

 SOLUTIONS DELIVERED		APPLICATION INVESTIGATION: <i>Project Description:</i> Reflective Sign Coating <i>Customer:</i> Transurban <i>Location:</i> Melbourne <i>Date:</i> May 2018 <i>Product:</i> X-Restore
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PROJECT DETAILS

Project Overview Transurban have a significant number of reflective signs that degrade with time due to UV exposure or their life is shortened by environmental conditions, not excluding graffiti. A number of their signs also use Red lettering / markings which are extremely susceptible to UV degradation. xGen X-Restore was applied with the intention of providing:

- UV stabilisation
- Anti-Graffiti coating
- Extending the life of the sign.

The cost to Transurban is not so much in the actual cost of the sign, but the actual cost of replacement through road closures, traffic management, etc.

A major concern and the main focus of this report was to understand and measure the impact of X-Restore on the reflectivity of the sign. A process was established for measuring light intensity on the reflection of a focused light source. In summary X-Restore had no impact.

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PRODUCT DETAILS

Product Applied X-RESTORE Oxidized Metal

Features and Benefits Applying X-Restore will provide:

- UV Stabilisation
- Corrosion Protection
- Anti-Graffiti Coating
- Resistance to Salt and bird faeces
- Reduce surface deposits
- Increase the sign life
- A flexible tough surface improving overall sign appearance
- No reduction in reflectivity

Application X-Restore was applied to the sign using a spray application

Test Method Prior to X-Restore being applied a test rig was set up to measure the light intensity of the light reflected off the sign at approximately 45 degrees angle to the surface of the sign.

Test Rig Configuration A focused light beam was reflected off the sign through a hole in the top of the box directly onto the light meter sensor and the reading recorded.



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Test 1 - Uncoated @ 7:15am 30th May 2018



Test 2 – Coated @ 11:15am 30th May 2018 (3hrs after coating was completed)



Test 3 – Coated @ 7:15am 1st June 2018 (23hrs after coating was completed)



Conclusion Light levels reflected are as follows:

Test	Status	Light Level		Result	Comments
1	Prior to Coating	229	LUX	Reference	
2	3 Hrs after Coating	308	LUX	34.5% Increase	Surface good to touch, felt soft
3	23 hrs after Coating	330	LUX	44.1% Increase	Surface good to touch, felt hard

Comments The initial expectation of the trial was a slight reduction in the reflectivity. What was experienced, was an un-expected gain of 44.1%. What we believe has occurred, is a more concentrated (less diffused) beam of light reflecting off the surface. All environmental conditions were maintained to ensure accurate correlation between the results could be established.

You will note in test 2 and 3 the sign has a greater reflective intensity. The glow is the reflection of light from the tape on the cardboard box just from room lighting.

Overall result, X-Restore does not impact the performance of the sign and will provide substantial long-term benefits.