

Modernité
By CarbonFutureX® Group

SEMI-TRANSPARENT PHOTOVOLTAIC BALUSTRADES

Solar Railing

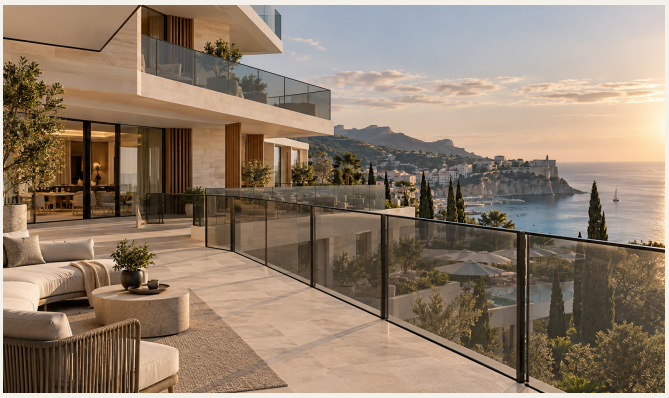
An outlook with more to offer.

Safety glazing, open views and solar electricity.
An architectural system for balconies, terraces and walkways.

DESIGNED FOR MODERN BUILDINGS

A place for solar, in every outlook.

Semi-transparent photovoltaic glass brings energy generation to everyday architecture, from private balconies to shared outdoor spaces.



01 Hotels & resorts

Guest balconies, terraces and rooftop spaces with a premium architectural finish.



02 Residential balconies

Energy-generating balustrades for apartments and private residences.



03 Commercial buildings

Integrated solar railings for offices and mixed-use developments.



04 Walkways & public spaces

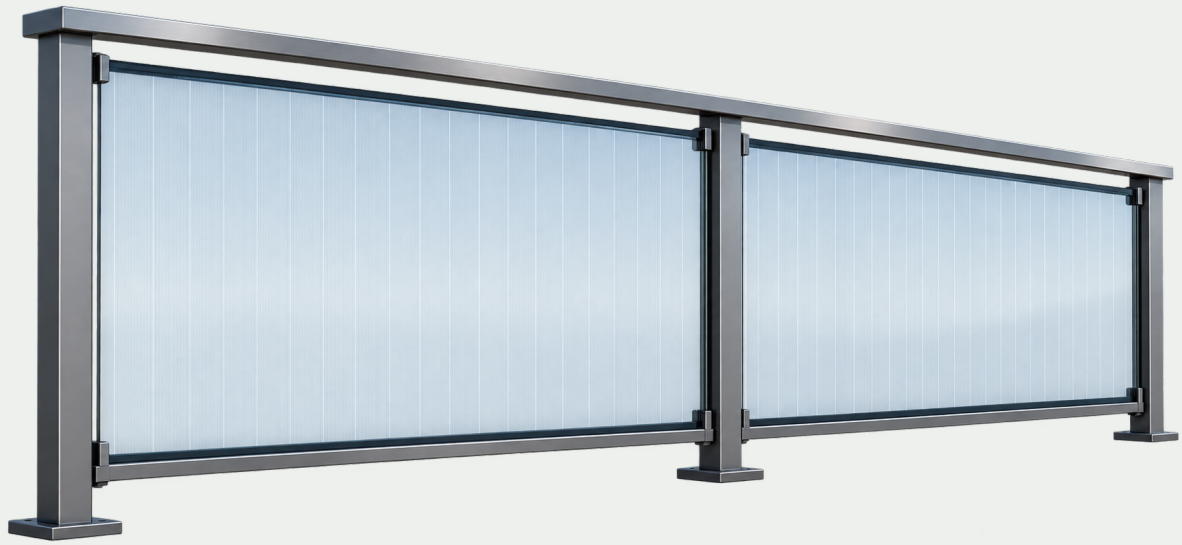
Solar barriers for elevated walkways, bridges and public terraces.

Architectural visualisations from the Modernité product website.

THE INTEGRATED SYSTEM

More than a railing.

Photovoltaic technology, architectural safety glazing and discreet electrical detailing, designed as one complete system.



Illustrative framed system. Final detailing is project-specific.

01 ## Clean energy

Exposed vertical surfaces become a source of solar electricity.

02 ## Open views

Semi-transparent glass maintains daylight and a visual connection outdoors.

03 ## Integrated safety

Laminated and toughened photovoltaic glass for architectural railing applications.

04 ## Refined detailing

Electrical connections and cabling can be concealed within the railing frame.

STRUCTURAL SPECIFICATION

Engineered for protection.

Laminated and toughened photovoltaic glass, continuously retained in a four-sided aluminium frame with a minimum effective glass bite of 10 mm.

6T BUILD

18.24 mm

6T + 1.52 PVB + 3.2 CdTe + 1.52 PVB + 6T

8T BUILD

22.24 mm

8T + 1.52 PVB + 3.2 CdTe + 1.52 PVB + 8T

PUBLISHED UNIFORM LOAD VALUES

Panel size	6T BUILD		8T BUILD	
	Design	Verification	Design	Verification
1200 × 1600 mm	±2.40	±3.60	±3.60	±5.40
800 × 1200 mm	±3.60	±5.40	±5.40	±8.10

All load values in kPa. Panel dimensions follow the website reference.

1.50 kN/m

Barrier line load

10 mm

Minimum glass bite

1(B)1

EN 12600 impact target

Design and verification values are subject to panel support, fixing conditions and project-specific engineering approval. The EN 12600 classification is stated as a target. Confirm the applicable assembly and supporting documentation for each project.

Glass build-up dimensions are in mm. T = toughened glass; PVB = interlayer; CdTe = photovoltaic glass.

ENERGY FROM VERTICAL SURFACES

The right outlook for solar generation.

Balconies and terraces create opportunities to harvest sunlight beyond the roof. Orientation shapes both the annual yield and when electricity is generated.



Architectural visualisation

30% TRANSPARENCY / UK ANNUAL AVERAGE

EAST

64

kWh/m²/year

Morning generation

SOUTH

89

kWh/m²/year

Highest annual yield

WEST

64

kWh/m²/year

Afternoon generation

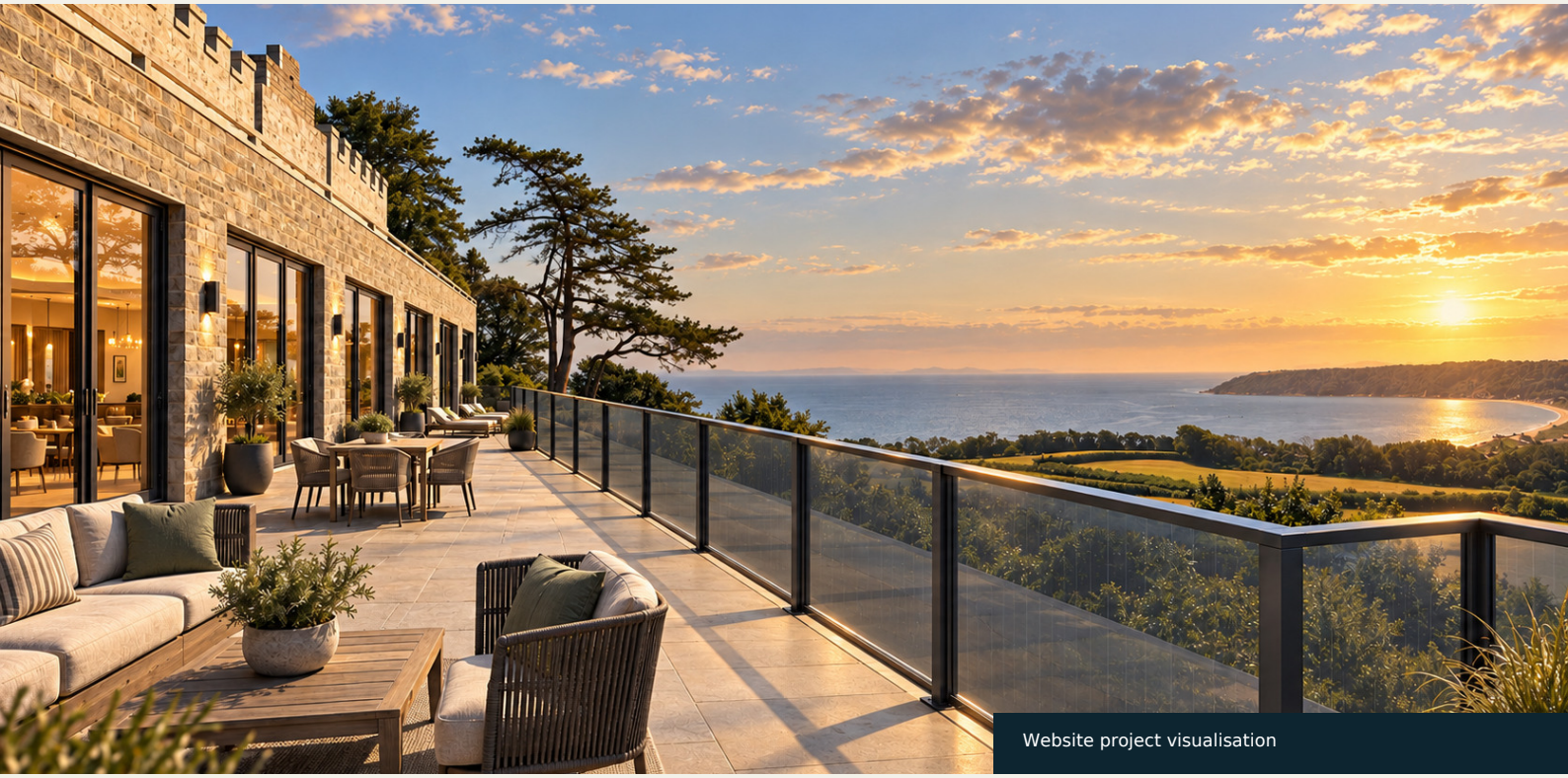
East- and west-facing railings can support morning and late-afternoon demand, while south-facing systems provide the strongest annual yield in the published UK comparison.

Indicative website figures. Actual yield varies with location, shading, orientation and system design.

UK PROJECT REFERENCE

Hotel balcony retrofit, Swansea.

A semi-transparent solar railing system designed to replace conventional balcony glazing, with concealed connections and views kept at the centre of the design.



Website project visualisation

23	2.4	2,047
m² railing area	kWp installed capacity	kWh/year generation

Glass configuration	22 mm laminated safety PV glass
Transparency	30%
Installation	Concealed base-shoe connection system

Figures and configuration are as published for the Swansea reference. Annual generation is a project-specific published figure; it is not a guaranteed yield for other sites.

Designed for British settings.

From urban balconies to landscaped terraces, solar railings can complement the materials, character and scale of British architecture.



URBAN BALCONIES

Brick, glass and clean lines.

Semi-transparent solar glass sits naturally alongside red brick, dark metalwork and contemporary apartment design.

LANDSCAPED TERRACES

Framing a wider view.

A refined railing for stone terraces and elevated walkways, maintaining a visual connection to the surrounding landscape.



AI-generated architectural visualisations of potential UK applications.

Concept imagery; these scenes do not represent completed installations.



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YOUR NEXT PROJECT

Give your outlook a new source of energy.

Share your project location, railing dimensions, orientation and preferred glazing. Our team can help define a suitable configuration.

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modernite.co.uk/solar-railing

EXPLORE ONLINE

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