IMPORTANT – THIS COMMUNICATION AFFECTS YOUR PROPERTY

COUNCIL OF THE ISLES OF SCILLY

Town Hall, St Mary's TR21 0LW
Telephone: 01720 424455 – Email: planning@scilly.gov.uk

Town and Country Planning Act 1990
Town and Country Planning (Development Management Procedure) Order 2010

PERMISSION FOR DEVELOPMENT

Application No: P/20/076/FUL

Date Application Registered: 1st October 2020

Applicant: Mr A Sandford and Miss O Callan
Vine House
The Town
Bryher
Isles Of Scilly
TR23 0PR

Site address: Olivia's Kitchen The Town Bryher Isles Of Scilly TR23 0PR

Proposal: Installation of eleven solar panels on front roof of cafe building, to provide 3.4kw power.

In pursuance of their powers under the above Act, the Council hereby **PERMIT** the above development to be carried out in accordance with the following Conditions:

C1 **The development hereby permitted shall be begun before the expiration of three years from the date of this permission.**
Reason: In accordance with the requirements of Section 91 of the Town and Country Planning Act 1990 (as amended by Section 51 of the Planning and Compulsory Purchase Act 2004).

C2 **The development hereby permitted shall be carried out in accordance with the approved details only including:**

- **Plan 1, Location Plan**
- **Plan 2, Roof Layout Plan**
- **Plan 3, Proposed Panels Specification (Paradise Power Systems Ltd)**

These are stamped as APPROVED
Reason: For the clarity and avoidance of doubt and in the interests of the character and appearance of the Conservation Area, Area of Outstanding Natural Beauty and Heritage Coast in accordance with Policy 1 of the adopted Isles of Scilly Local Plan 2005 and Policy OE1 of the submission Draft Isles of Scilly Local Plan 2015-2030.

C3 **The solar panels and associated equipment, hereby approved, shall be permanently removed upon redundancy for their dedicated purpose and the site reinstated to its former condition within a period of three months unless otherwise agreed in writing by the Local Planning Authority. Should equipment become faulty or cease to operate it should either be removed or repaired within a period of 3 months and the site reinstated to its former condition.**
Reason: The solar panels have been permitted for a dedicated purpose and to facilitate the reduction of non-renewable energy on the Isles of Scilly. If the equipment is no longer needed or ceases to function it should be removed from the site in the interests of the visual amenities of the area.

Further Information

1. In dealing with this application, the Council of the Isles of Scilly has actively sought to work with the applicants in a positive and proactive manner, in accordance with paragraph 38 the National Planning Policy Framework 2019.
2. The Applicant is reminded of the provisions of the Wildlife and Countryside Act 1981 and the E.C. Conservation (Natural Habitats) Regulations Act 1994, the Habitat and Species Regulations 2012 and our Natural and Environment and Rural Communities biodiversity duty. This planning permission does not absolve the applicant from complying with the relevant law protecting species, including obtaining and complying with the terms and conditions of any licences required, as described in part IV B of Circular 06/2005. Care should be taken during the work and if bats are discovered, they should not be handled, work must stop immediately and a bat warden contacted. Extra care should be taken during the work, especially when alterations are carried out to buildings if fascia boards are removed as roosting bats could be found in these areas. If bats are found to be present during work, they must not be handled. Work must stop immediately and advice sought from licensed bat wardens. Call The Bat Conservation Trust's National Bat Helpline on 0845 1300 228 or Natural England (01872 245045) for advice.

Signed: 

Senior Officer, Planning and Development Management
Duly Authorised Officer of the Council to make and issue Planning Decisions on behalf of the Council of the Isles of Scilly.

DATE OF ISSUE: 26th November 2020

COUNCIL OF THE ISLES OF SCILLY

Planning Department
Town Hall, The Parade, St Mary's, Isles of Scilly, TR21 0LW
0300 1234 105
planning@scilly.gov.uk

Dear Mr A Sandford and Miss O Callan,

Please sign and complete this certificate.

This is to certify that decision notice: P/20/076/FUL and the accompanying conditions have been read and understood by the applicant: Mr A Sandford and Miss O Callan.

1. **I/we intent to commence the development as approved:** Installation of eleven solar panels on front roof of cafe building, to provide 3.4kw power. at: Olivia's Kitchen The Town Bryher Isles Of Scilly TR23 0PR **on**:..... .

2. ~~I am/we are aware of any conditions that need to be discharged before works commence.~~

3. ~~I/we will notify the Planning Department in advance of commencement in order that any pre-commencement conditions can be discharged.~~

Print Name:

Signed:

Date:

Please sign and return to the **above address** as soon as possible.

Plan 1

Olivia's Kitchen at The Vine (Vine House)

APPROVED
By Lisa Walton at 4:42 pm, Nov 26, 2020

0 50
Metres

N

ReQuestaPlan

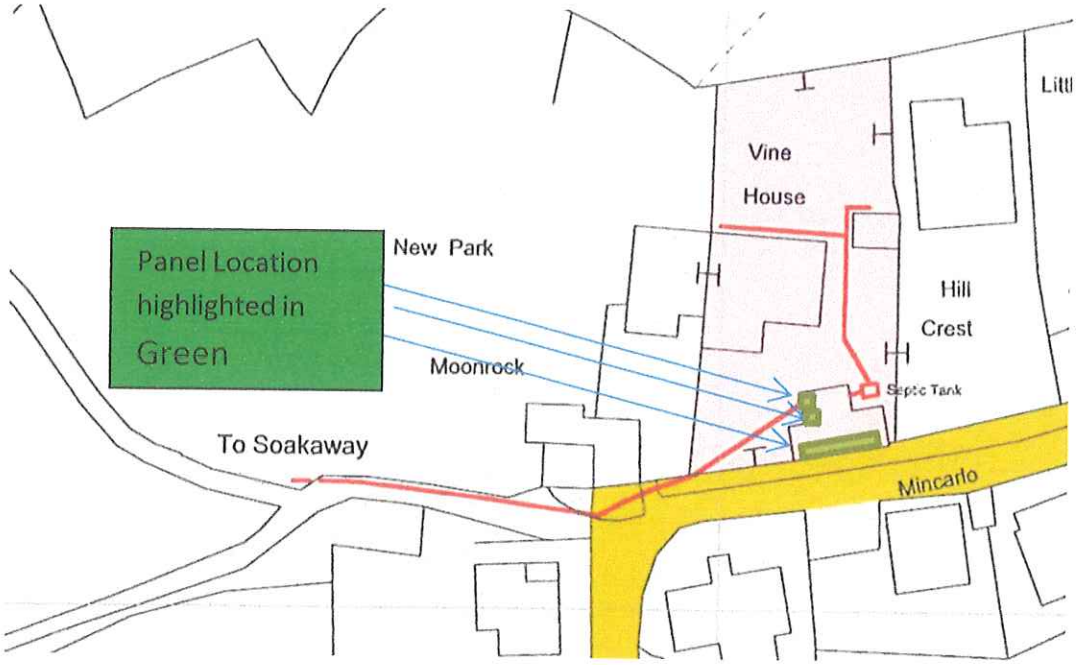
Plan Produced for: A J Sandford & O Callan

Date Produced: 01 Oct 2020

Plan Reference Number: TQRQM20275091827093

Scale: 1:1250 @ A4

Plan 2



Roof Dimensions are 11m in length and 2.4m in height

APPROVED

By Lisa Walton at 4:43 pm, Nov 26, 2020

Plan 3

RECEIVED
By Emma Kingwell at 11:14 am, Sep 24, 2020

APPROVED
By Lisa Walton at 4:43 pm, Nov 26, 2020

Paradise Power Systems Ltd

Project Name: 9th June 2020

Client: Olivia Callan

Address: Newton Road Isles of Scilly Isles of Scilly, TR23 0PR

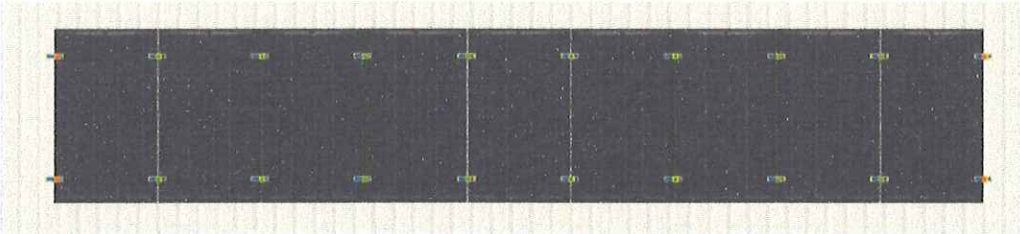
Date Created: 9th June 2020

Designer: Jason Hicks Jason Hicks

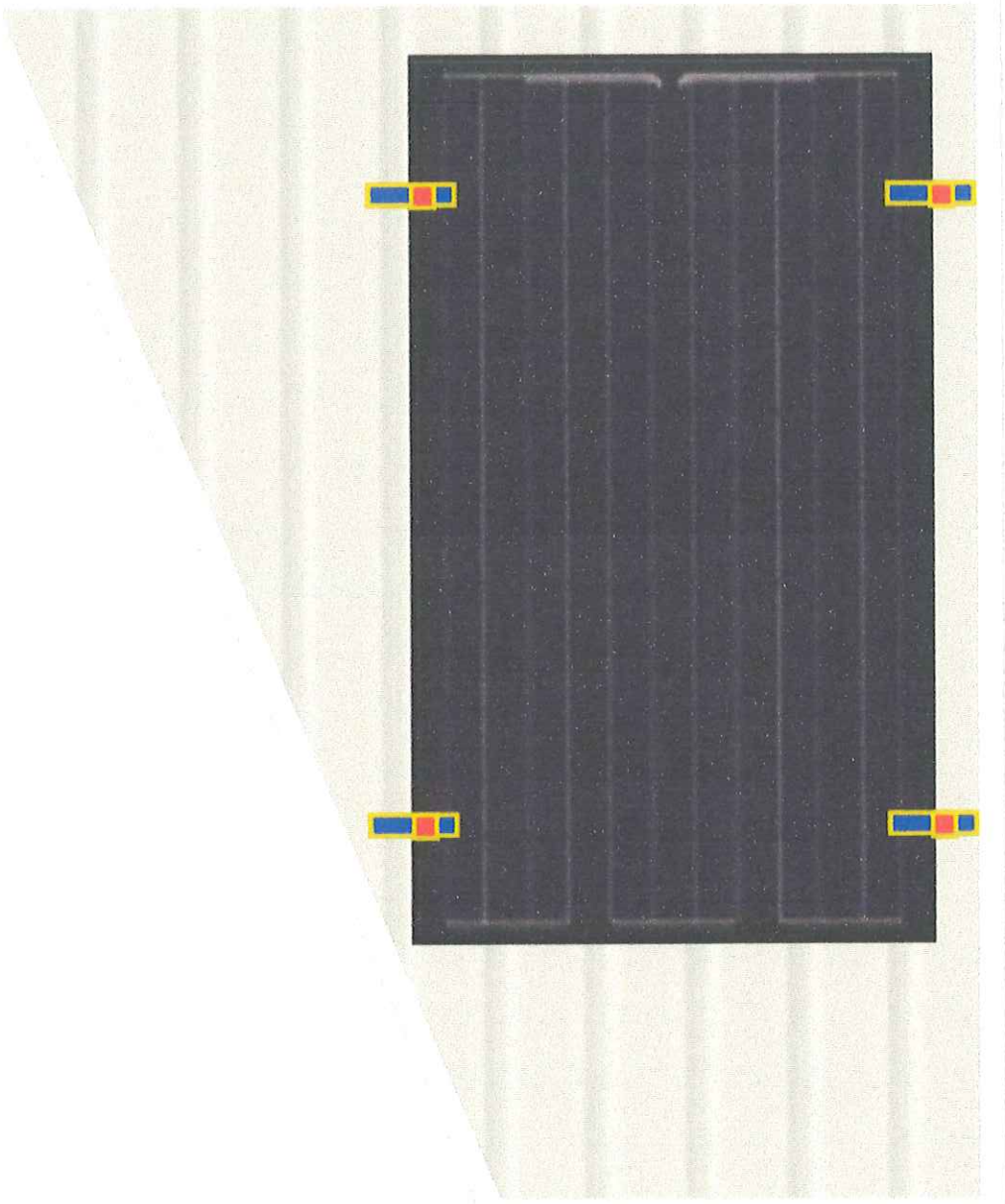
paradisepower

Roof Layout

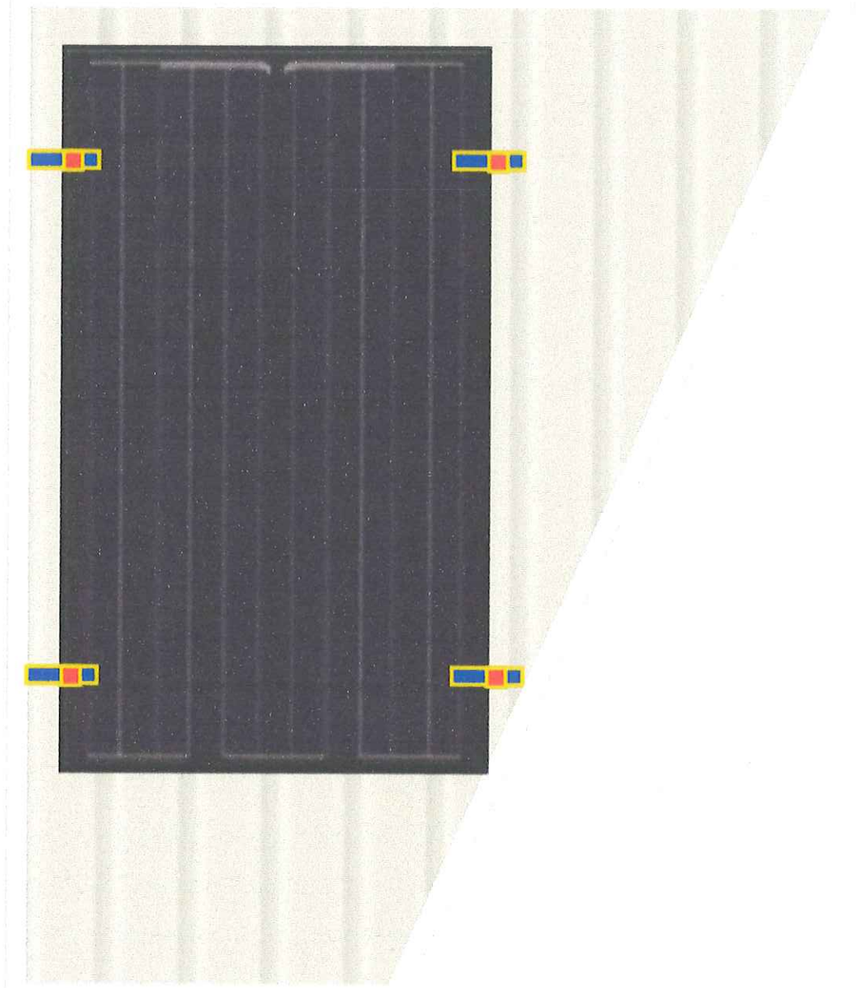
Roof 1



Roof 2



Roof 3



Component list

Item	Quantity
 Q Cells 340W All Black Split Cell Mono solar panel	11
 SolarEdge 3680 HD Wave - Screenless SETAPP inverter	1
 Emlite ECA2 Single Phase Meter	1
 Label sheet	1
 Rail bolt for fastensol rails	10
 SolarEdge Wattnode Modbus Meter with 100A CT Clamp	1
 SolarEdge Wifi Antenna for SETAPP inverters	1
 AC isolator - KN Newbury 20A 4-pole	2
 SolarEdge Optimiser P370	11
 Pair of MC4 connectors	2
 50m reel of 4mm2 solar cable	1
 Metasole flat channel (portrait)	28
 Renusol end clamp (black)	12
 Renusol mid clamp (black)	16

Inverter Compatibility

SolarEdge 3680 HD Wave - Screenless SETAPP

Panels		Inverter	
PV power:	**3740 W**	Rated AC output	**3680 W**

✓ The inverter rated output is 2 percent less than the maximum power of the array. However, a small amount of underdimensioning is normal, and there will be little loss of power.

String 1: 11 Q Cells 340W All Black Split Cell Mono solar panels with P370 optimiser

Panels		Optimiser	
PV power:	**340 W**	Rated input power	**370 W**
Open circuit voltage at -10° C	**46 V**	Max DC voltage	**60 V**
V_{mpp} at 40° C:	**32 V**	V_{mpp} lower limit	**8.00 V**
V_{mpp} at -10° C:	**38 V**	V_{mpp} upper limit	**60 V**
I_{mpp} at 25° C:	**10.07 A**	Max DC input current	**11 A**

String			
Total string power	**3740 W**	Max string power	**5250 W**
String length	**11**	Permitted string lengths	**8/25**

✓ The maximum expected current from the panel is **10.58A**, which is suitable for this optimiser

✓ The maximum expected power output of the panel is **340W**, which is suitable for this optimiser

✓ The maximum open circuit voltage of the panel is **46V**, which is suitable for this optimiser

✓ The maximum power point voltage of the panel is **33.94V**, which is within the correct range for this optimiser

✓ The string power output is less than the maximum input for this inverter.

✓ This string contains 11 optimisers.

Electrical

SolarEdge 3680 HD Wave - Screenless SETAPP

AC isolator

A AC isolator - KN Newbury 20A 4-pole has been specified for this inverter

- The rated isolator current (20A) is greater than the rated inverter current (16A)
- The isolator is suitable for use on a single phase inverter.

Input 1

DC isolator

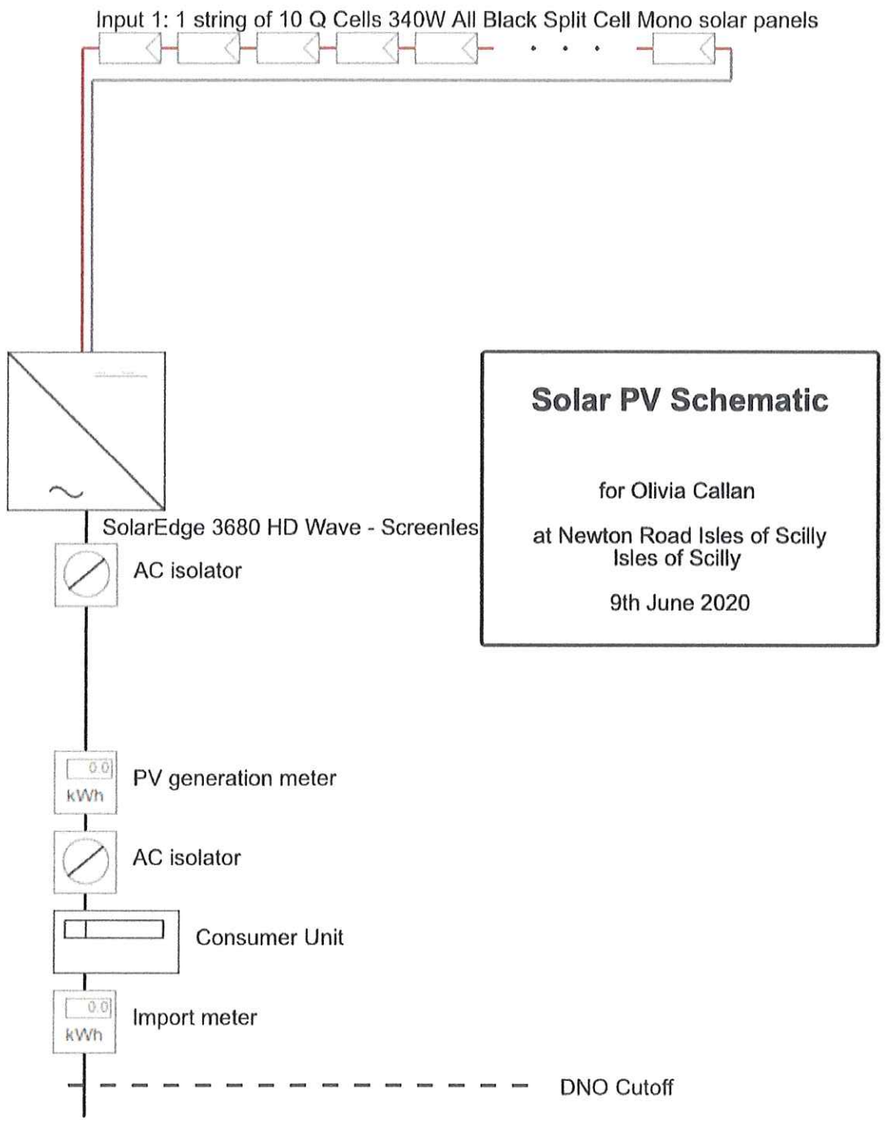
- This inverter contains an integrated DC Isolator.

Cable

10m of 4mm2 solar cable has been specified

- Voltage drop at maximum power point at 40°C will be around **0.85 V (0.22** percent)

Schematic diagram



Annual Output Performance Estimate

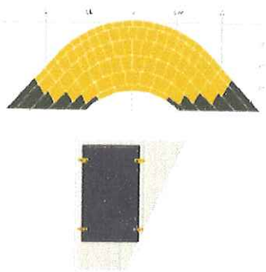
Site Details	
Client	Olivia Callan
Address	Newton Road Isles of Scilly Isles of Scilly TR23 0PR
Postcode zone	Zone 4

The sunpath diagram shows the arcs of the sky that the sun passes through at different times of the day and year as yellow blocks. The shaded area indicates the horizon as seen from the location of the solar array. Where objects on the horizon are within 10m of the array, an added semi-circle is drawn to represent the increased shading. Blocks of the sky that are shaded by objects on the horizon are coloured red, and a shading factor is calculated from the number of red blocks.

The performance of the solar array is calculated by multiplying the size of the array (kWp) by the shading factor (sf) and a site correction factor (kk), taken from tables which take account of the geographical location, orientation and inclination of the array.

Inverter 1: SolarEdge 3680 HD Wave - Screenless SETAPP

String 1 - shading group 1



A: Installation data	
Installed capacity	3.740 kWp
Orientation	-90°
Inclination	20°
B: Calculations	
kWh/kWp (kk)	891
Shade factor (sf)	1.00
Estimated output	3332 kWh

The performance of solar PV systems is impossible to predict with certainty due to the variability in the amount of solar radiation (sunlight) from location to location and from year to year. This estimate is based upon the standard MCS procedure and is given as guidance only. It should not be considered a guarantee of performance.

The shade assessment has been undertaken using the standard MCS procedure. It is estimated that this method will yield results within 10% of the actual annual energy yield for most systems.

Structural calculations

Roof 1

Weight loading calculation

The total weight of the solar panels and mounting components is **215.76 kg**. Assuming this is spread evenly over the area that the solar panels cover (**17.92 m²**), the loading imposed by the solar PV array is **12 kg/m²**, or **0.12** kN/m².

The existing dead load on the roof from the roof covering is **35 kg /m²**, or **0.34 kN/m²**.

If we factor in an imposed load of ${results.imposedLoad} kN/m², then the percentage increase in loading due to the installation of the solar array becomes

100 x ((0.12 + 0.34 + 0.75) / (0.34 + 0.75) - 1) = **11%**

For a traditional cut roof with rafters and purlins we recommend also using our rafter calculator to check the load-bearing capacity of the rafters. Even if the increase in loading is more than 15% the rafters may well be able to take the additional weight.

✓ An increase of less than 15% in the load imposed on a roof is not considered to be a significant change (The Building Regulations 2000, Approved Document A).

Please note that this method does not calculate the strength of the roof, and if a roof was badly constructed, does not meet existing building regulations, or is in poor condition then it may still not be appropriate to install an array.

Roof 2

Weight loading calculation

The total weight of the solar panels and mounting components is **20.14 kg**. Assuming this is spread evenly over the area that the solar panels cover (**1.79 m^2**), the loading imposed by the solar PV array is **11.2 kg/m^2**, or **0.11** kN/m^2.

The existing dead load on the roof from the roof covering is **12 kg /m^2**, or **0.12 kN/m^2**.

If we factor in an imposed load of ${results.imposedLoad} kN/m^2, then the percentage increase in loading due to the installation of the solar array becomes

100 x ((0.11 + 0.12 + 0.75) / (0.12 + 0.75) - 1) = **12.6%**

For a traditional cut roof with rafters and purlins we recommend also using our rafter calculator to check the load-bearing capacity of the rafters. Even if the increase in loading is more than 15% the rafters may well be able to take the additional weight.

✓ An increase of less than 15% in the load imposed on a roof is not considered to be a significant change (The Building Regulations 2000, Approved Document A).

Please note that this method does not calculate the strength of the roof, and if a roof was badly constructed, does not meet existing building regulations, or is in poor condition then it may still not be appropriate to install an array.

Roof 3

Weight loading calculation

The total weight of the solar panels and mounting components is **20.14 kg**. Assuming this is spread evenly over the area that the solar panels cover (**1.79** m^2), the loading imposed by the solar PV array is **11.2** kg/m^2, or **0.11 kN/m^2**.

The existing dead load on the roof from the roof covering is **12 kg /m^2**, or **0.12 kN/m^2**.

If we factor in an imposed load of ${results.imposedLoad} kN/m^2, then the percentage increase in loading due to the installation of the solar array becomes

100 x ((0.11 + 0.12 + 0.75) / (0.12 + 0.75) - 1) = **12.6%**

You should note that this method does not actually check the load capacity of the roof - it merely checks that you are not increasing the loading significantly. Calculating roof strength of trussed rafter roofs is a complicated task, and if you are unsure of the strength of the roof then it would be wise to take the advice of a structural engineer.

✓ An increase of less than 15% in the load imposed on a roof is not considered to be a significant change (The Building Regulations 2000, Approved Document A).

Please note that this method does not calculate the strength of the roof, and if a roof was badly constructed, does not meet existing building regulations, or is in poor condition then it may still not be appropriate to install an array.