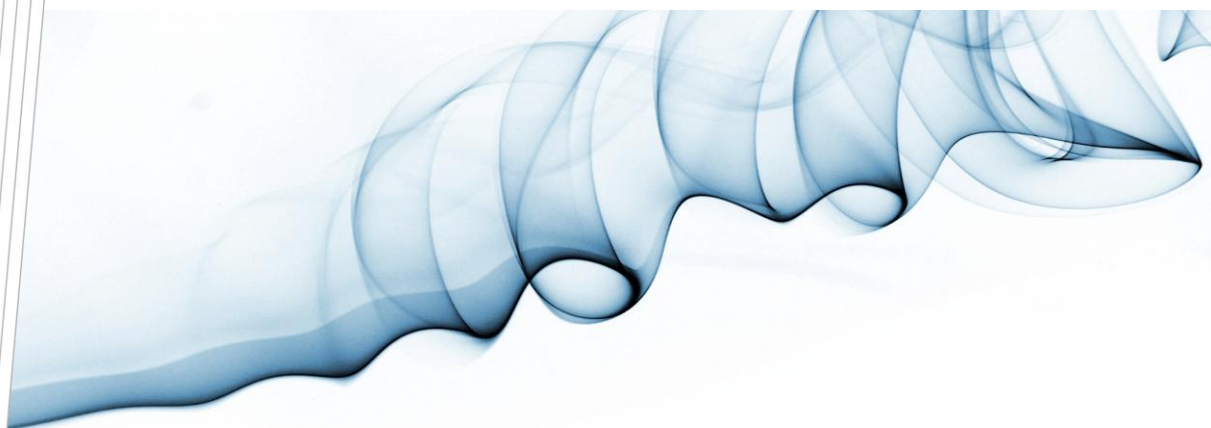




**INSPECTION OF VITREFLON 700 COATED FAÇADE
NAB BUILDING, 800 BOURKE ST, MELBOURNE**

Commercial-in-Confidence



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Agreement :
Report No: XC3233
Issue date: 1 November 2013



CMSE REPORT XC3233

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1. INTRODUCTION

The National Australia Bank building is located at 800 Burke Street, Dockland. The building is the Headquarters of NAB and construction commenced in 2002 and completed in 2004. The facade of the building consists of FRC panels painted with one coat of Vitrecure 10 UV cured undercoat followed by one coat of Vitreflon 700 two pack based finish. The paint finish was applied in February 2003. The building is quite striking because of the bold colours used on the facade (Fig1)

It was requested by Mr Peter Gillies, A & I Coatings that CSIRO inspect the facade of the NAB Building to establish the performance of the Vitreflon 700 coatings system after 10 years exposure.

2. INSPECTION

The inspection was undertaken on the 29 October 2013 in company with Mr Peter Gillies. Only the ground floor panels on the north facing side were fully accessed during the inspection. These consisted of the purple, blue and red panels (Figs 2, 3 & 4). Only a visual assessment was made of the panels above ground level was made by the author.

2.1 Ground Level Inspection

Only the north facing floor facades were fully inspected. The north facing facade on the bottom three floors are subject to the maximum solar radiation and would represent the worst case scenario for the coating in term of weathering. The floors above the third floor are shield by aluminium louvers whist the other side of the building would be subject the much less solar radiation.

The coating was assessed in accordance with AS 1580 Methods 481.1 – 12 ‘Paints and related coatings _ Methods of test coatings - Exposed to weathering’ for the properties detailed in Table 1. In general the rating ranges from 0 to 5 with 0 being no change in the property with 5 being the maximum change in the property.

For the colour change, the facade coatings were compared with the colour swatches provided by Mr Peter Gillies using ISO 105 A02: Grey Scales. The results are detailed in Table 1 and show that there has been no integrity failure, change in gloss and only a very slight change in colour (lightening).

Table 1: Inspection of Vitreflon after 10 Years Exposure

AS1580 Method	Properties	Vitreflon Colour		
		Blue Violet	Regatta Bay	Bright Red
481.1.2	Discolouration	0	0	0
481.1.3	Dirt collection	0	0	0
481.1.4	Dirt retention	0	0	0
481.1.5	Gloss change	0	0	0
481.1.6B	Erosion1	0	0	0
481.1.7	Degree of checking	0	0	0
481.1.8	Degree of cracking	0	0	0
481.1.9	Degree of blistering	0	0	0
481.1.10	Degree of flaking	0	0	0
481.1.11	Degree of chalking	0	0	0
481.1.12	Colour change	0/1	0/1	0/1
481.1.13	Fungal growth	0	0	0

2.2 Remote Assessment

A visual inspection of the north facing Vitreflon 700 panels on the second floor indicated the following:

- There was no discernable visible integrity failure in any of the areas or change in gloss.
- The panels had not been subject to a regular cleaning regime and hence there was some dirt build up.
- In addition to the Blue Violet, Regatta Bay and Bright Red, the Green (Jack O Lantern) and the Light Yellow (Sunny Side Up) was also viewed. In the ground floor panels a very slight lightening of the colour was observed. However, the dirt build up on the second floor acted to darken the colour and in essence the colours were a match with the original colour swatch.

3. CONCLUSION

The NAB building facade provides an excellent case history of the performance of the Vitreflon 700 paint system after 10 years outdoor weathering. On the north face it is exposed to the maximum solar radiation and located at dockland precinct only 20 meters from the wharf it is subject to a coastal environment.

After 10 years exposure the coating is in excellent condition. There was no evidence of integrity failure or change in gloss. There was only a very slight lightening of the colours.



Figure 1: North Face of the NAB Building



Figure 2: The Ground Floor Blue Violet Panel



Figure 3: The Ground Floor Panel Regatta Blue



Figure 4: Ground Floor Bright Red Panel



Figure 5: First & Second Story showing the Yellow and Green Colours