MCS5, MCS2, BS4 |
| Structural Durability             | Equivalent to roof structure                                               |

| Electrical Specification                 |                                    |
|------------------------------------------|------------------------------------|
| Model                                    | Clearline fusion PV16-335-G1       |
| Peak Power <sup>2</sup>                  | Wp 335 340                         |
| Module Efficiency <sup>3</sup>           | % 20.7 21.0                        |
| Number of Cells                          | 60x2 60x2                          |
| Maximum Power Voltage (V <sub>mp</sub> ) | V 34.7 35.0                        |
| Maximum Power Current (I <sub>mp</sub> ) | A 9.7 9.7                          |
| Open Circuit Voltage (V <sub>oc</sub> )  | V 42.0 42.4                        |
| Short Circuit Current (I <sub>sc</sub> ) | A 10.3 10.4                        |
| NOCT <sup>4</sup>                        | °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 1000                           |
| Maximum Fuse Rating                      | A 20                               |
| Safety Classification                    | Class 2                            |
| Electrical Connectors                    | Genuine Soluk MC4 PV-K3T4, PV-K3T4 |

I-V Curve

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

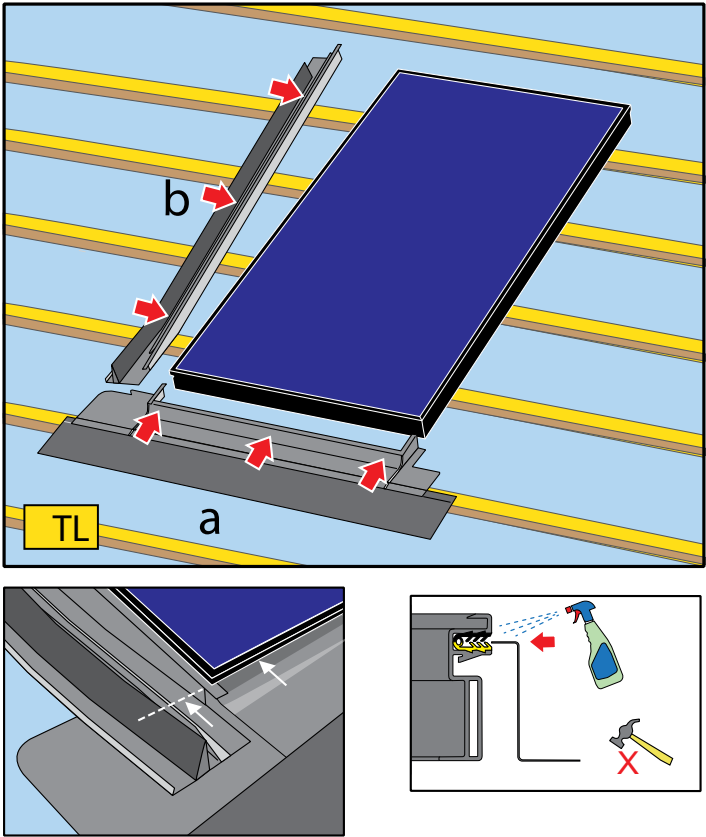
4 Nominal Operating Cell Temperature

Electrical specification measured under standard test conditions: Irradiation 1 kW/m<sup>2</sup> with light spectrum AM 1.5 and a cell temperature of 25°C.

© Viridian Solar Ltd. 2024. Not to be reproduced either wholly or in part without the express written permission of Viridian Solar Ltd. Viridian has a policy of continuous improvement, and reserves the right to alter the specifications without notice. Viridian has made every effort to ensure the accuracy of information, but does not accept liability for any errors or omissions.

viridian solar

Clearline fusion





For further information please contact

Neil Edwards  
[neil@architectsav.co.uk](mailto:neil@architectsav.co.uk)

AV Architects  
51 St Marys Road,  
Tonbridge,  
Kent,  
TN9 2LE  
T+44 (0)1732 366223

[www.architectsav.co.uk](http://www.architectsav.co.uk)