Pro-Shield Case Study

Pro-Shield

In-situ Case Study

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1. PROJECT AREA DESCRIPTION

Area 1: External, tiled first floor veranda. Tiled area with bituminous torch on previously applied.

Area 2: External, untiled first floor veranda. Traditional Acrylic Waterproofing applied to concrete.

2. THE ISSUE

Continued water ingress, causing water leakage through to the ceiling below the veranda, significant substrate moisture build up, damaged paint and plaster. Several alternate remedies were attempted unsuccessfully, resulting in significant expense and frustration.

3. PREVIOUS REMEDIES ATTEMPTED

Attempted Remedy	Result
Area 1: All tile grout was meticulously removed and replaced with waterproof grouting.	Unresolved problem. Continued leakage.
Area 1: Applied bituminous torch on waterproofing over the existing tiles.	Unresolved problem. Some improvement, however performance still not satisfactory.
Area 1: Applied traditional acrylic waterproofing over bituminous torch on.	Slight, short-term improvement, however leaks soon returned and continued. With time, the over-coated acrylic water proofing started to perish due to exposure to the element and the leaks increased.
Area 2: Traditional acrylic waterproofing applied to untiled, properly prepared concrete.	Unresolved problem. Some improvement, however performance still not satisfactory.

4. THE PRO-SHIELD SOLUTION

4.1 Area 1:

External, tiled first floor veranda. Veranda area: 60 square meters.

Date: August 2022

Weather: Mild to hot and sunny. No rain since before the winter.

Preparation and Application:

- The existing bituminous torch on waterproofing, was mechanically removed. Despite all efforts, traces of torch on remained (**Image 1 & Image 2 below**).
- Substrate below the torch on was very wet, despite it having rained several months ago. Substrate left to dry for a period of 5 days.
- Substrate swept and all loose material and debris removed.

- Test patch of Pro-Shield Barrier applied over bitumen. No bleed through at all. Excellent adhesion. (**Images 3**).
- Corners, edges and gulleys strip coated with Pro-Shield Barrier, using a brush. Hard to reach, problematic areas such as cracks and holes were also coated with Pro-Shield Barrier (**Image 4**).
- One coat of Pro-Shield Barrier liberally applied to entire veranda area (1.5 square meters per litre) **(Image 4**).
- Once the Pro-Shield Barrier was dry, two coats of Pro-Shield at 1.5 square meters per litre, per coat. The first coat was applied in the morning, and the second during the course of the afternoon. Being a hot day, the first coat was somewhat tacky when being walked upon (**Image 5 & 6 below**).
- Two coats of Pro-Shield were also applied to a parapet wall – applied directly to a sound, previous application of traditional acrylic waterproofing (**Image 7**).
- An additional problem wall (directly under a gutterless, roof overhang), was painted with two coats of Pro-Shield, tinted to match the existing colour of the house. Note that only UV stable colours can be tinted. Tinted product must be brush rolled, using the cross hatch method to avoid streaks (**Image 8**).
- Repairs: The substrate below the tiles has been extremely wet for an extended period of time. Despite allowing 5 days to dry out, some moisture remained in the substrate. Two blisters were noted in the grouted areas, once coating with Pro-Shield had been completed. The blisters form due to excessive moisture content attempting to leave the substrate. The blisters were easy to repair. The Blisters were removed with a putty knife, followed by one touch-up coat of Pro-Shield Barrier, and two touch-up coats of Pro-Shield.
- Application method: Brush & roller only. No use of airless spray during this project. Airless spray is recommended, however not always practical.
- **Usage:** Pro-Shield Barrier = 40 litres / Pro-Shield =80 litres

4.2 Area 1 Images

Image 1

Image 2

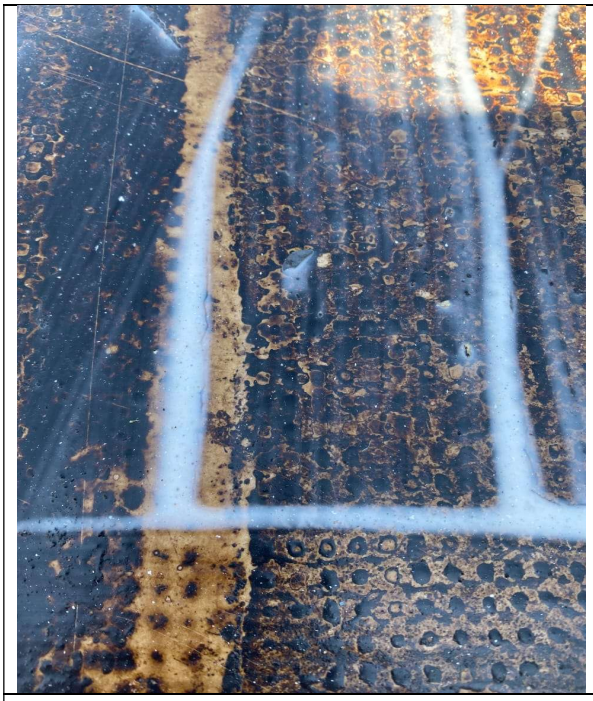

Image 3

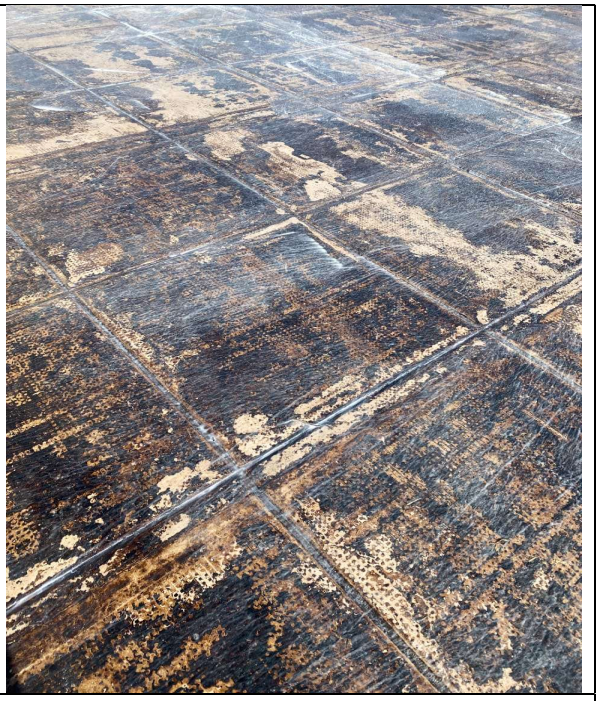

Image 4

Image 5

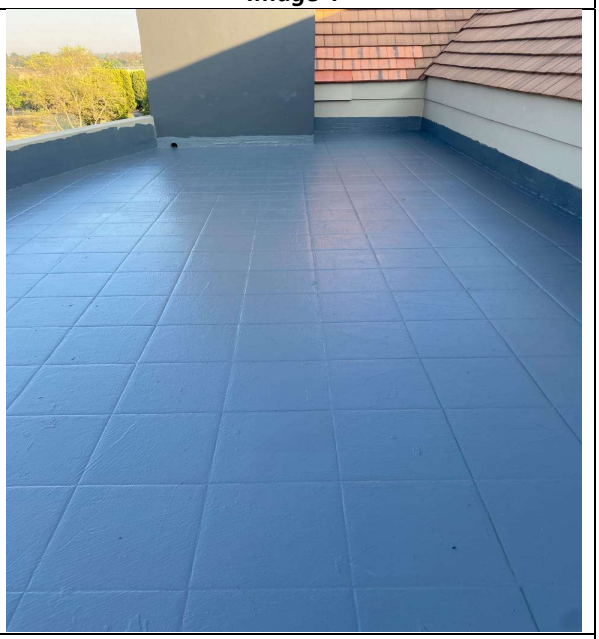

Image 6

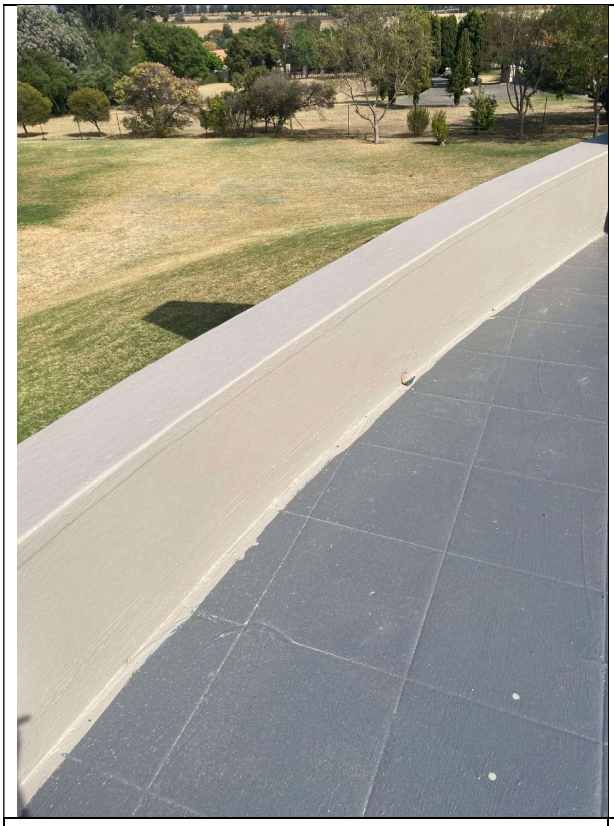	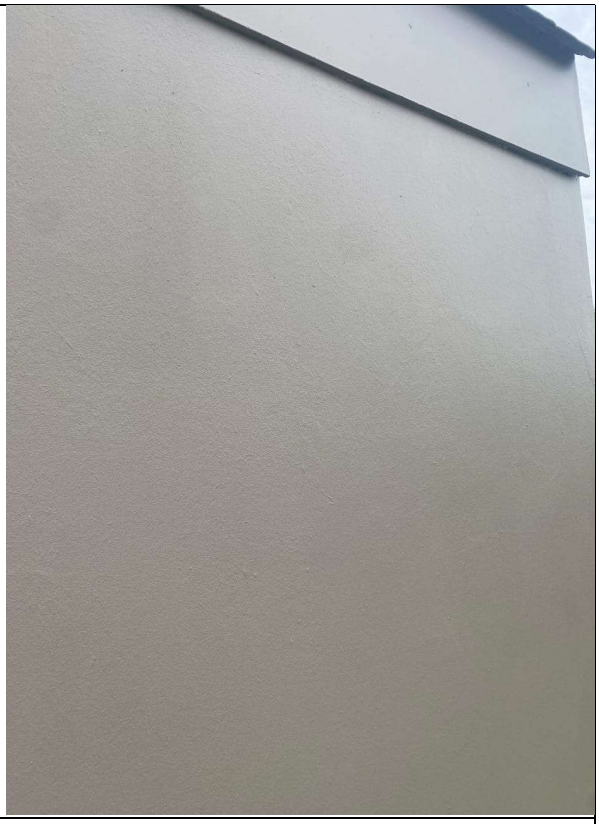
Image 7	***Image 8***

Important Note: Do not roll out Pro-Shield when applying. Pro-Shield must be applied lightly so as to achieve maximum build to ensure optimal performance and longevity.

4.3 Area 2: External, untiled 1st floor veranda. Previously coated with traditional acrylic waterproofing. Veranda area: 11 square meters

Date: August 2022

Weather: Mild to hot and sunny. No rain since before the winter.

Preparation and Application:

- Before (Image 9).
- Damaged areas such as damaged plaster, and damaged old waterproofing were sanded down (**Image 10**).
- The substrate was then brushed and washed with soapy water and allowed to dry.
- Pro-Shield was applied with a brush, to strip coat all damaged areas, edges and corners (single coat) (**Image 11**).
- Two coats of Pro-Shield were applied (1.5 square meters per litre, per coat), directly to the substrate, three hours apart (**Image 12**).
- A third coat of Pro-Shield was applied the following day (1.5 square meters per litre) (**Image 13**).
- Application method:Brush & roller only. No use of airless spray during this project. Airless spray is recommended, however not always practical.
- Usage: Pro-Shield = 10 litres.

Tip: When using masking tape to cut the edges, it is important to remove the tape before the coating dries. One the coating has dried, the masking tape will be very difficult to remove.

4.4 Area 2 Images

Image 9

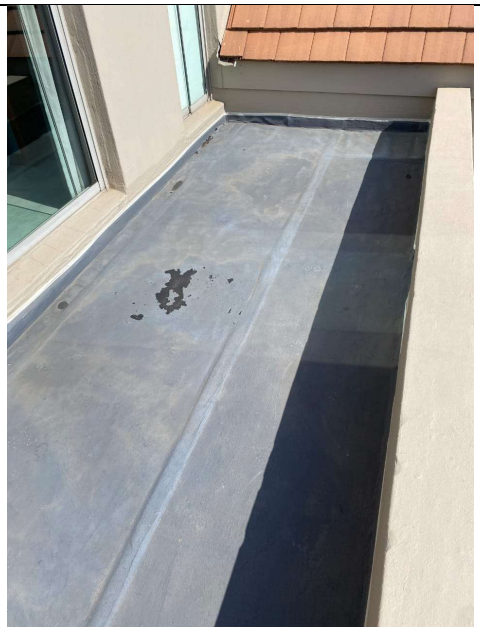

Image 10

Image 11

Image 12

Image 13

5. THE RESULTS

Water ingress problem fully resolved. No more leaks and an aesthetically pleasing finish.

6. Technical Data

APPEARANCE	Sheen finish.
COLOUR	***Pro-Shield:*** Black, White, Charcoal, Terracotta, and Deep Red. White is tintable in pastel, UV stable colours only. ***Pro-Shield Barrier*** - milky
VOLUME SOLIDS	43% by mass typical (Varies by colour)
S G @ 25°C	1.19 typical (Varies by colour)
MASS SOLIDS	51%
PRACTICAL SPREADING RATE	**Waterproofing:** 3 coats. 1.3 m2/litre per coat. If insufficient build has been achieved (< 1.3 m2/l) a further coat will be required. **Roof Coating:** 2 to 3 coats. 1.5m2 / litre per coat. 270 micron (DFT) per coat. If insufficient build has been achieved (< 1.5 m2/l per coat) a further coat will be required.
VISCOSITY @ 25°C	100 - 110 Ku
SUBSTRATE	Suitably prepared steel, galvanised iron, Chromadek, Zincalume, Aluzinc, corrugated iron, concrete, brick, cement plaster, roof tiles, downpipes, PVC guttering and Bituminous surfaces.
TOP COAT	Can be used as a final coat or top coated with Wedgewood Roof Coat or Wedgewood decorative coatings.

APPLICATION ENVIRONMENT

Ambient Temp	Relative Humidity
Min 5°C	Min: 10%
Max: 35°C	Max: 85%

DRYING TIME	Overcoating	4 – 6 hours @ 25°C between coats.
	Final Cure	3 – 5 Days.

APPLICATION	Brush, roller or airless/pressure pot spray (17, 19 or 21 thou nozzle). The use of conventional spray equipment is not recommended.
COVERAGE:	**Parapets, flashings, joints, cappings and roof** screws – 3 coats. 1.3m2/litre per coat. **Pitched Roof Coating** – 2 coats. 1.5m2 / litre per coat. 270 micron (DFT) per coat. **Flat Roof Coating** – 3 coats. 1.5m2 / litre per coat. 270 micron (DFT) per coat.

In all cases, the application of ***Pro-Shield Barrier*** constitutes one of the recommended coats (i.e. Flat roofs, one coat ***Pro-Shield Barrier*** plus 2 coats ***Pro-Shield.***

To ensure optimum performance, apply a maintenance coat of ***Pro-Shield*** every 5 years.

7. FEATURES

Exceptional elongation and elastic recovery.	Does not harden or go brittle over time.	Low VOC.
Excellent adhesion.	Long-term protection.	APEO free.
Superior weather resistance.	Excellent re-coating properties. Can be top coated or used as a final coat.	UV resistant.
Excellent obliteration and high build.	Attractive sheen finish.	Low maintenance and easily repairable.
Allows for expansion and contraction of the surface.	Pure acrylic polymer waterproof coating.	Shrugs off dirt and easy to clean.

Pro-Shield.

The Professional Choice.

Technical Data Sheets and Safety Data Sheets are available at www.durapaints.co.za

Contact your Technical Sales Representative for more information or email us at orders@durapaints.co.za.