



steel
CONNECT

TOP 5 REASONS STEEL IS THE BEST FOR YOUR HOME

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STEEL BRINGS MORE BENEFITS TO YOUR HOME



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①

**SOPHISTICATED
&
MODERN
DESIGN**



MODERN CONTEMPORARY DESIGN

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MINIMALISTIC DESIGN

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COLORBOND.COM

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COLORBOND.COM

BOLDER DESIGN

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STRAIGHT LINE PROFILE

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STEEL ALLOWS FOR ORGANIC DESIGN

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STEEL IN TEXTURED FINISH

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**STEEL
IN
METALLIC
FINISH**



STEEL IN METALLIC FINISH

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STEEL IN MATTE FINISH

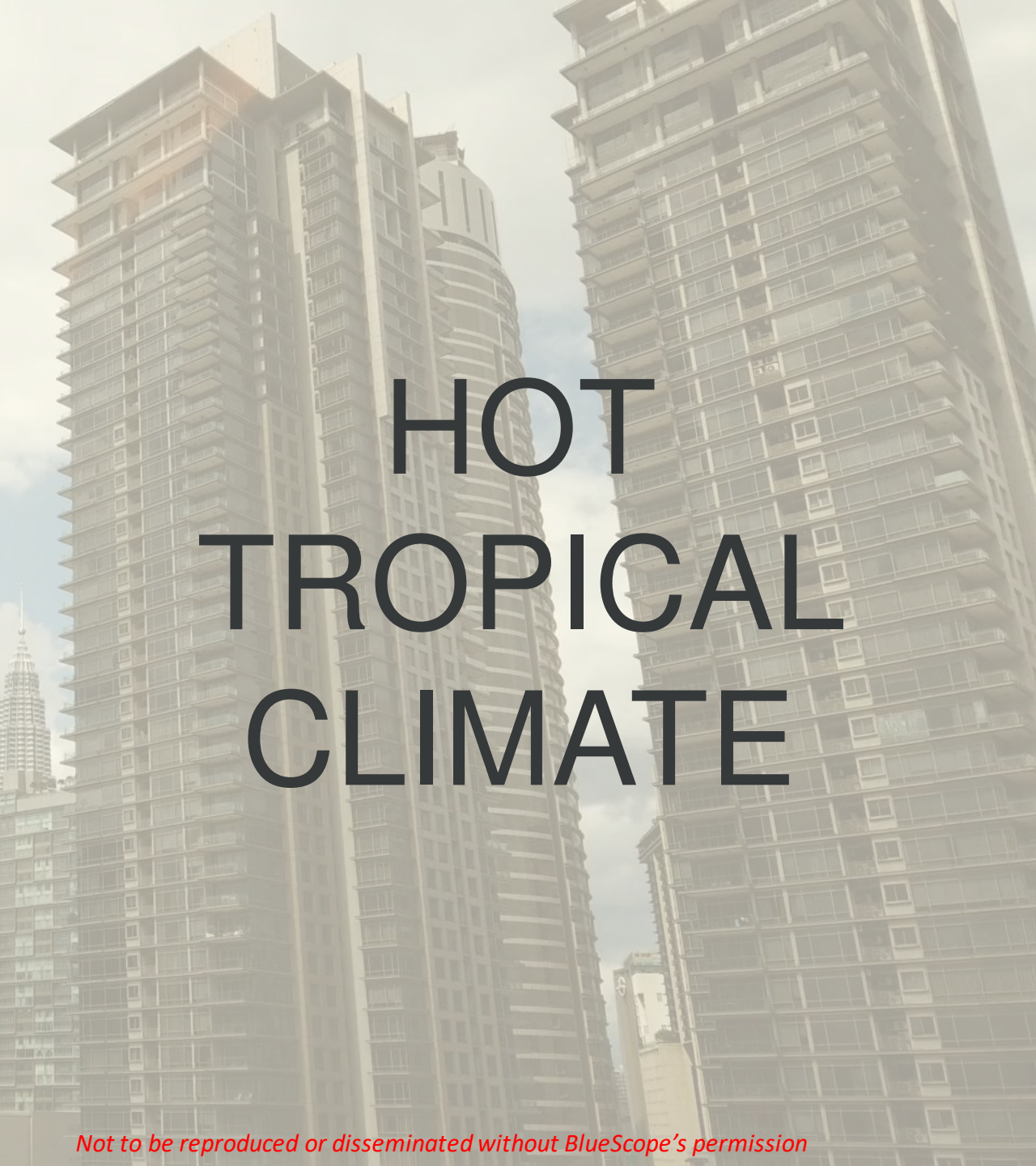
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Image by [Stephanie Pratt](#) from Pixabay

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HOT TROPICAL CLIMATE



STEEL



CONCRETE



STEEL

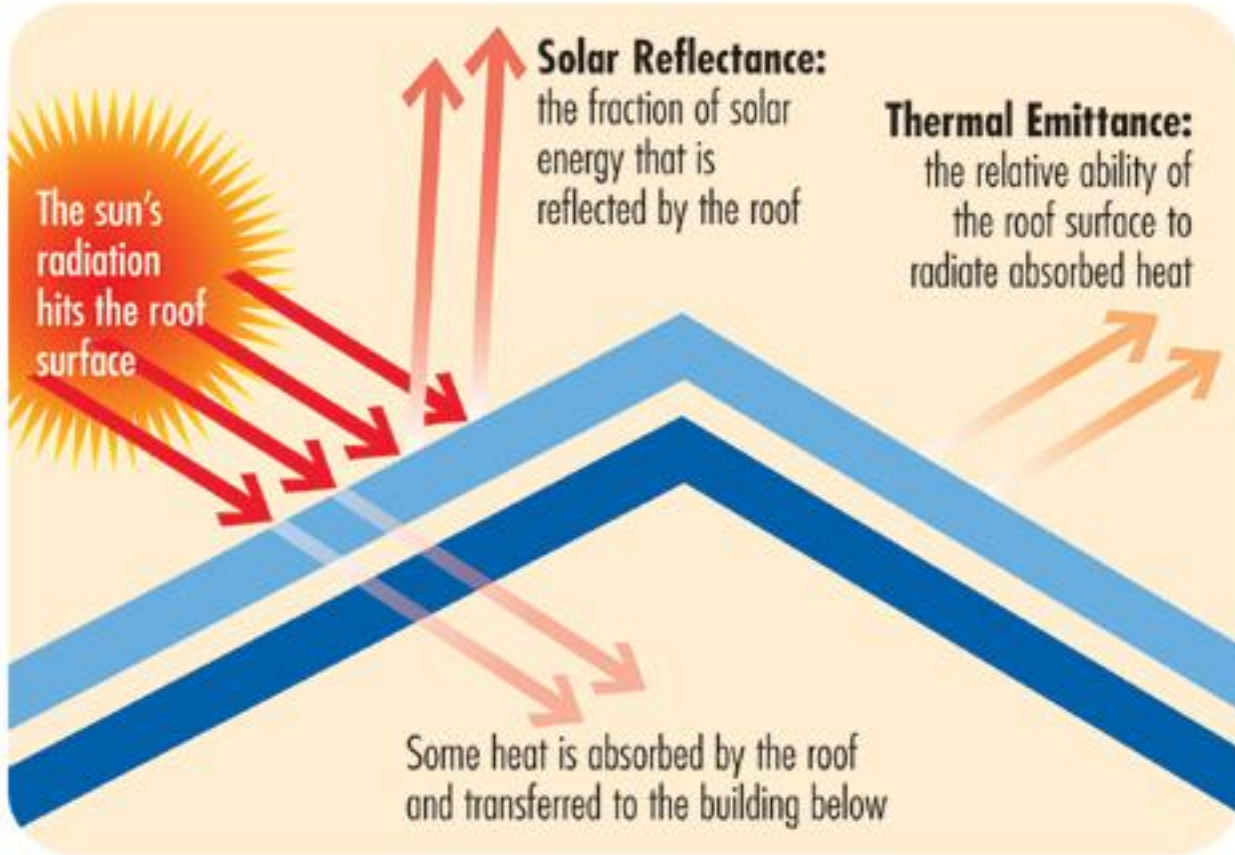
CONCRETE

ROOFING MATERIAL	UNIT MASS kg/m ²
Concrete roof tiles	44
Fibre cement roofing @ 6 mm	19
Fibre cement sheet roofing @ 7 mm (commercial/industrial)	14
Hardwood roofing @ 10 mm	8.5
Steel roofing @ 0.5 mm (residential)	4.9
Steel roofing @ 0.53 mm (commercial/industrial)	5.6
Synthetic rubber membrane roofing @ 1.5 mm	1.84
Terracotta roof tiles	49

PROPERTY	LOW THERMAL MASS	HIGH THERMAL MASS
Heats up quickly	✓	✗
Cools down quickly	✓	✗
Takes a lot of energy to alter temperature	✗	✓
Stores thermal energy	✗	✓
Lightweight	✓	✗

STEEL COOLS DOWN FASTER






HIGH SOLAR REFLECTANCE



**HIGH SOLAR
REFLECTANCE
=
LIGHTER
COLOURS**

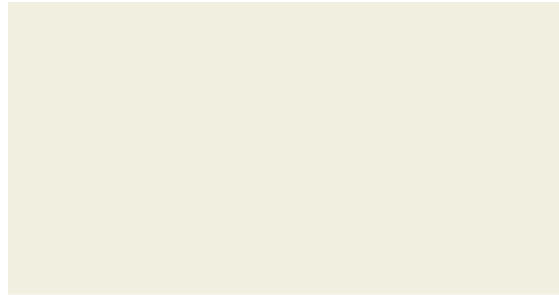


**HIGH SOLAR
REFLECTANCE
=
LOWER
HEAT GAIN**

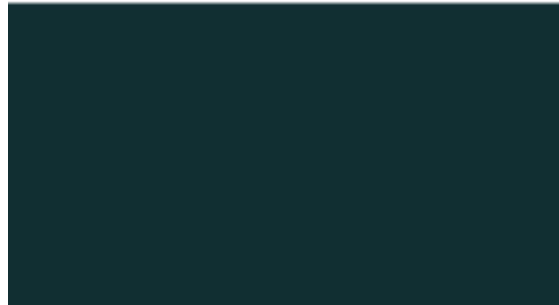
POTENTIAL COOLING ENERGY SAVINGS



300m² single storey house



Off White (SRI: 80)



Cape Charcoal (SRI: 20)

Comparing 2 colours of different solar reflectance value.

Possible cooling saving:

~RM7,028 for 5years

~RM11,566 for 10years

Possible upfront HVAC saving:

~RM2,490

Assumptions:

- Set parameters: Medium level insulation (R3.2), cooling system away from roofspace and roof.
- Based on simple addition of potential upfront HVAC. cooling equipment saving and potential annual cooling energy savings.
- Light to dark roof (solar reflectance change of 60%) provides cooling savings ranging from 10 to 50% (20% average).
- Electricity tariff rate = RM0.365/kWh, includes blending of consumption and a demand charge reduction.
- Annual cooling cost of RM19.16/m² (53kWh/m²/year @ RM0.365/kWh).
- Includes HVAC cooling equipment saving valued at @930/kW^[1].
- HVAC peak load saving calculated based on representative hot day steady state heat flow reduction ($I=1000 \text{ W/m}^2$, $T_{in}=22^\circ\text{C}$, $T_{out}=34^\circ\text{C}$, wind=0.5m/s).
- Note: Cooling energy savings will vary considerably as each building is unique in its construction and operation. Factors such as the amount, quality and installation of roof insulation, the roof size, the type of HVAC equipment and presence of ducting within or near the roofspace will also influence potential savings. When air conditioning is not used the building will be cooler in hot weather.
- Sources: [1] http://www.airah.org.au/imis15_prod/Content_Files/EcoLibrium/2010/December/2010_12_01.pdf.

Note:

- This simulation is calculated based on BlueScope's internally developed calculation tool, titled "Guide to Potential Air Conditioning Cooling Energy Savings".

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POTENTIAL COOLING ENERGY SAVINGS



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Armour Grey (SRI: 48)



Generic Armour Grey (SRI: 40)

Comparing with similar colour of different solar reflectance value.

Possible cooling saving:

~RM1,702 for 5years

~RM2,660 for 10years

Possible upfront HVAC saving:

~RM744



MALAYSIAN STANDARD

MS 1525:2014

Energy efficiency and use of renewable
energy for non-residential buildings - Code of
practice
(Second revision)

ICS: 91.040.01

Descriptors: energy efficiency, renewable energy, non-residential, buildings, code of practice, energy



GBI ASSESSMENT CRITERIA
FOR
RESIDENTIAL NEW CONSTRUCTION (RNC)

VERSION 3.0 | JULY 2013

www.greenbuildingindex.org | info@greenbuildingindex.org

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GREENBUILDINGINDEX SDN BHD (113566-X)



INSTALL WITH INSULATION

Photo from <https://www.greenbuildingadvisor.com/article/insulating-a-metal-building>

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STEEL WALL CLADDING WITH INSULATION

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STEEL WALL CLADDING WITH INSULATION



COST LESS TO A COOL HOME





③

A SENSE OF SECURITY



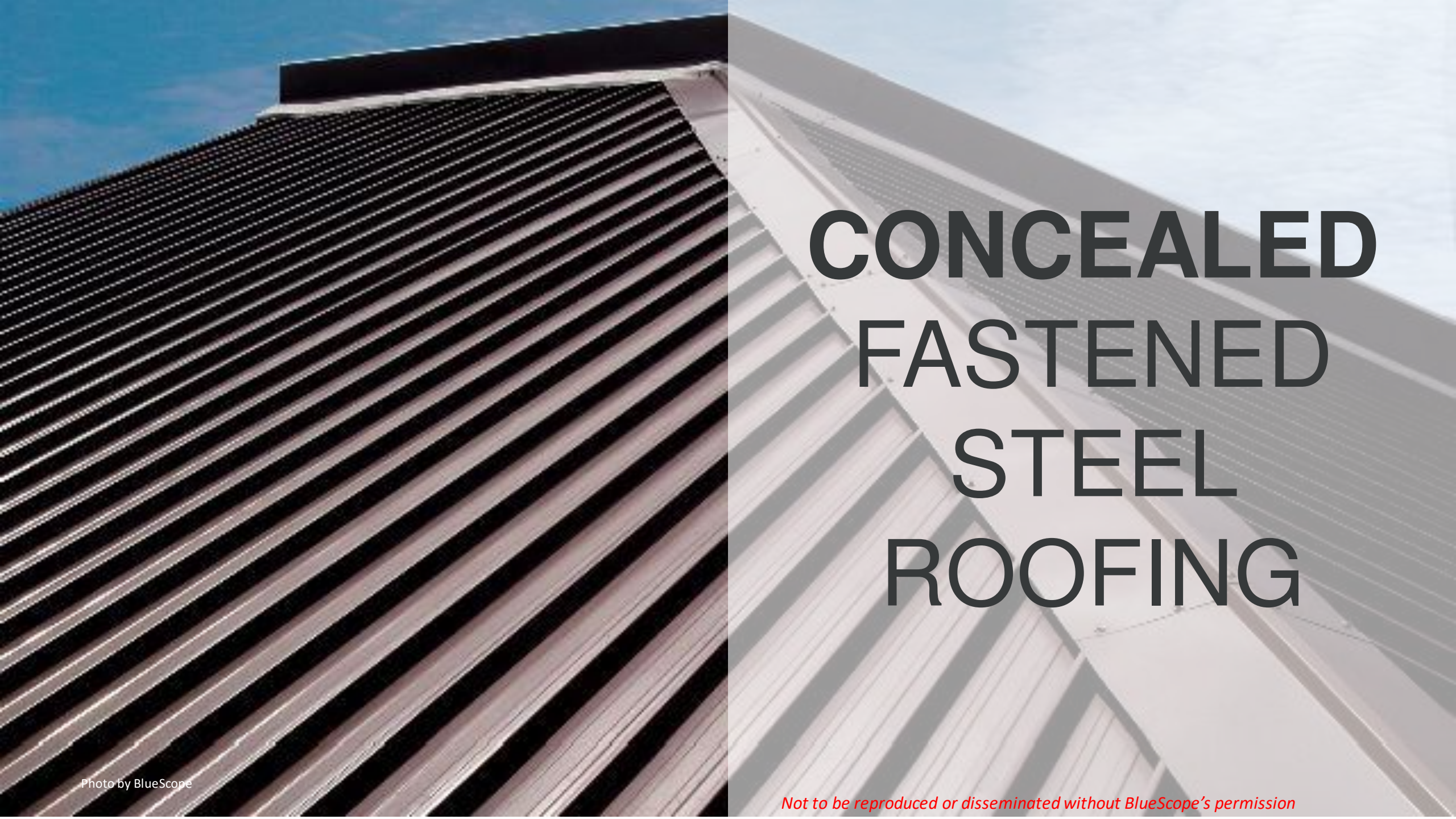
**TILES ARE
RELATIVELY
EASY TO
TAKE APART**

Photo from <https://homeownersinsurancecover.net/burglary/>

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**TILES IS
RELATIVELY
EASY TO TAKE
APART**

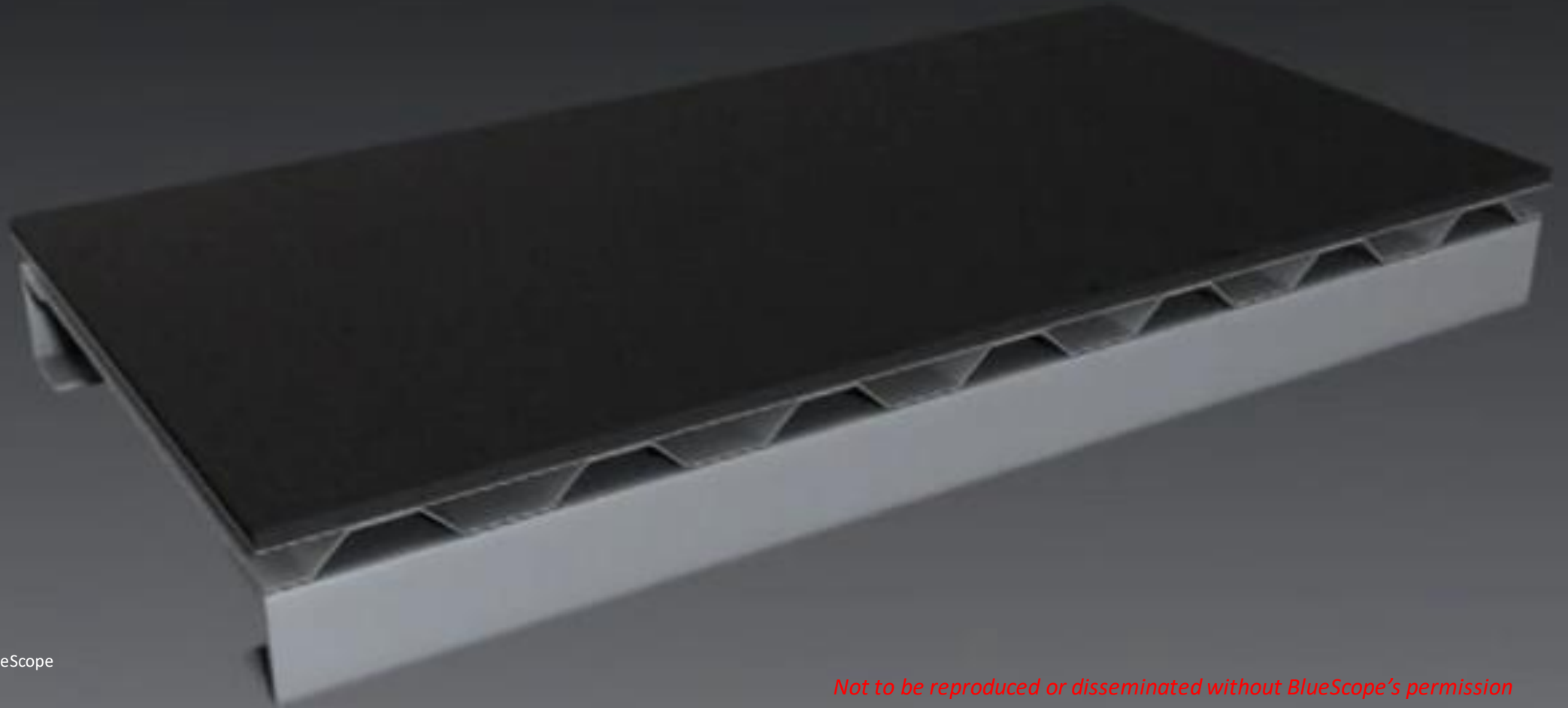


CONCEALED FASTENED STEEL ROOFING

Photo by BlueScope

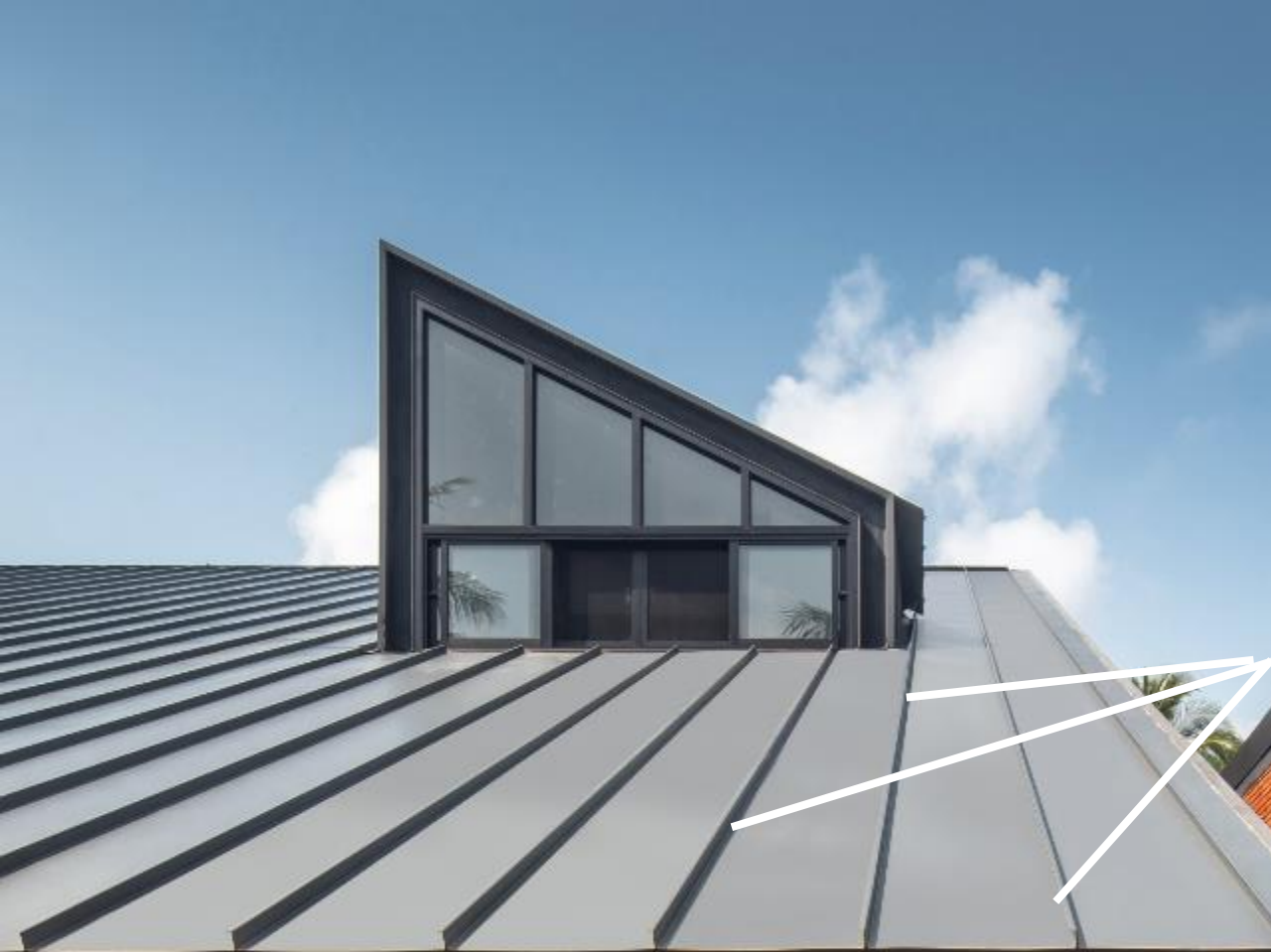
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CONCEALED FIXED PROFILE



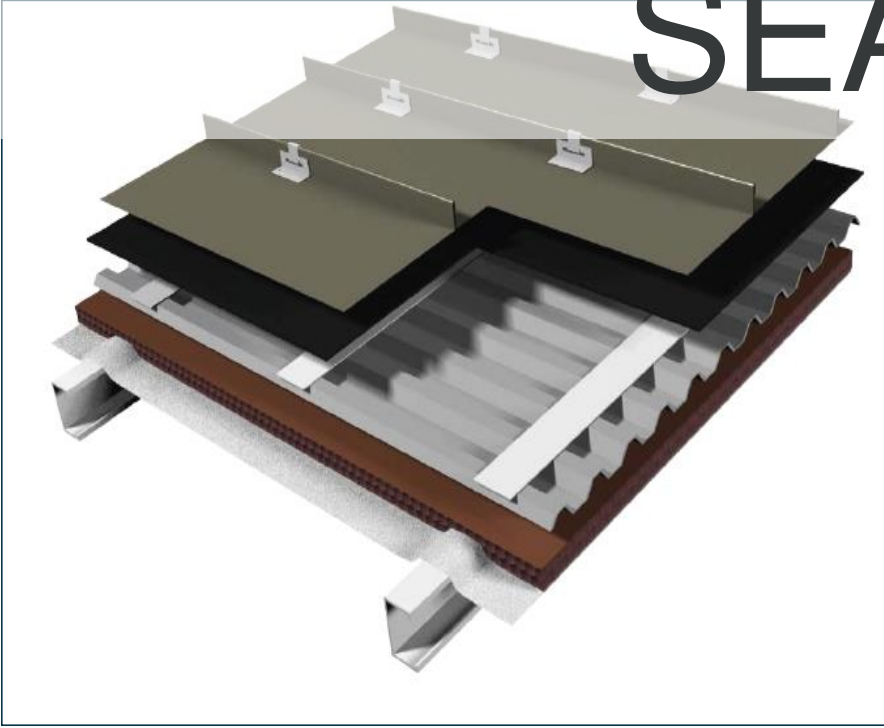
Video by BlueScope

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SEAM LOCKED STEEL ROOFING

SEAM PROFILE



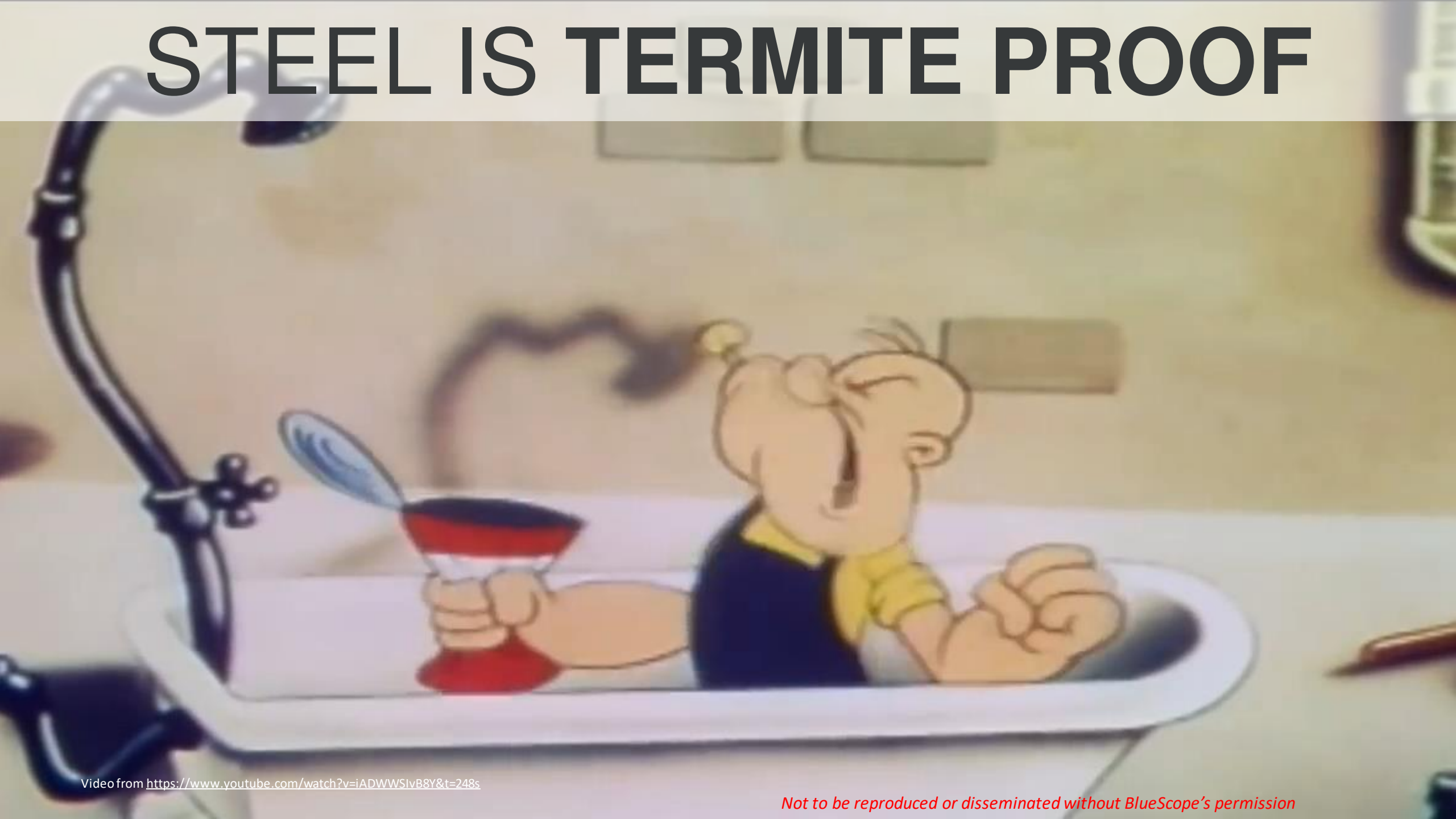


IMPROVES
WEATHER
TIGHTNESS

STEEL IS TERMITE PROOF



STEEL IS TERMITE PROOF



Video from <https://www.youtube.com/watch?v=iADWWSivB8Y&t=248s>

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A woman with long blonde hair and a young girl are sitting at a wooden dining table in a bright, modern kitchen. The woman is leaning over the table, and the girl is looking down at something on the table. In the foreground, a white ceramic pitcher with a handle sits on a woven placemat, filled with cotton flowers. The background shows a white brick wall, a white countertop, and a small Christmas tree in the corner. The overall atmosphere is warm and cozy.

SECURE FROM BURGLARS, WEATHER AND TERMITE


Video by [cottonbro](#) from [Pexels](#)

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④

EASE OF MAINTENANCE

An aerial photograph of a village nestled in a lush, green forest. The image shows several buildings with different roof types: a large house with a reddish-brown tiled roof, a smaller house with a traditional thatched roof, and another with a corrugated metal roof. The surrounding area is filled with dense tropical vegetation, including banana trees and various other plants. The text 'INCONSISTENT ROOF APPEARANCE' is overlaid in large, bold, black letters on the right side of the image.

INCONSISTENT ROOF APPEARANCE



CRACKED TILES AND LEAKAGES

Photo by BlueScope

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ROOF LEAKAGES



NO RUST ON COATED STEEL (20 YEARS)


A worker in a white protective suit is using a high-pressure water spray gun to clean a roof. The roof consists of dark grey tiles and a metal lattice structure. The worker is wearing a white jumpsuit and a red safety harness. The background is a blurred outdoor setting.

ELIMINATE REPAINTING OR REPATCHING WORK

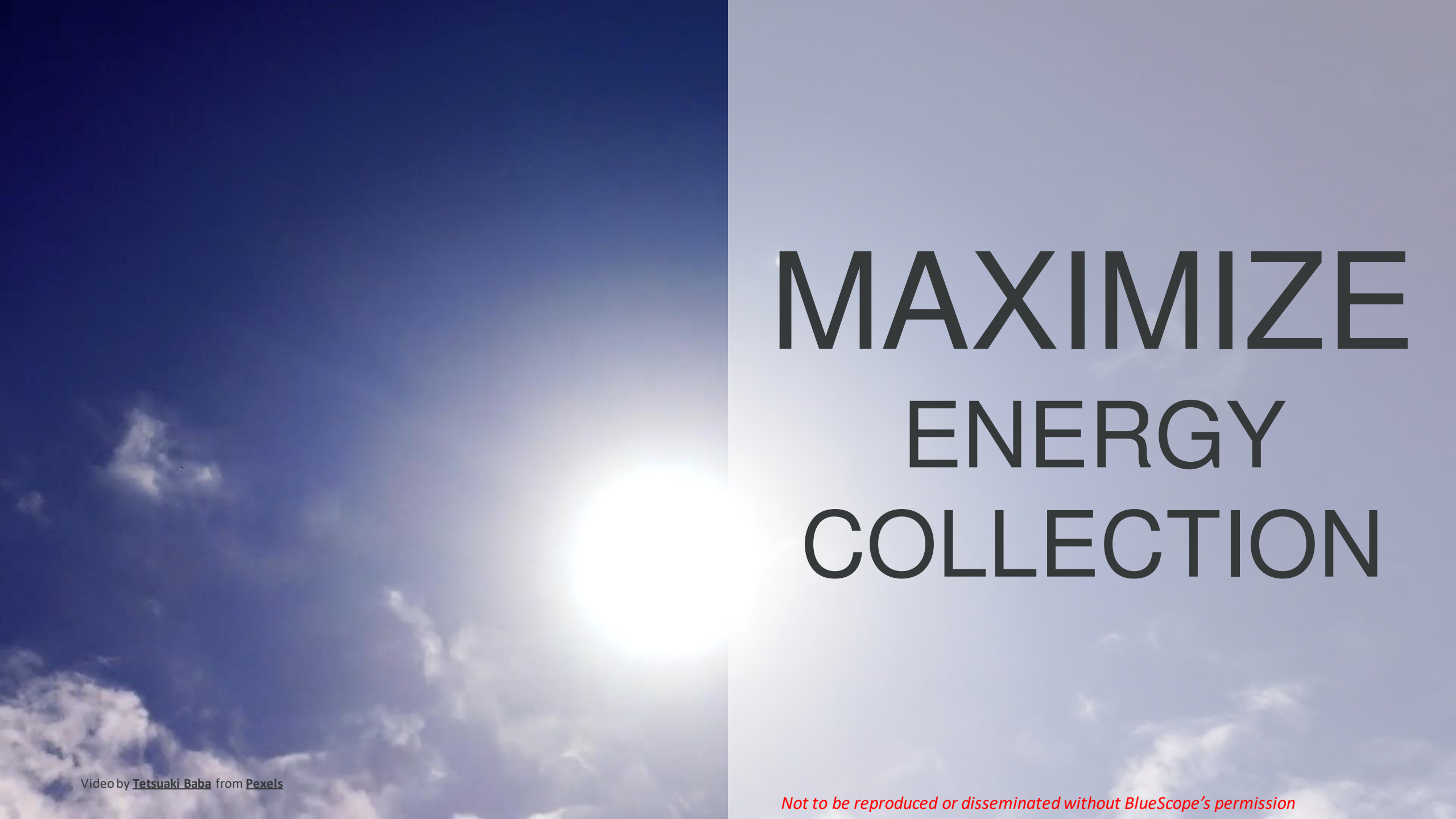


⑤

SOLAR PANEL READY



LOW PITCH STEEL ROOF



MAXIMIZE ENERGY COLLECTION



Clamp
areas

Purlin area

SUPPORT INSTALLATION OF SOLAR PANEL



FREQUENT MAINTENANCE



FREQUENT MAINTENANCE

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SOPHISTICATED DESIGN

STATE OF COMFORT

A SENSE OF SECURITY

EASE OF MAINTENANCE

SOLAR PANEL READY



steel CONNECT

Colorbond®

Zincalume®

TrueCore®



events@bluescope.com.my



bluescope.com.my



Colorbond Steel Malaysia

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