BRITMET

LIGHTWEIGHT ROOFING

Installers Guide For Solar Photovoltaic

Tile Panels

1. Slate 2000 – 2.17/m2 (1260x369mm cover)
2. Ultratile – 2.18/m2 (1248x370mm cover)
3. Profile 49 – 2.08/m2 (1315x365mm cover)
4. Plaintile – 5/m2 (1250x160mm cover)

When installing the solar bracket, the gauge for the batten directly above the solar bracket batten must be reduced by 2mm.

Note: Due to the depth of the profile, Villatile, is not recommended for the solar bracket and bar.

Slate 2000:
- Min. pitch: 12°
- Max. pitch: 90°
- Cover width: 1250mm

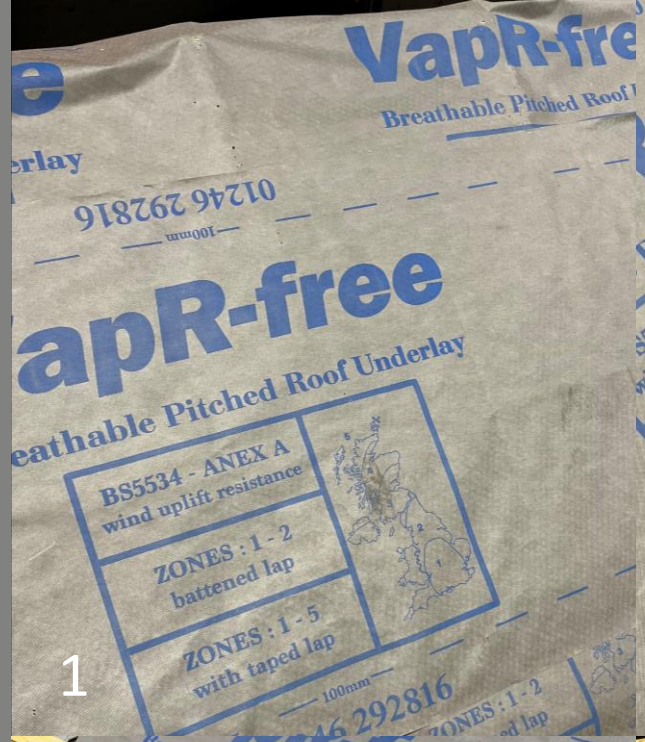
Ultratile:
- Min. pitch: 10°
- Max. pitch: 90°
- Cover width: 1248mm

Profile 49:
- Min. pitch: 10°
- Max. pitch: 90°
- Cover width: 1315mm

Plaintile:
- Min. pitch: 15°
- Max. pitch: 90°
- Cover width: 1260mm

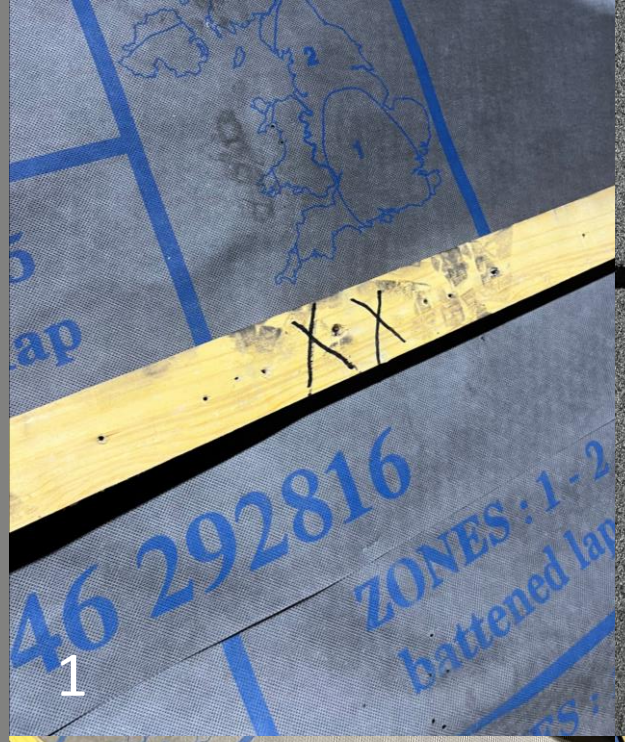
Battening

1. Install the membrane over the rafters, ensuring a natural drape.
2. Start battening from the eave. The batten gauge will be dependent on the profile of the tile panel.
3. Once the first batten, that will have the solar brackets on, has been installed, the gauge for the next batten needs to be reduced by 2mm to allow the thickness of the bracket to be covered by the tile panel.
4. Continue battening the roof, remembering to reduce the gauge on all the battens above the bracket battens.



Panels/Brackets

1. Mark along all of the solar bracket battens.
2. Install tile panels on the roof leaving the area where the solar will be positioned.
3. Offer the tile panel up to the first solar bracket batten, secure with a couple of screws or nails per panel, making sure not to penetrate the membrane below.
4. Position the brackets by each of the rafters and secure with 100mm screws, through the battens and into the rafter below (2 fixings per bracket).



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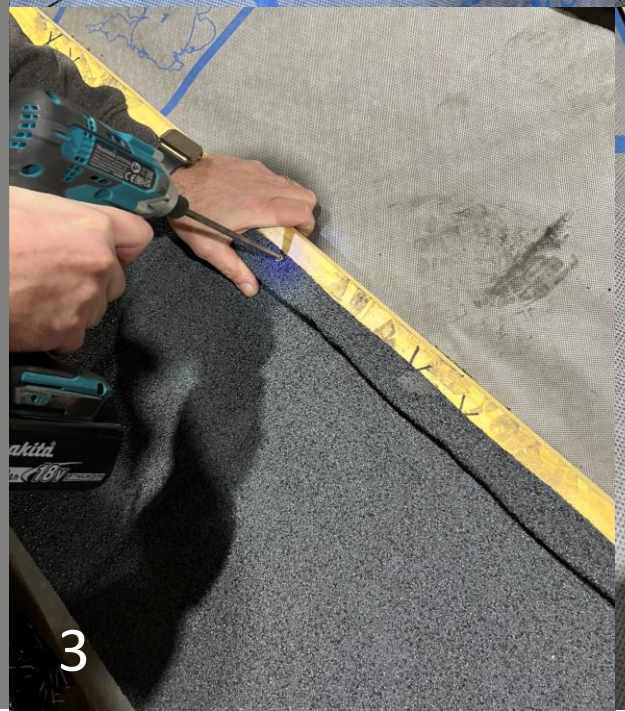
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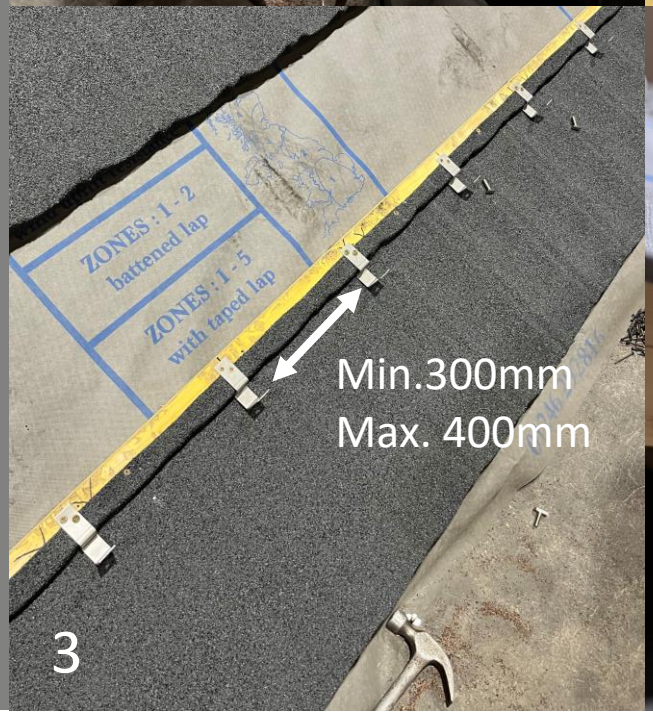
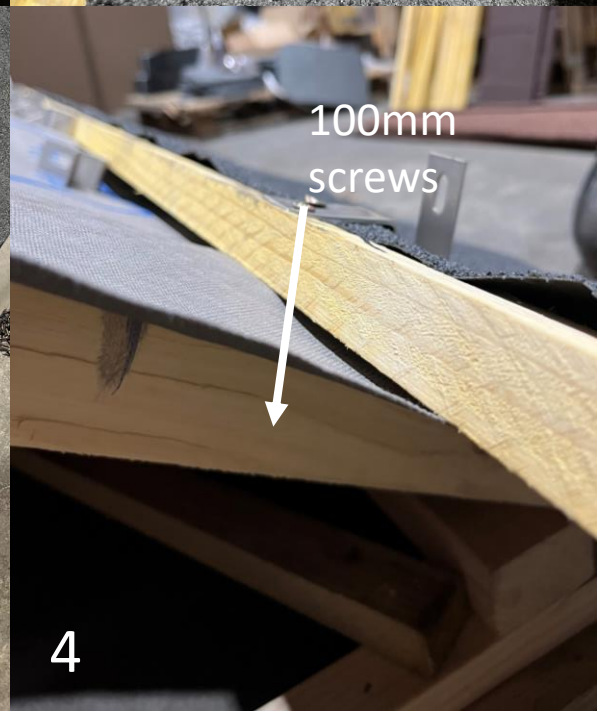
Panels/Brackets

1. The brackets must be spaced at no more than 400mm apart. Therefore, if the rafters are 600mm apart then a supporting bracket needs to be installed at the midpoint.
2. Install the supporting bracket using 30mm screws (2 fixings per bracket).
3. Repeat the install of the brackets across the relevant solar battens, covering the area that the solar panels will be installed.
4. The bracket is secured into 25mm of tile batten, then 73mm of rafter, ensuring a strong fixing point.





Panels/Brackets

1. Position the tile panels into place. The 2mm adjustment to the batten gauge will allow the panel to sit over the brackets but tight enough to fix into the battens
2. As per all the panels, secure through the downturn of the panel with 4 nails spaced out.
3. If using 0.9mm panels, then tec screws must be used.
4. To secure the bar to the bracket, the bolt nut and washers, that are provided with the system, are to be loosely put together through the hole in the bracket.

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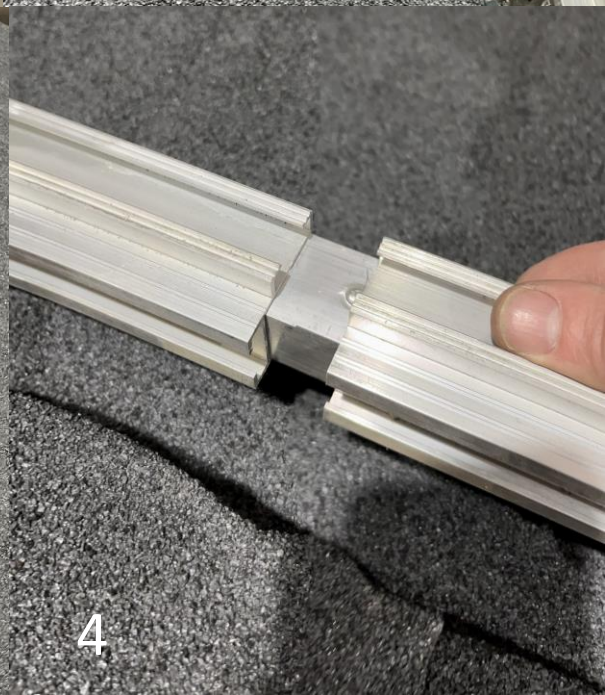
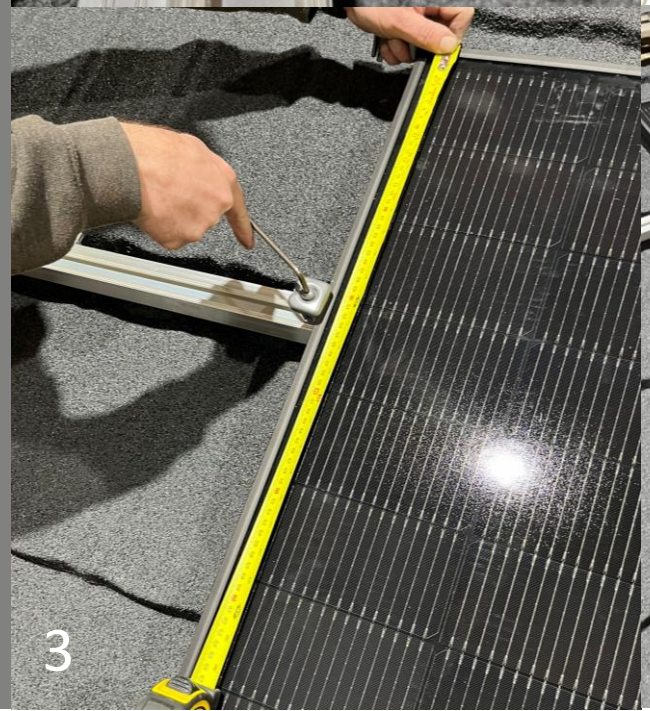
Bars

1. To install the bar, angle the bolt into the bar slot and turn through 90° to hold the bar in place, repeat for all bolts.
2. Tighten the nuts, using a spanner , wrench of power tool (m8 bolts). Place a protective plate to reduce the risk of damage to the tile below.
3. Repeat process for all bolts on all courses.
4. If the area of solar is wider than one bar, insert a connector into the first bar then slide another bar in place. The bolts on the brackets will secure the bar.



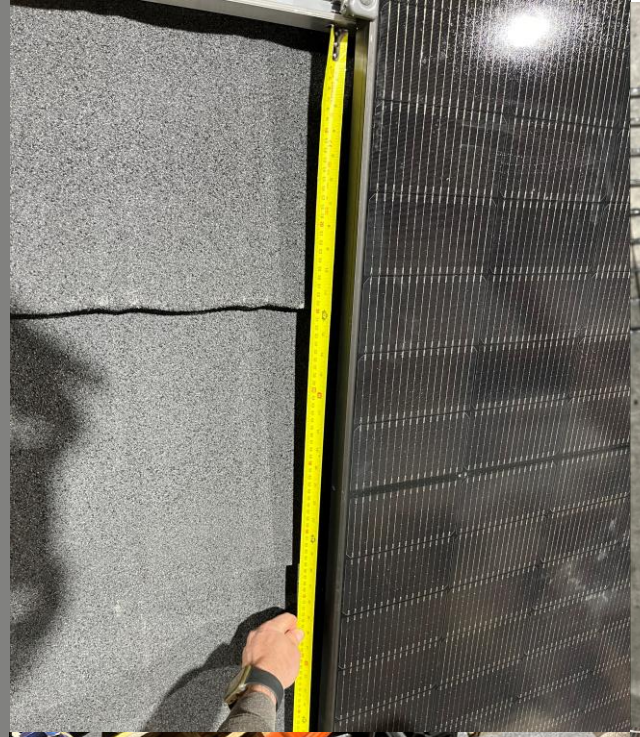
Solar Panels

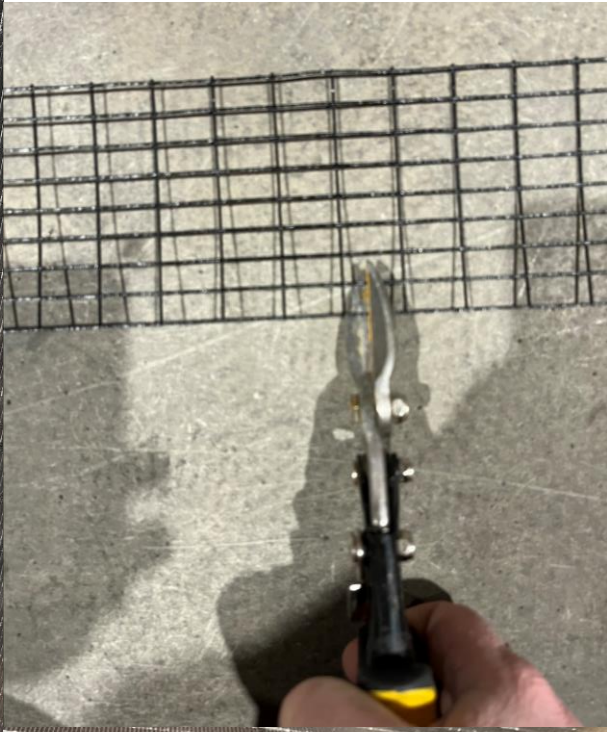
1. Slot the 4 solar fixing brackets into the top of the bars. Make sure the brackets are set wider than the solar panels.
2. Position the solar panel on to the bars and slide the solar fixing brackets up to the solar panels.
3. Measure the distance from the bar to end of the solar panel to make sure the overhang of the panel is equal at the top and bottom. Then, using the relevant allen key, tighten all brackets
4. Once the first panel is secured, other panels can be installed using the same process. The solar fixing bracket can be positioned to allow the next panel to be secured alongside the other.



Solar Mesh

1. Measure the perimeter of the solar panel between each panel clasp.
2. Measure and cut the mesh for all four pieces. Tin snips or wire cutters work best.
3. Offer the mesh to the side of the solar panels to make sure the measurement is correct.
4. The top edge of the mesh needs to be flush with the top edge of the solar panel, therefore the mesh will need to be folded outwards to fit the profile of the tile.





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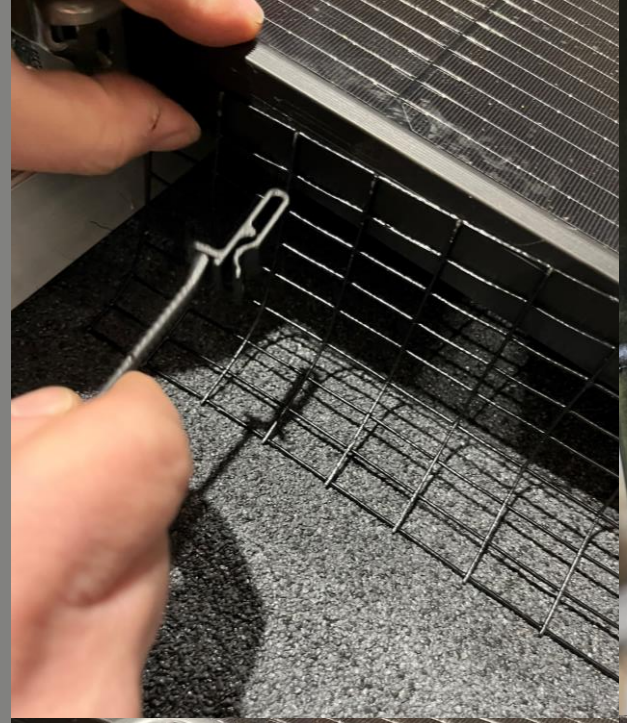

Solar Mesh

1. Where the course changes there is a vertical drop of approx. 30mm, this leaves a gap under the mesh.
2. To counter this, make a cut, using tin snips, along the top edge of the course, back to the fold of the mesh. The same can be done for the corners of solar panel, where the mesh has been folded, snip and fold round the corner.
3. Install a mesh clip by every course. Fold the mesh down so that any gaps are minimised.
4. Repeat the process to all courses on both sides of the solar panel.

Solar Mesh

1. Offer the ctop and bottom mesh into place, ensuring the right size. Bend the mesh through 90° to fit snug with the corner of the solar panel.
2. Repeat the process of folding the mesh to match the profile, insert and secure the mesh clips.
3. Secure a mesh clip close to the corner, making sure the mesh is touching the tile panels.
4. Position the clips at approx. 300mm centres across the top and bottom of the solar panel.

Note: If installing multiple panels, only use the mesh once all panels have been secured per course.