THERMOSHIELD®
thermal insulation coating

THE UNIVERSITY OF MELBOURNE

McCoy Building - Earth Sciences
Pre Solar PV installation - Roof Protective Coating Work

Heat Reduction | Future Proofing | Solar PV Efficiency

CORROSION control

Waterproof

THERMOSHIELD AUSTRALIA PROUDLY MADE IN AUSTRALIA

10 YEAR warranty IF APPLIED BY THERMOSHIELD APPROVED APPLICATORS

ISO 9001 & 14001 Certified

Section 1: **Original Condition:**

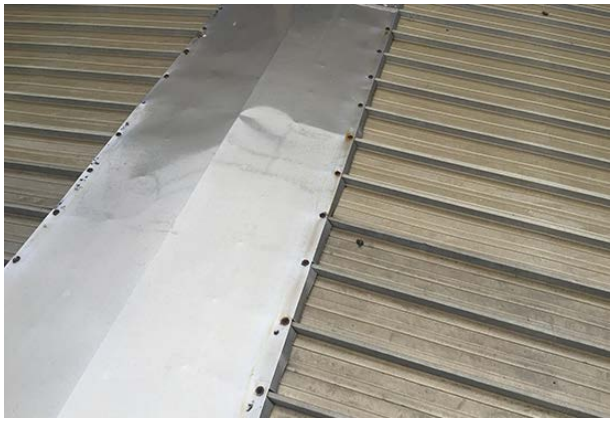
The McCoy building roof was ageing and showing signs of deterioration.

A very unique roof sheet (aluminum), the soft metal would suffer from expansion and contraction which would cause waterproofing issues.

Below aerial photos of the weathered, ageing roof:







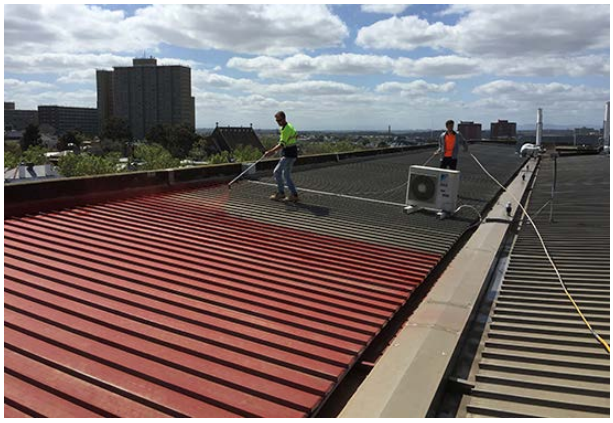

Section 2: **Pressure washing:**

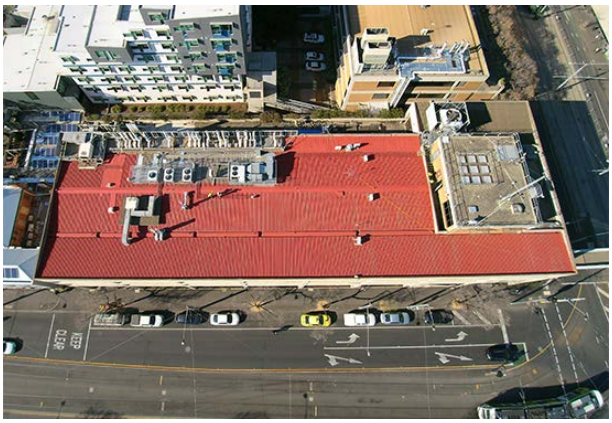
Pressure washing had to occur outside of office hours due to noise complaints within.

Section 3: **Etch primer coating (all areas):**

Etch primer is then applied over all areas prior to the ceramic top coat.
This particular etch primer ensures maximum adhesion to the ageing roof sheets.

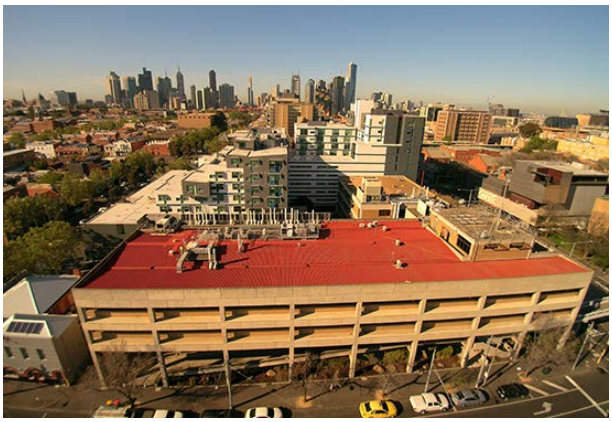
The etch primer is misted and is clear to see due its vivid red appearance:





Section 3: **Etch primer coating** continued:



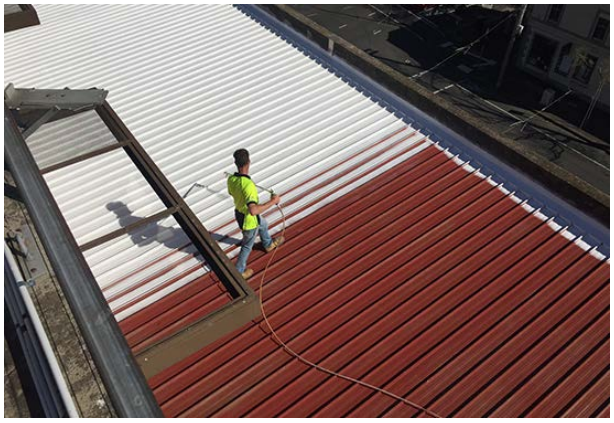
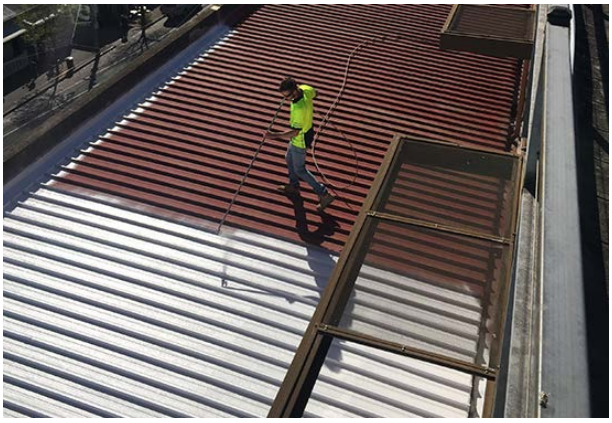



Section 4: **Thermoshield coating – first coat:**

Thermoshield thermal ceramic coating creates a thick, non-permeable membrane that acts to thermally insulate the roof sheeting & add a layer of waterproofing protection.

The bright white of the Thermoshield coating over the vivid red of the etch primer ensures a complete coverage of the ceramic membrane.


Section 4: **Thermoshield coating** continued:

Section 5: **Waterproofing:**

Waterproof bandage application to damaged area of sheeting (left), followed by heavily sealed beneath the ceramic coating (right):


Section 5: **Waterproofing** continued:

Prior to the coating works, reports from University staffers reported widespread leaking from the roof areas with HVAC penetrations. As a result, all areas of sheet overlap for the HVAC equipment we applied multiple passes of coating to really build up the protective thickness.

Below shows before and after of the waterproofing prone sheet overlaps:

Below photos show this added thickness to these problematic areas specifically.

The coating is to be applied to yield a dry film thickness of 350 micron but on the areas of waterproofing concern, you can see the dry film thickness is between 900 micron and 1,300 microns as you can see from the below two photos:

Following roof coating and solar installations, we were informed there had not been any reports of roof leaking which was a great result.

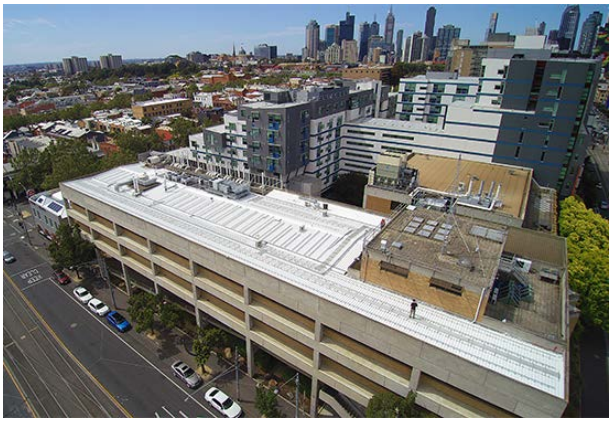
Section 6: **Thermoshield – second coat:**

Second coat commencing:

Below photos show the comprehensive sealing of sheet overlap and tech screw penetrations:

Section 7: **Completed coating:**

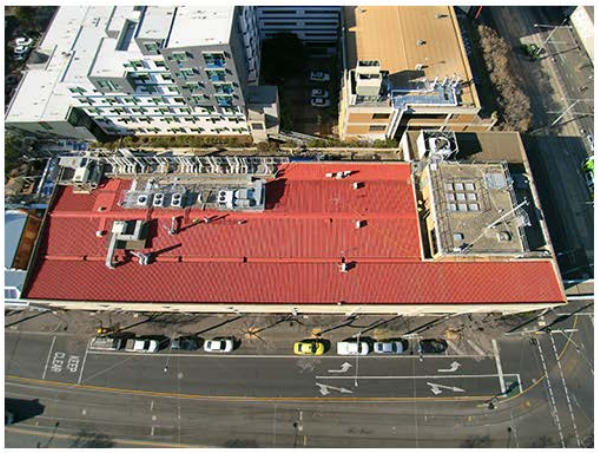
Section 6: **Completed coating** continued:

Section 8: **Before and after photos:**


Section 8: **Before and after photos** continued:

Section 8: **Before and after photos** continued:



Section 9: **Conclusion:**

The ageing roof has been comprehensively sealed beneath a thick, ceramic thermal barrier.

The coating will greatly reduce surface temperatures, which will eliminate the ability for thermal expansion to potentially cause damage to the roof, therefore potentially compromise the solar PV investment.

The Thermoshield coating is a perfect pairing to solar PV panel investment by adding longevity to the roof sheeting as well as increasing electrical output in hotter months by removing radiant heat exposure to the panels.

The coating system comes with a 10 year warranty – with the ability to extend with scheduled m aintenance.

For any addition information or enquires, please contact us at Thermoshield Australia.

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