

Modernité
By CarbonFutureX® Group

ARCHITECTURAL PHOTOVOLTAIC ROOFING

SolarInn roof tiles

Traditional roof appearance. Integrated solar generation.

PRODUCT BROCHURE / SEPTEMBER 2026

modernite.co.uk

THE INTEGRATED ROOF

One roof.
Three functions.

SolarInn brings roof covering, weather protection and solar generation into one architectural surface.

01

Roof covering

An overlapping tile surface designed to form part of the building.

02

Weather surface

Protection against rain, wind, snow and everyday exposure.

03

Power generator

CdTe photovoltaic glass turns daylight into useful electricity.

INSIDE THIS COLLECTION

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ARCHITECTURE, WITH ENERGY WITHIN

A familiar roofline. A different purpose.

SolarInn integrates photovoltaic glass into the rhythm of the roof. Four tile formats and a coordinated palette support traditional homes, contemporary buildings and carefully considered renovations.



Architectural visualisation from the Modernité collection.

01 / FORM

A continuous surface

Low-profile tiles preserve the visual order of the roof, with cabling concealed beneath the weathering layer.

02 / DETAIL

Integrated by design

Matching ridge, hip, verge and eaves components help resolve the roof as one coordinated system.

Private Residence, Cheshire



Website reference project. Architectural visualisation.

A traditional British detached house with an overlapping photovoltaic roof, specified in dark grey and installed on timber battens.

120	12.6	11,690
m²	**kWp**	**kWh / year**
Active roof area	Installed capacity	Published annual generation

Figures are reproduced from the published Modernité project example. Annual generation is project-specific and is not a forecast for every installation.

CHOOSE YOUR ARCHITECTURAL LANGUAGE

Four formats. One roof system.



01

Windsor Broad

37 Wp / tile



02

Cotswold Slate

18 Wp / tile



03

Yorkshire Longspan

76 Wp / tile



04

Highland Shingle

29 Wp / tile

All dimensions are in millimetres. Model powers and sizes follow the current product website; output varies with the specified colour and construction.

THE COLLECTION / 01

Windsor Broad

A broad, balanced rhythm



37

Wp / tile

Published nominal peak power



A generous rectangular format creates a calm, regular roofscape. Windsor Broad combines an established tile proportion with an integrated photovoltaic surface.

CdTe module size	Overall tile size
600 × 400 mm	670 × 480 mm

Dimensions and peak power follow the current product website. Select the final colour, finish and electrical configuration with the Modernité team.

Cotswold Slate

A refined slate proportion



18

Wp / tile

Published nominal peak power



The smaller Cotswold format brings a finer texture to the roof. Its compact proportions offer another architectural choice when setting out the tile layout.

CdTe module size	Overall tile size
300 × 400 mm	370 × 480 mm

Dimensions and peak power follow the current product website. Select the final colour, finish and electrical configuration with the Modernité team.

Yorkshire Longspan

A strong horizontal line



76

Wp / tile

Published nominal peak power



The longest format in the collection creates broad horizontal bands, bringing a distinctly linear expression to the roof surface.

CdTe module size	Overall tile size
1200 × 400 mm	1250 × 450 mm

Dimensions and peak power follow the current product website. Select the final colour, finish and electrical configuration with the Modernité team.

Highland Shingle

A slender shingle expression



29

Wp / tile

Published nominal peak power



Highland Shingle introduces a slim horizontal proportion and closely spaced courses for a finely layered architectural finish.

CdTe module size	Overall tile size
800 × 240 mm	840 × 290 mm

Dimensions and peak power follow the current product website. Select the final colour, finish and electrical configuration with the Modernité team.

The tile, in detail

Laminated photovoltaic glass sits within a coordinated roof-tile assembly. Black and coloured finishes use different glass build-ups.

Construction	Black tile	Coloured tile
Glass build-up	3.2 CdTe + 0.5 EVA + 3.2 mm	3.2 + 0.5 EVA + 3.2 CdTe + 0.5 EVA + 3.2 mm
Nominal glass thickness	6.9 mm	10.6 mm
Glass type	Laminated glass	Laminated glass

TILE ASSEMBLY DIMENSIONS

Series	Depth	Black / colour weight
Windsor Broad	33 mm	6.5 / 8.5 kg
Cotswold Slate	33 mm	3.5 / 4.5 kg
Yorkshire Longspan	44 mm	11.5 / 15.4 kg
Highland Shingle	44 mm	4.5 / 6.1 kg

Nominal physical data are provided for reference. Confirm the selected glass build-up, assembly depth and weight in the project specification.

COLOUR COLLECTION

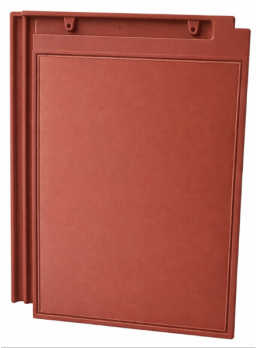
Colour, considered

Coordinate the photovoltaic roof with masonry, landscape and the surrounding roofscape.



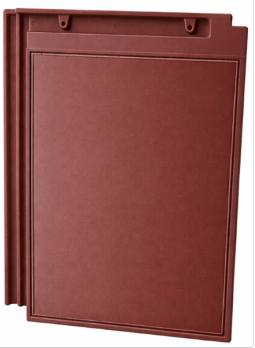
Terracotta

RAL 8004



Brick Red

RAL 3011



Burgundy

RAL 3009



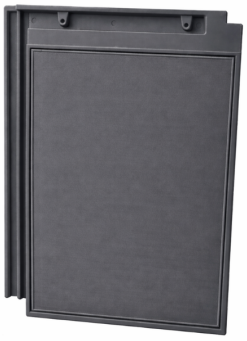
Silver Grey

RAL 9006



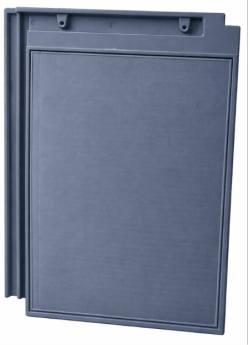
Dusty Grey

RAL 7040



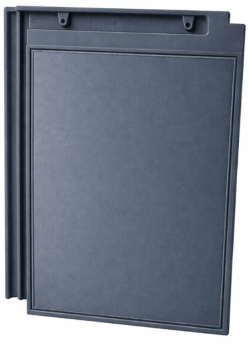
Graphite Grey

RAL 7024



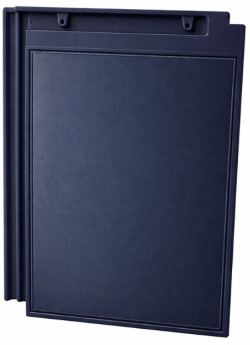
Blue Grey

RAL 7031



Steel Blue

RAL 5011



Night Blue

RAL 5022

Also available: All Black

Colours are illustrative. Confirm the finish and colour-specific power using a physical sample.

TEXTURED SLATE COLLECTION

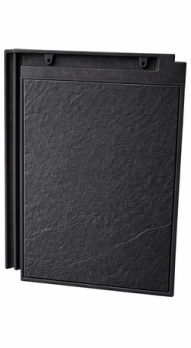
Texture with depth

Slate-inspired finishes extend the architectural palette with a distinctive surface texture.



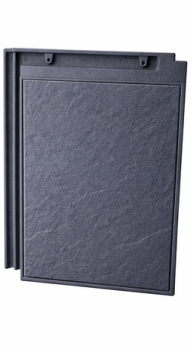
Graphite Slate

RAL 7024



Slate Black

RAL 9005



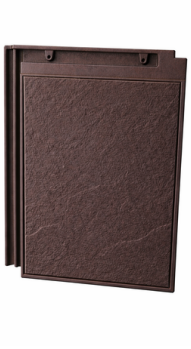
Slate Blue Grey

RAL 5011



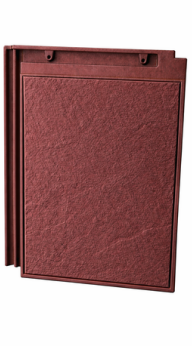
Natural Slate Grey

RAL 7031



Slate Brown

RAL 8019



Slate Oxide Red

RAL 3009



Silver Slate

RAL 9007



Ocean Slate Blue

RAL 5022



Volcanic Slate

RAL 7021

Confirm textured-finish availability, colour and output for the selected tile format. Physical samples govern the final appearance.

ENGINEERED FOR EUROPEAN LIGHT

Productive beyond direct sunshine

Thin-film CdTe photovoltaics continue generating under diffuse daylight, making the roof an active surface under a wider range of sky conditions.



MODERNITÉ PUBLISHED REGIONAL COMPARISON

+25-30%	**Northern & North-Western Europe** Published CdTe annual-yield advantage
around +20%	**Central Europe** Published CdTe annual-yield advantage
+6-14%	**Southern regions** Published CdTe annual-yield advantage

Indicative manufacturer comparison with mono-crystalline silicon, as published on the product website. Actual results depend on the product, location, orientation, shading and operating temperature.

FROM ROOF DESIGN TO ENERGY OUTPUT

The whole roof sets the opportunity

Energy yield begins with a considered layout. Tile format, usable roof area, colour and orientation work together to determine the installed capacity and annual output.



Roof integration shown in the Modernité portfolio.

01

Use the roof

Set out tile courses around rooflights, chimneys and junctions.

02

Model the yield

Account for orientation, shading and the chosen colour.

03

Plan the use

Coordinate generation with household demand and storage.

Project economics depend on the roof scope, installation cost, energy tariffs and self-consumption. Request a project-specific yield and quotation.

WEATHER & DURABILITY

Designed as a building envelope

Current performance information published for the SolarInn roof-tile system.

GENERATION

27.8 Wp

Grey tile reference

IEC 61215 certified

DOWNWARD LOAD

3,600 Pa

Tested design load: up to

Building-envelope loading

WIND UPLIFT

1,600 Pa

Published uplift test

IEC 61215 / IEC 61730

FIRE

Class A

UL 790 fire rating

Published roof-tile classification

HAIL

25 mm

Ice-ball impact test

IEC 61215-2:2021

RAIN

Weatherproof

Designed for wind-driven and deluge rain

PD CEN/TR 15601:2012

The 27.8 Wp grey-tile figure is a separate website reference and is not assigned to every format. Confirm the tested model, assembly and applicable reports for the project.

ENVIRONMENTAL QUALIFICATION

Performance over time

Published environmental test conditions and design targets, separated for clarity.

TESTED / QUALIFIED

Exposure	Published condition	Reference
UV resistance	60 kWh/m² UV dose at 60 ± 5°C	IEC 61730-2:2023 MST 54
Humidity-freeze	10 cycles	IEC 61730-2:2023 MST 52
Damp heat	200 h	IEC 61730-2:2023 MST 53
Thermal cycling	50 cycles; ≥10 min dwell at high / low temperatures	IEC 61215-2:2021 / IEC 61730-2:2023 MQT 11 / MST 51
Temperature range	-40°C to +70°C	IEC 61730-1:2023

CERTIFICATION & CONFORMITY

ISO 9001 · UKCA · CE · MCS · TÜV Rheinland · cTUVus

Marks shown on the Modernité website. Applicability is subject to the relevant company or product certificate and its scope.

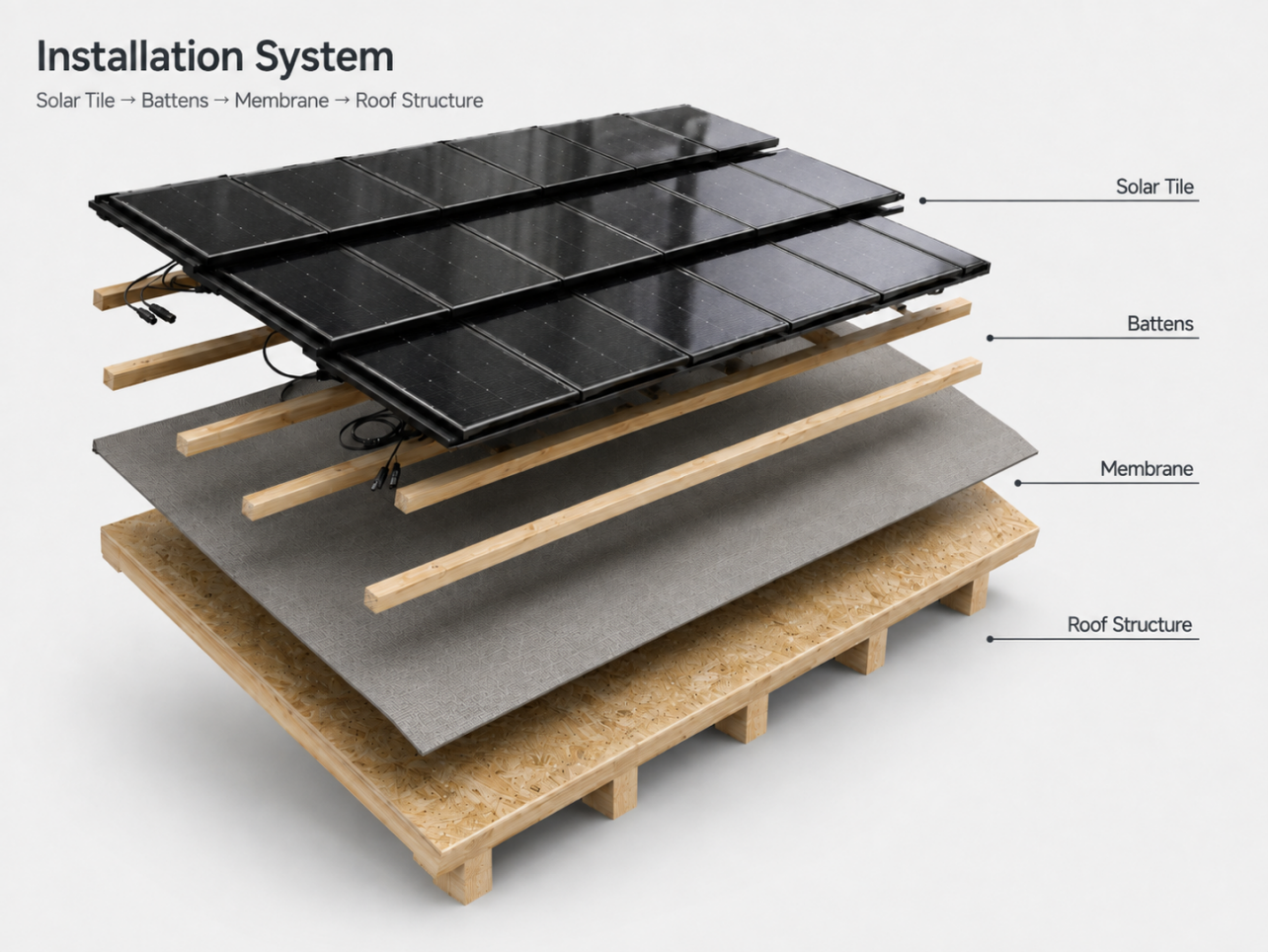
DESIGNED / TARGETED

Design consideration	Published basis
Corrosion protection	Minimum C2 atmospheric corrosivity; ISO 9224:2012
Salt-mist resistance	Design target: IEC 61701:2020
Ammonia resistance	Design target: IEC 62716:2013

INSTALLATION SYSTEM

Built like a roof. Powered like solar.

The current website configuration places solar tiles on timber battens, with electrical cabling concealed beneath the tile layer.



01 **Solar tile**

Integrated photovoltaic weathering layer.

02 **Timber battens**

Direct tile support and installation interface.

03 **Breathable membrane**

Secondary weather protection beneath the tiles.

04 **Roof structure**

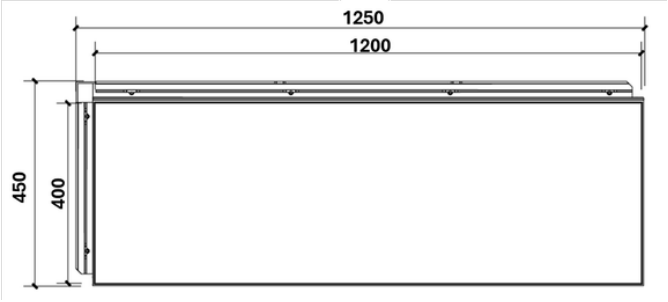
Conventional structural roof build-up.

Schematic overview. Fixings, ventilation, weathering and electrical design are coordinated for each project.

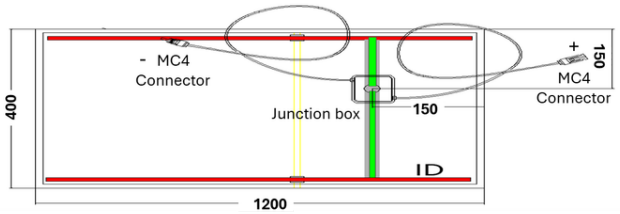
A coordinated layout

Reference arrangement illustrated with the Yorkshire Longspan format.

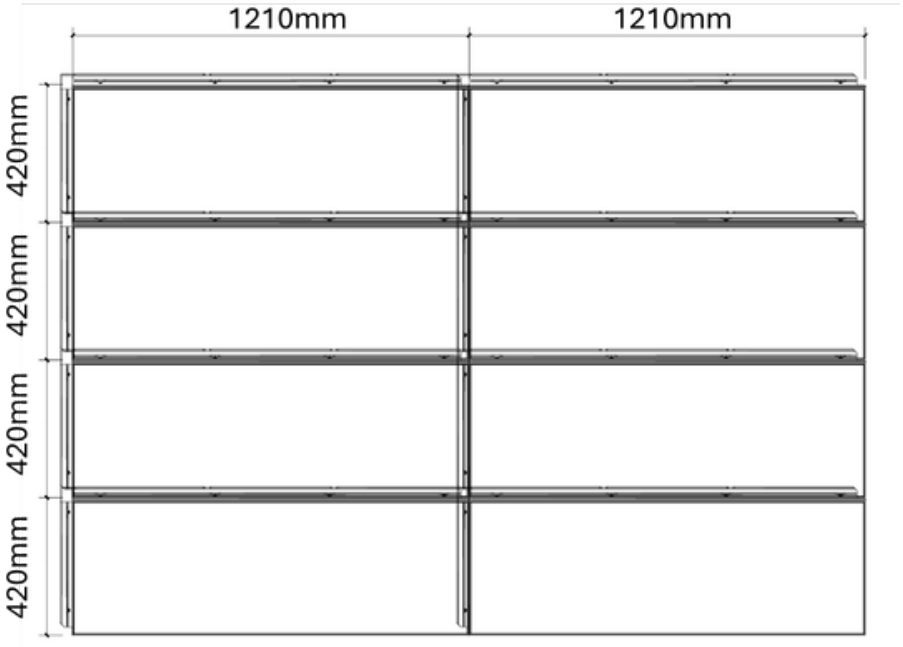
SUN-FACING SURFACE



REAR-FACING SURFACE



GENERAL ARRANGEMENT / ROOF TILE ARRAY

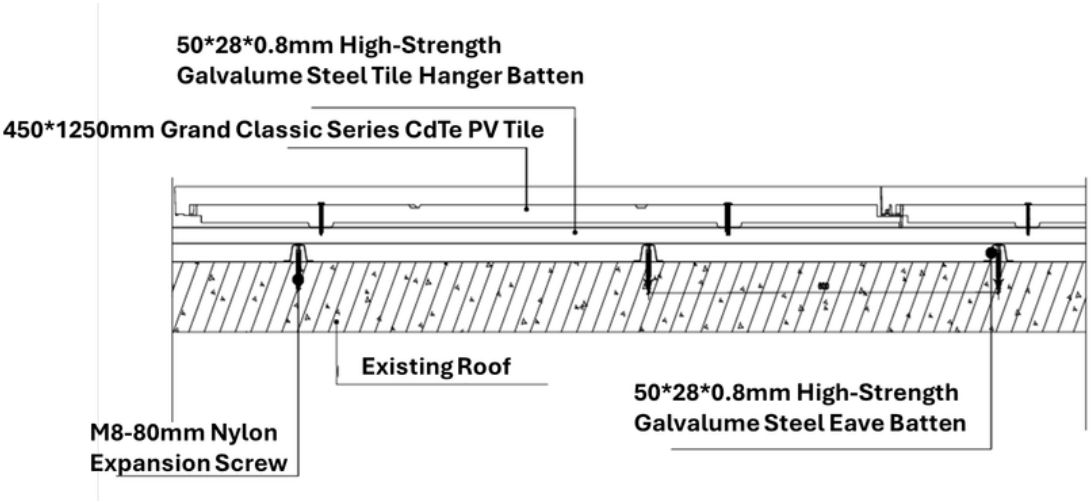


All drawing dimensions are in millimetres. Reference information only: confirm the selected format, lap, fixing positions and cable routing in project drawings.

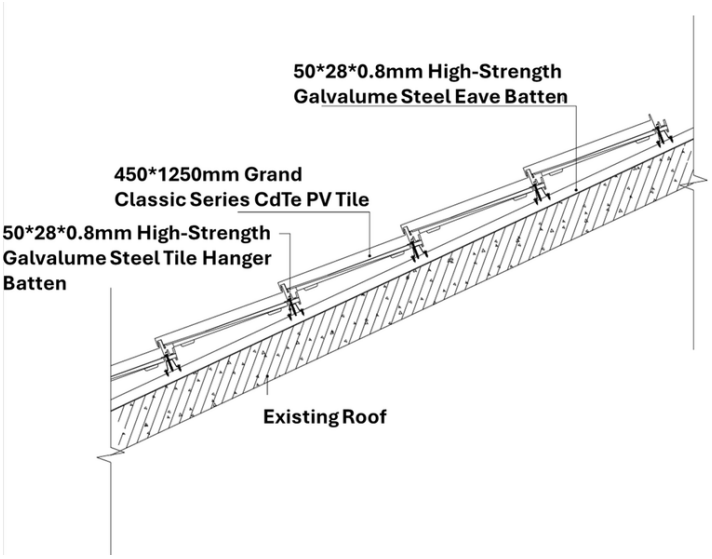
The layers beneath

Typical roof sections from the SolarInn technical collection.

CROSS-SECTIONAL VIEW



LONGITUDINAL-SECTIONAL VIEW

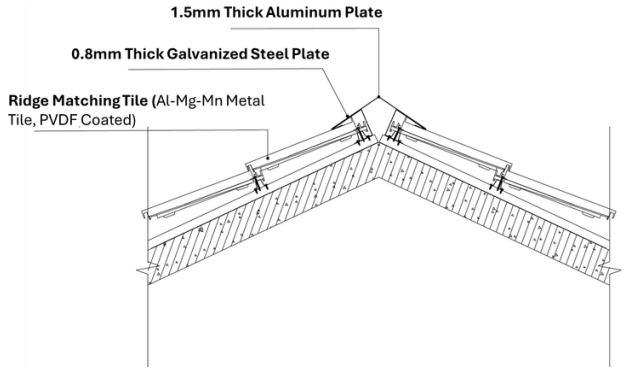


These source drawings show a metal-batten configuration. The current website timber-batten concept is shown on page 17. Use project-specific approved details for installation.

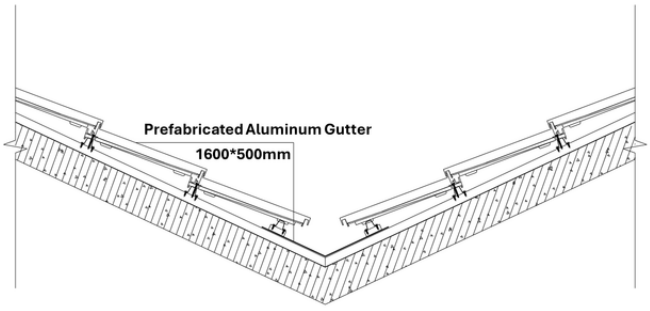
Continuity at every edge

Ridge, valley, eaves and wall connections complete the roof envelope.

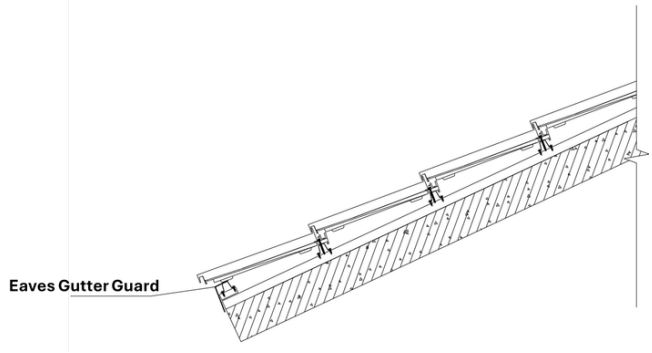
RIDGE



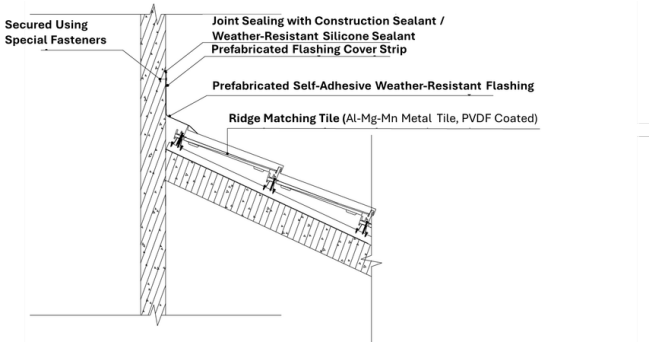
VALLEY



EAVES

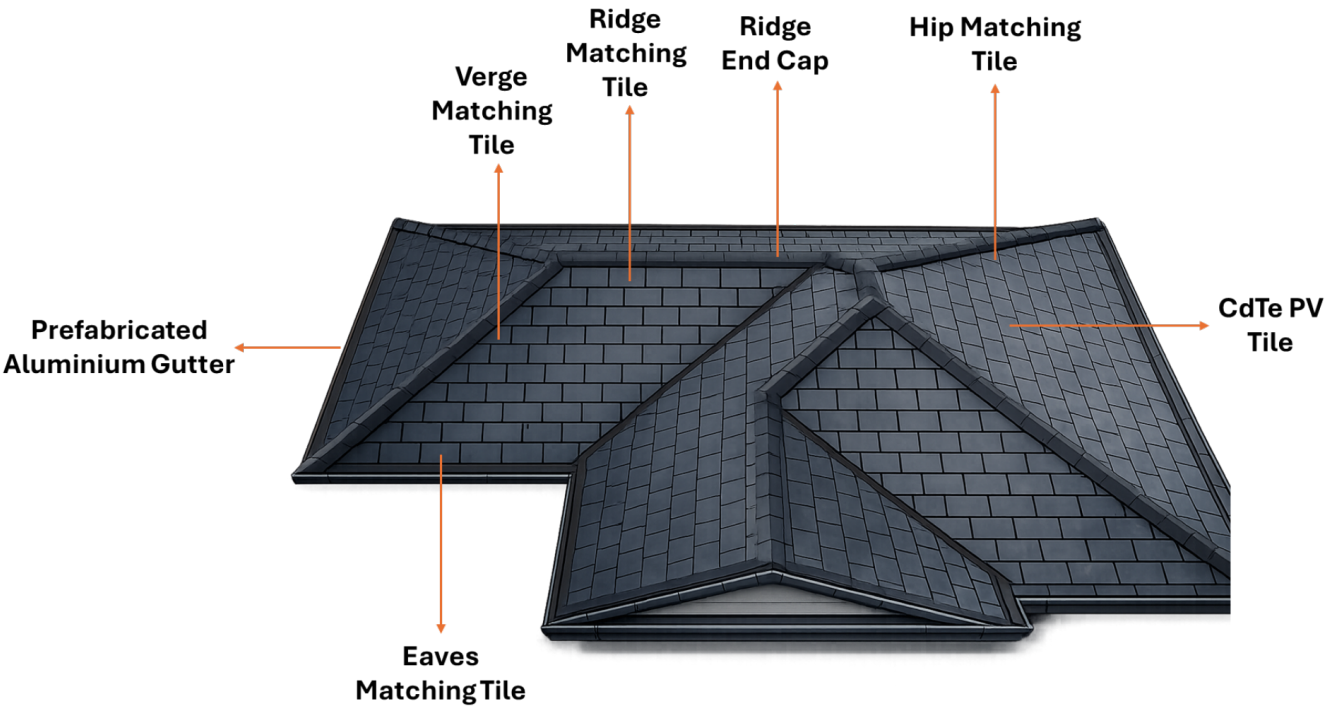


WALL ABUTMENT



Reference junction details; metal-batten variants are illustrated. Dimensions, flashing, drainage and interfaces require confirmation for the chosen roof build-up.

Resolve the roof as one system



Roof components shown schematically.

Component	Role in the roof system
PV roof tiles	Active photovoltaic weathering surface
Ridge & hip pieces	Coordinated upper-roof junctions
Verge & eaves pieces	Matching perimeter detailing
Ridge end caps	Closure of ridge terminations
Gutters & flashings	Rainwater management and weathering interfaces
Battens & counter battens	Support layout to the specified roof build-up

ARCHITECTURAL INSPIRATION

British roofscapes

From village homes to rural conversions, an integrated solar roof can form part of a familiar British architectural language.



Village rooflines



Rural living



The roofing detail

Traditional materials, considered proportions and a continuous photovoltaic surface create a roof that belongs to its setting.

AI-generated architectural visualisations illustrating British settings. Not photographs of completed projects.

YOUR PROJECT

Start with your roof

Share the information below so the Modernité team can develop the roof layout, discuss the product specification and prepare a tailored quotation.

01 **The building**

Project location, building type, new build or re-roofing, and intended programme.

02 **The roof**

Plans, pitch, orientation, dimensions, photographs, chimneys, rooflights and shading.

03 **The finish**

Preferred tile format, colour, texture and matching perimeter details.

04 **The energy brief**

Electricity demand, battery or EV requirements, and the proposed grid connection.

05 **The specification**

Roof structure, support system, relevant test reports, installation details and maintenance access.

Discuss a layout. Request samples. Define your solar roof.



Modernité
By CarbonFutureX® Group

Create your solar roofscape

Architectural roof tiles with integrated solar generation.

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Explore SolarInn