BlueScope

steel CONNECT

WHICH COATED STEEL SHOULD YOU CHOOSE WHEN ALL STEEL LOOKS THE SAME.

Mr. FEKRY ZAKY

POSTGRAD. RESEARCH IN PAINT TECHNOLOGY & PROJECT MANAGEMENT

ACCUMULATED 33 YEARS EXPERIENCE IN COIL COATING

17 YEARS IN BLUESCOPE IN VARIOUS RESEARCH ROLES

Fekry Zaky
Polymer Coating Approval Specialist

WHICH COATED STEEL SHOULD YOU CHOOSE WHEN ALL STEEL LOOKS THE SAME.
THE CHOICE IS YOURS.

INTRODUCTION

Pre-painted Steel customer/ end-user expectations

Beautiful, durable and versatile

Safe and sustainable

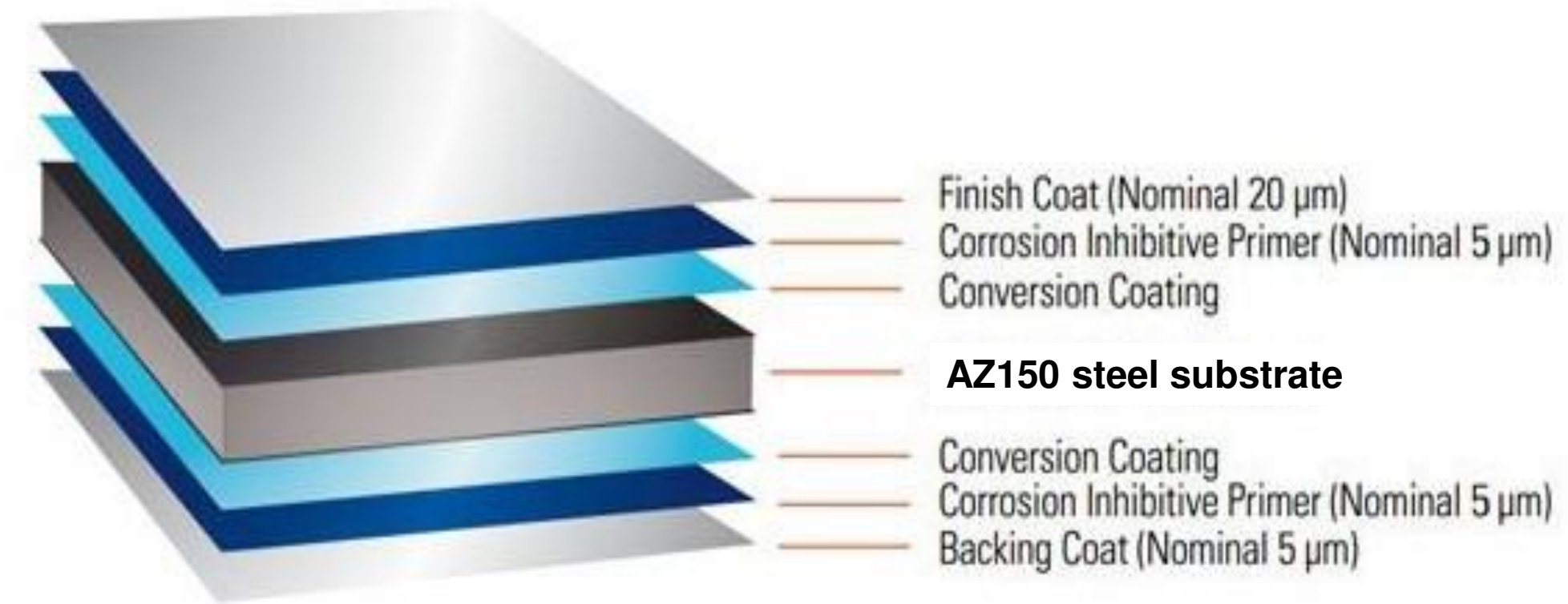
Is subjected to years of rigorous testing ensuring a long-lasting performance

Made for the intended environment and conditions

Supported by a suitable warranty and a strong team of technical experts during the product's life

Affordability

PRE-PAINTED STEEL LAYERS



BEAUTIFUL AND VERSATILE

DURABLE

11 years old roof

DURABLE

5 years old shed

INITIAL CHOICE

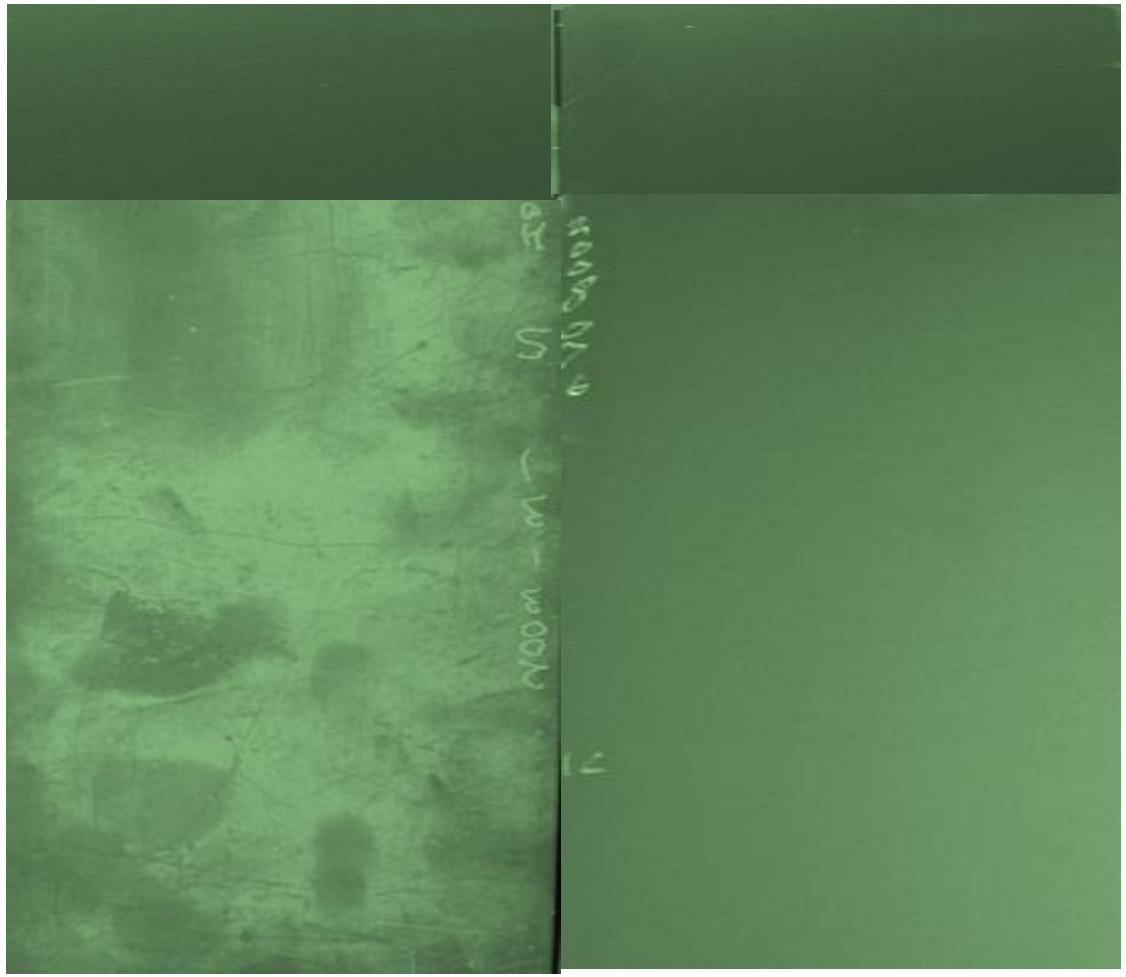
What questions should we ask?

Supplier A

Supplier B

ACCREDITED SUNSHINE TEST SITE

4 years outdoor exposure choice

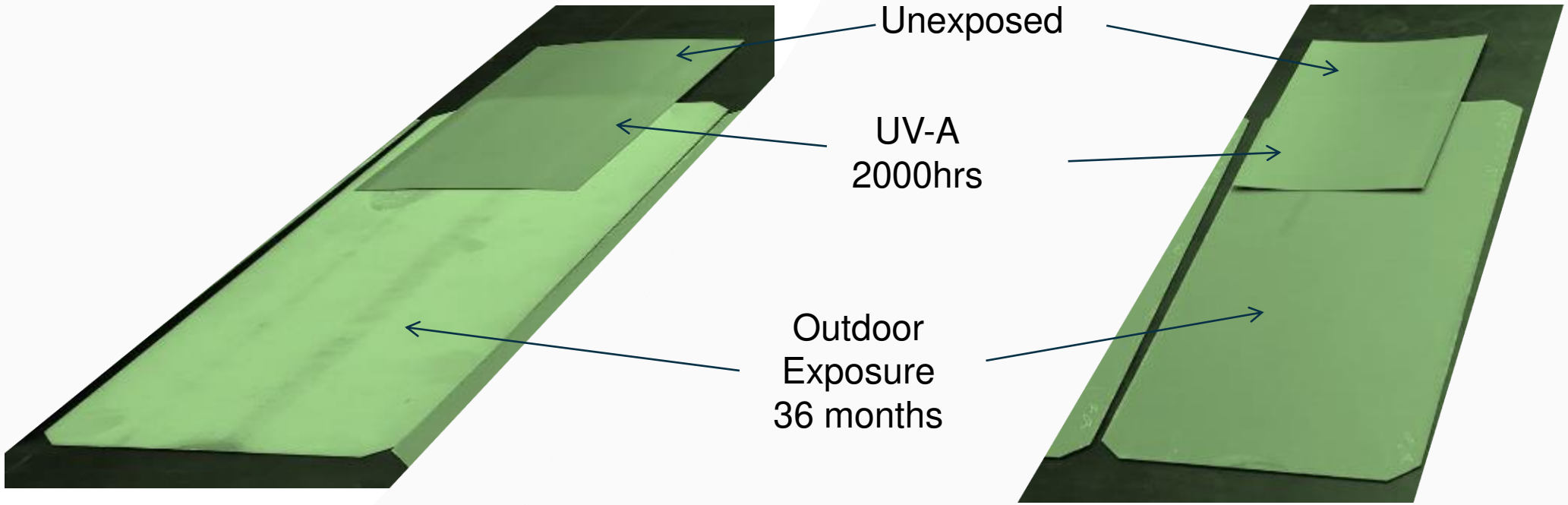


Supplier A

Supplier B

PRODUCT PERFORMANCE

36 months outdoor exposure vs. UV-A 2000hrs exposure



Supplier A
Topcoat contains lead

Supplier B

OUR STEEL TEST FACILITIES

Our steel endures rigorous testing.

A combination of:

- Accelerated laboratory testing;
- Outdoor testing with world wide exposure sites;
- Chemical analysis;
- Physical testing.

Our steel testing covers the life cycle of the product including production, transportation, roll forming, installation, long-term durability corrosion, UV and heat resistance.

ACCELERATED LABORATORY TESTING

Accelerated testing performed includes;

Corrosion testing
- Cyclic corrosion
- Salt Spray

Durability testing
- UV

Humidity testing
- Humidity

ACCREDITED LABORATORY TESTING

Our laboratory performs tens of thousands of readings each year.

OUTDOOR TEST SITE (SEVERE MARINE)

Rated as C4 corrosion test site according to ISO 9223 and AS/NZS 2728

OUTDOOR TEST SITE (SUNSHINE)

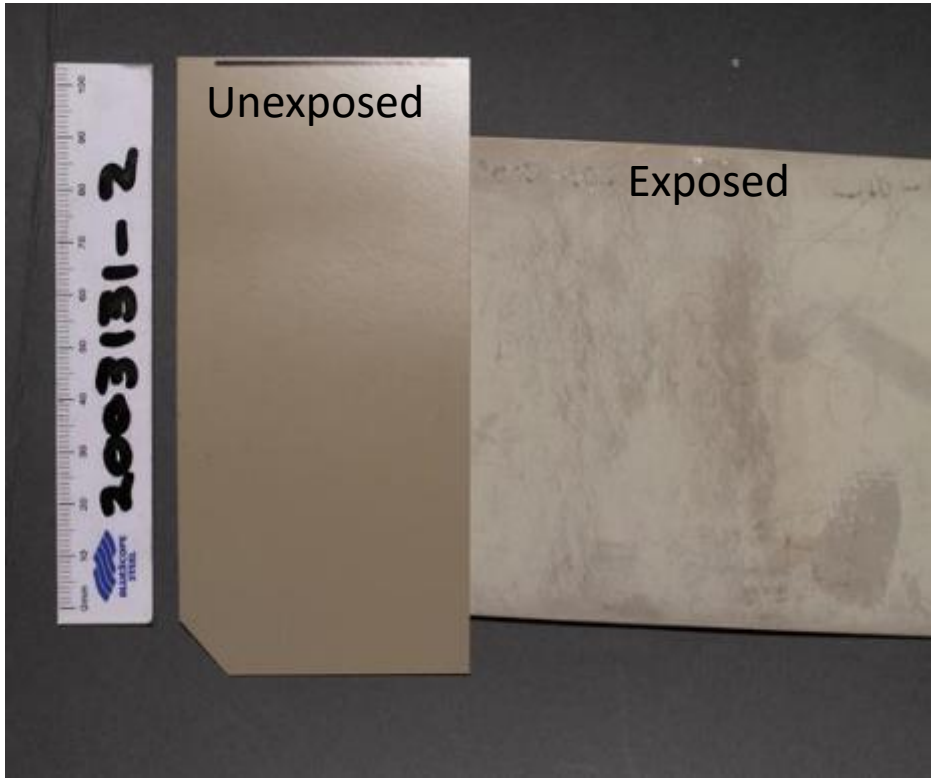
Rated as severe UV durability test site according to AS/NZS 2728

OUTDOOR TEST SITE (TROPICAL)

Combined industrial and UV site. Actual environment

COLOUR PERFORMANCE AT SUNSHINE SITE

- Lead, a poisonous substance detected in the topcoat of competitor sample. Lead not used in supplier B steel paints.
- Supplier A product has a low topcoat film thickness of 10.8microns. This could make it prone to early UV delamination.

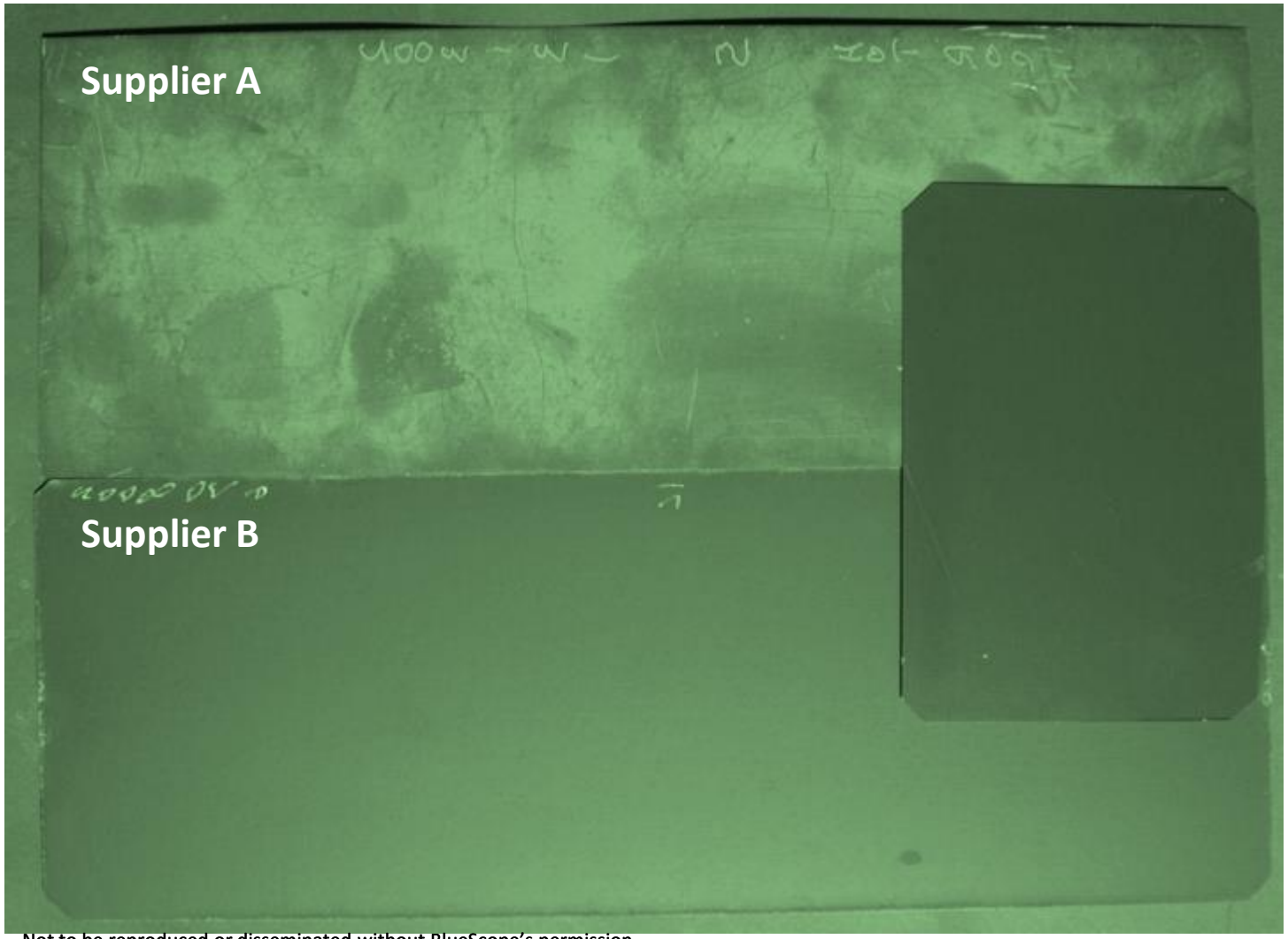


Supplier A
Exposed for 48 months

Supplier B
Exposed for 60 months

COLOUR PERFORMANCE AT SUNSHINE SITE

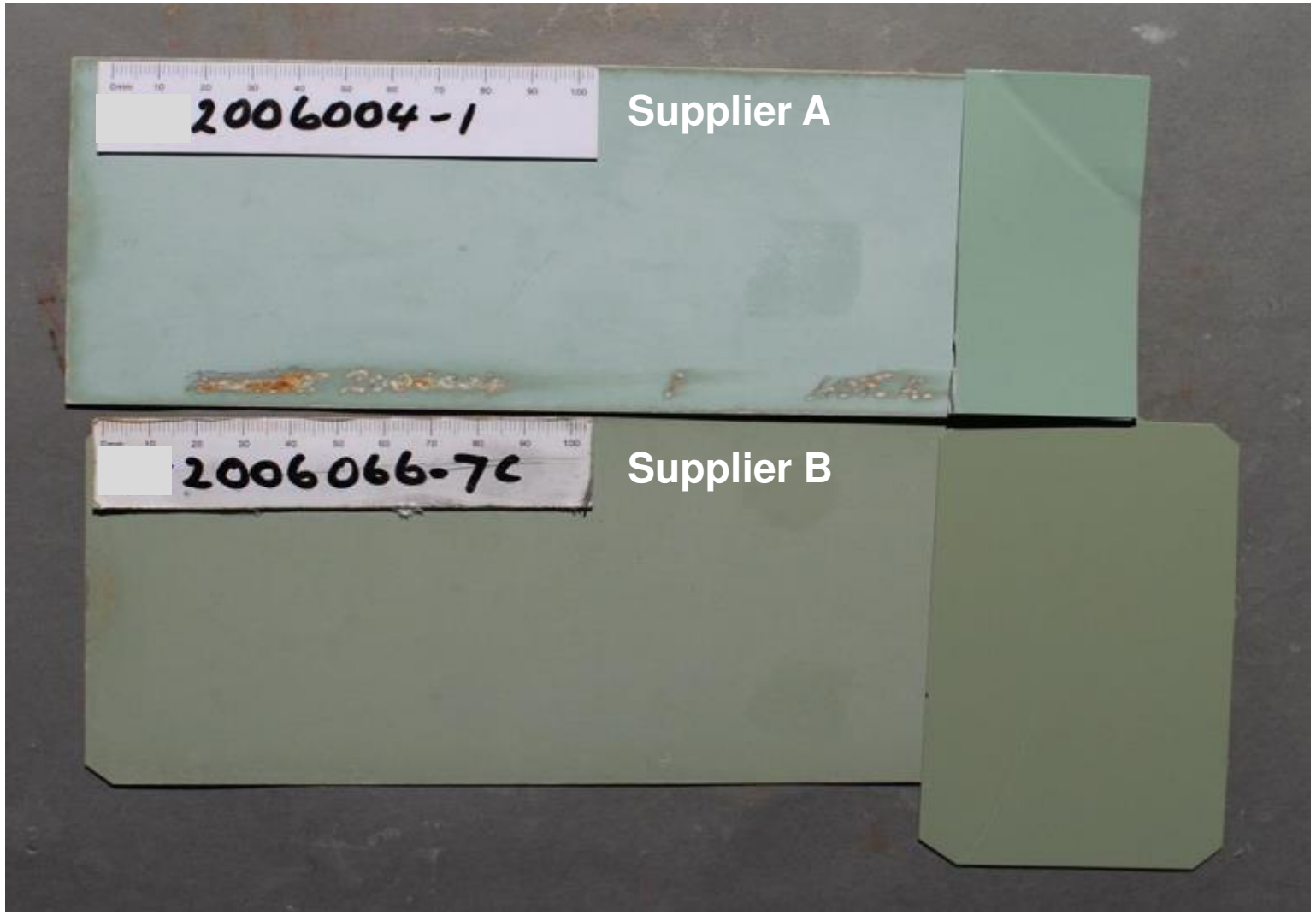
4 years exposure



Both samples originally matched this retain.

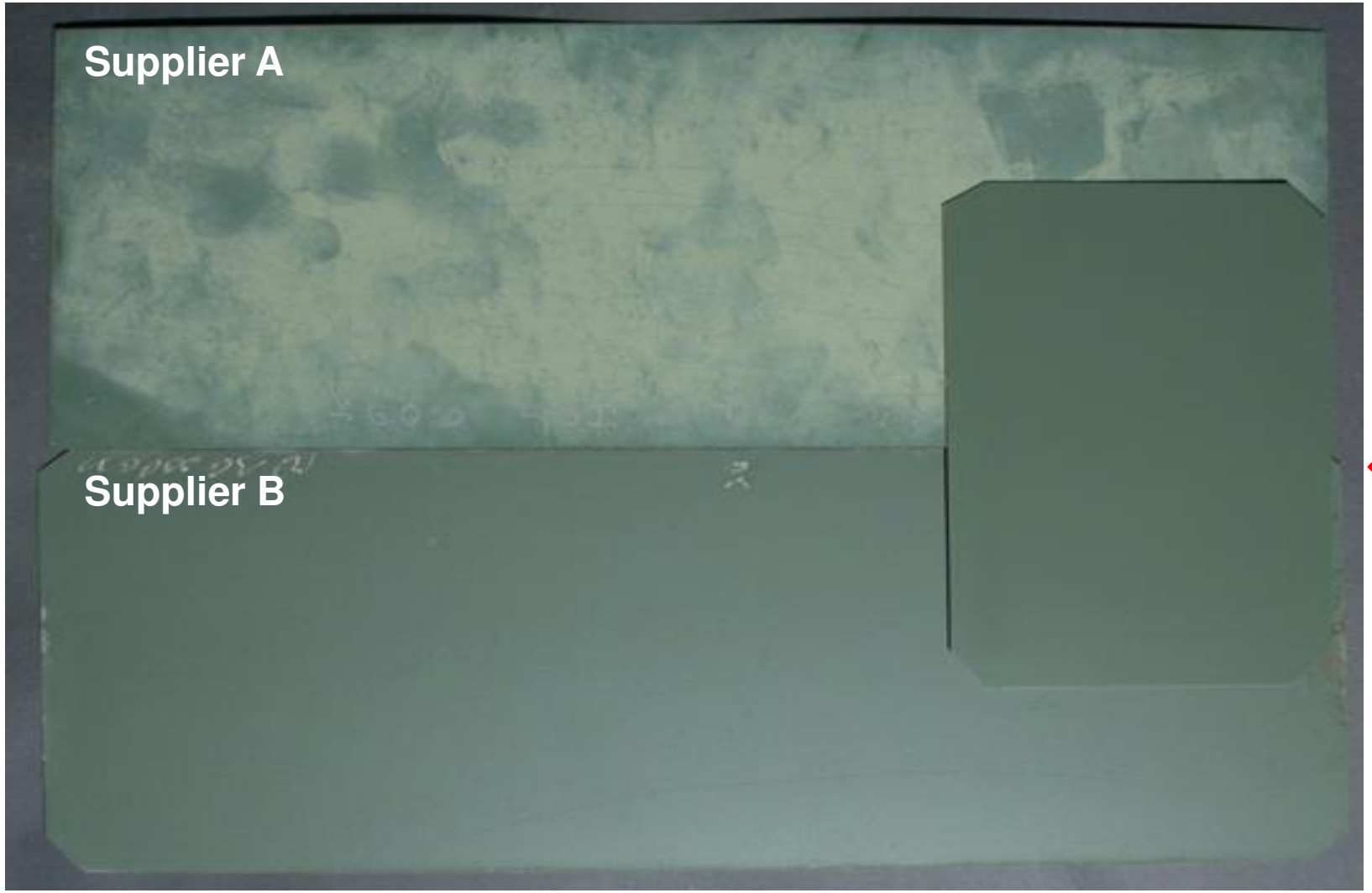
COLOUR PERFORMANCE AT SUNSHINE SITE

7 years exposure



COLOUR PERFORMANCE AT SUNSHINE SITE

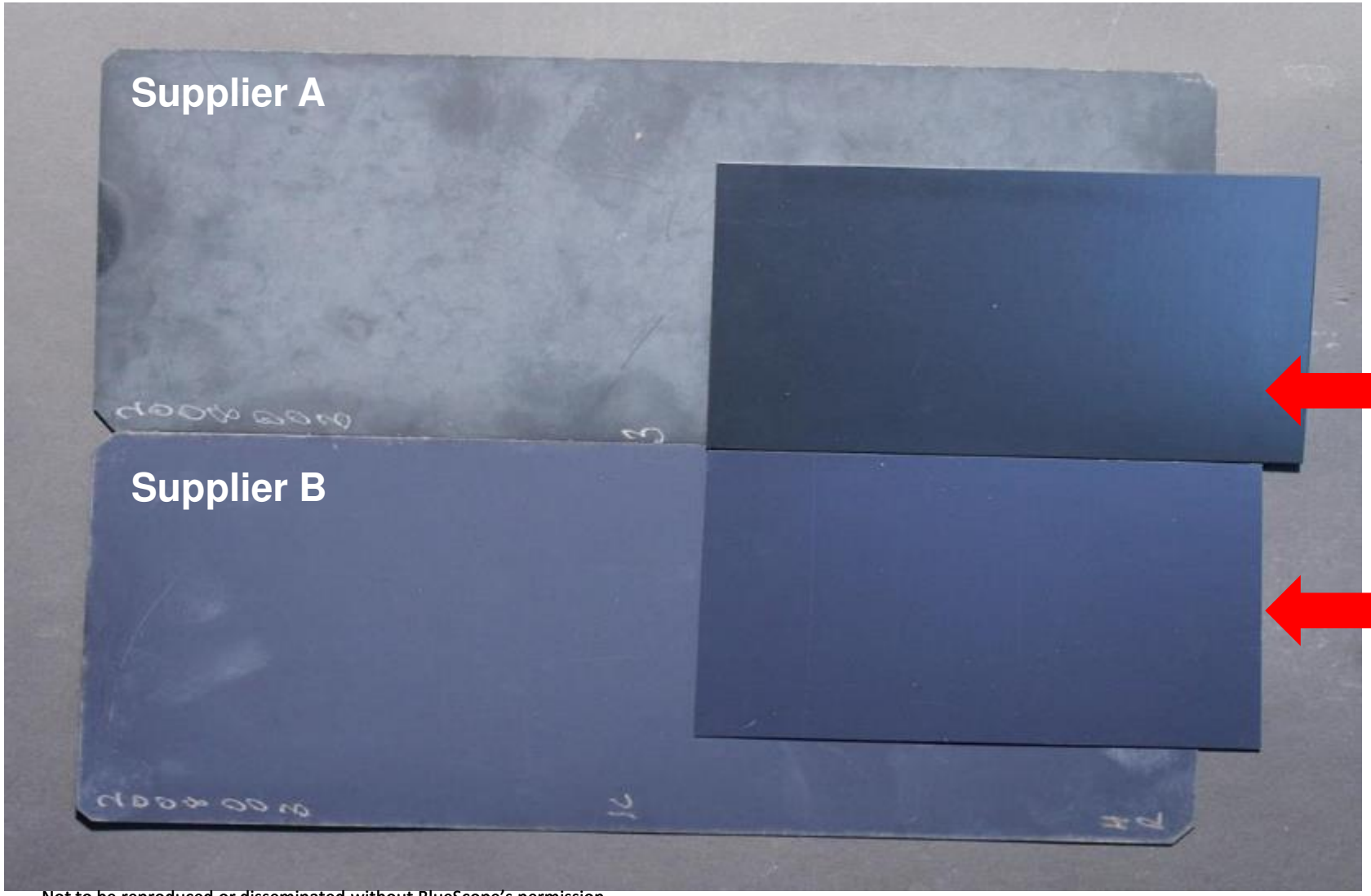
4 years exposure



Both samples originally matched this retain.

COLOUR PERFORMANCE AT SUNSHINE SITE

6 years exposure



Both samples originally matched this retain.

SEVERE MARINE EXPOSURE AT MARINE SITE

Substrate of both samples is AZ150

Supplier A
Exposed for 84 months

Supplier B
Exposed for 105 months

SEVERE MARINE EXPOSURE AT MARINE SITE

4 years exposure

- Supplier A has an epoxy primer on the top surface compared to a polyester primer on the Supplier B product. This could make the Supplier A product prone to early UV delamination of the topcoat.

- Supplier A product has a low topcoat film thickness of 12.8 microns. This could make the Supplier A product prone to early UV delamination.

Supplier A

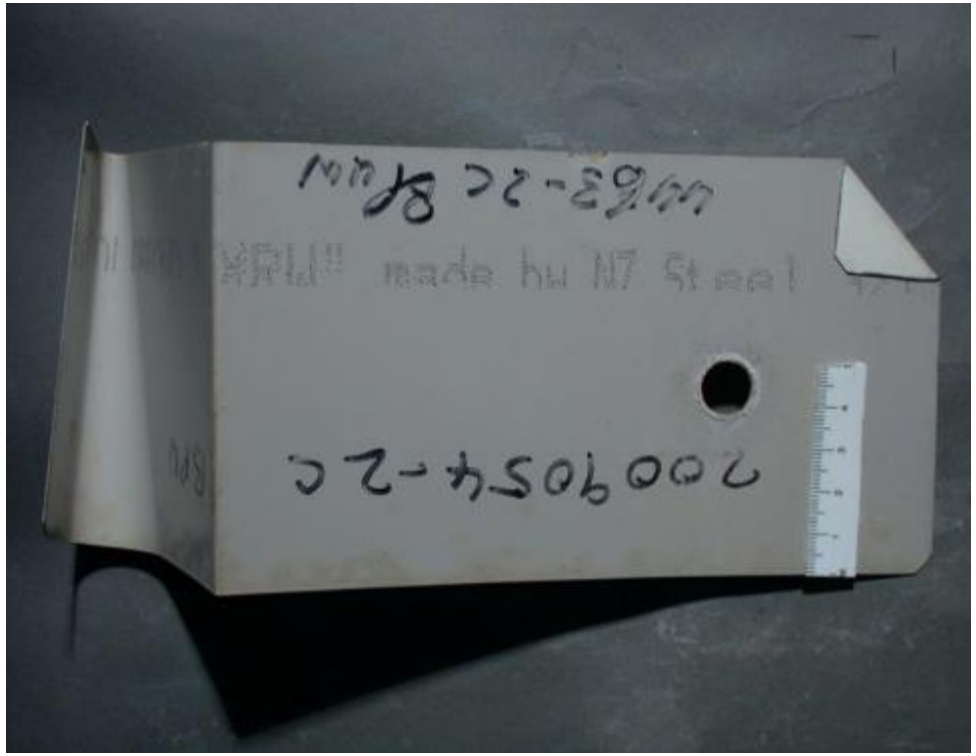
Supplier B

SEVERE MARINE EXPOSURE AT MARINE SITE

4 years exposure

- Supplier A product has a single coat epoxy backer compared with a two coat (primer and topcoat) backer on the Supplier B product. It is suspected that single coat backers give less corrosion protection than two coat backers.

Supplier A

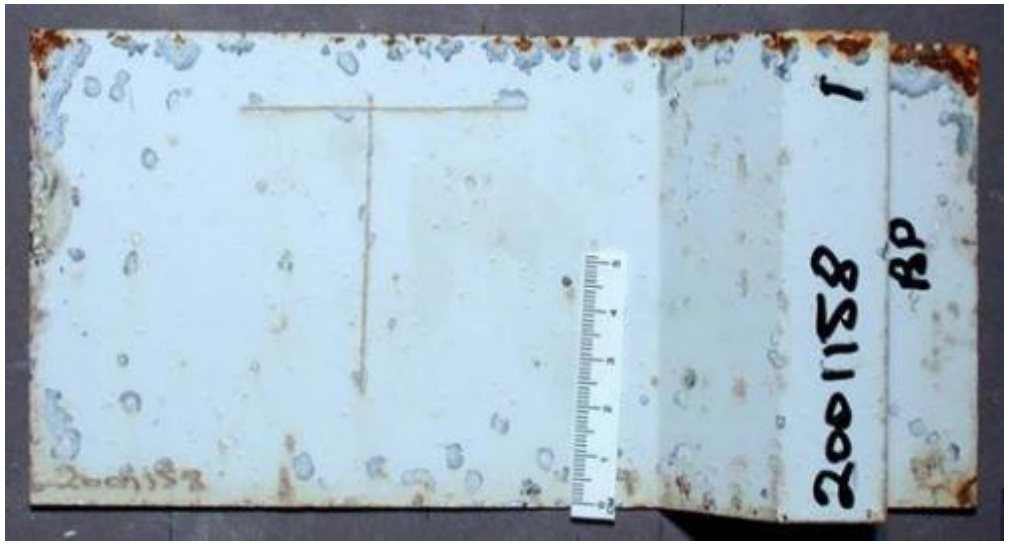


Supplier B

PRODUCT PERFORMANCE AT MARINE SITE

Supplier A

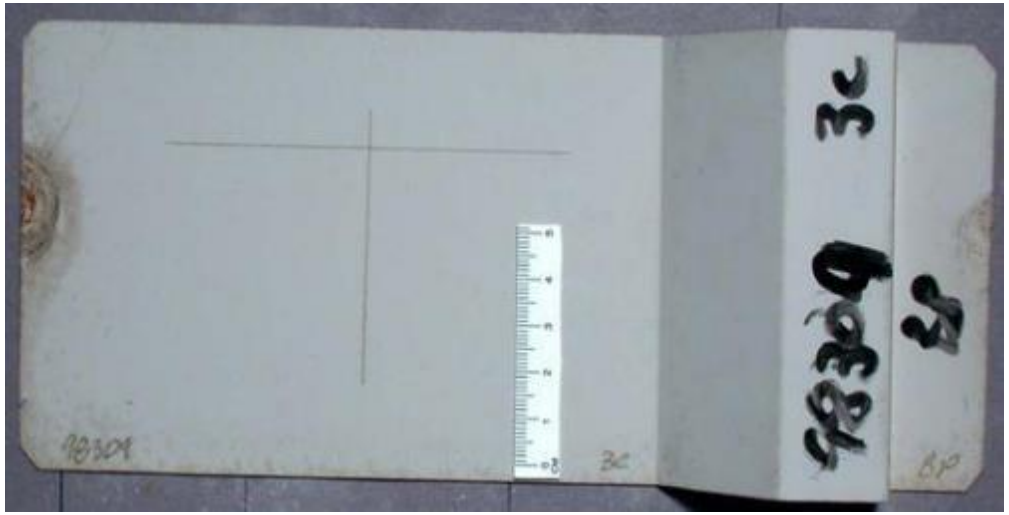
White: Z142
16µm polyester topcoat
3 µm epoxy primer



54 months

Supplier B

Grey: AZ150
18µm polyester topcoat
5 µm epoxy primer



84 months

CONCLUSION

Choosing a prefinished steel

1. Beautiful, durable and versatile
2. Identify suitable prefinished for your project design and your expectation
3. Identify a supplier or suppliers – based on your previous experience and their reputation
4. Compare the published data – technical data sheet, warranty and so on
5. Discuss you expectation including end environment, safety, suitability, supporting data….and any question of concern
6. Last but not least, consider a reputable supplier that has conducted all the above for your peace of mind

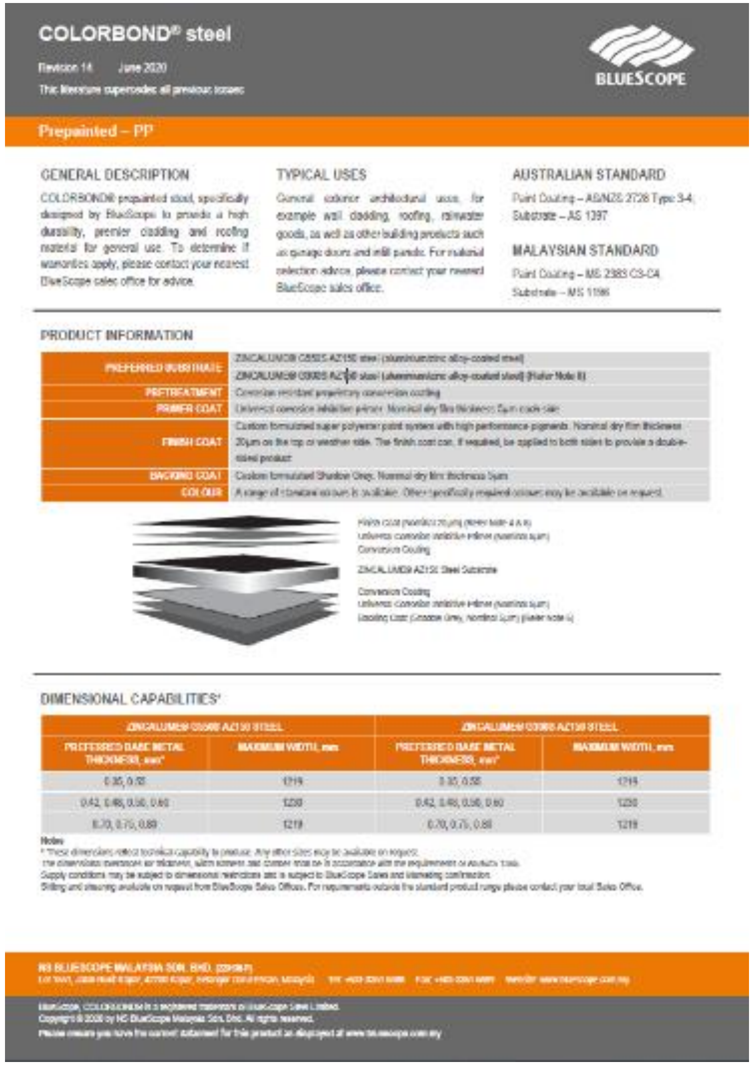
POLLING QUESTION

DIALOGUE SESSION

① PREPAINTED VS POST-PAINTED

② STANDARD OR NON-STANDARD COLOURS

3 OUTDOOR EXPOSURE VS ACCELERATED TESTS



COLORBOND® steel

Revision 14 June 2020

This literature supersedes all previous issues

BLUESCOPE

Prepainted – PP

GENERAL DESCRIPTION

TYPICAL USES

AUSTRALIAN STANDARD

MALAYSIAN STANDARD

PRODUCT INFORMATION

PREFERRED SUBSTRATE	[illegible]
PRETREATMENT	[illegible]
PRIMER COAT	[illegible]
FINISH COAT	[illegible]
BACKING COAT	[illegible]
COLOUR	[illegible]

DIMENSIONAL CAPABILITIES

COLORBOND® steel

Revision 14 June 2020

This literature supersedes all previous issues

BLUESCOPE

Prepainted – PP

RESISTANCE TO DIRT STAINING

EXPECTED PRODUCT SERVICE PERFORMANCE

ATTRIBUTES TESTED DURING MANUFACTURE

④

EVALUATE PRODUCTS FROM TECHNICAL DATASHEETS

NATA

NATA ACCREDITED LABORATORY

National Association of Testing Authorities, Australia

(ABN 59 004 379 748)

has accredited

BlueScope Steel Limited

Weathering Laboratory

Port Kembla Laboratory

following demonstration of its technical competence to operate in accordance with

ISO/IEC 17025

This facility is accredited for the tests shown on the *Scope of Accreditation* issued by NATA

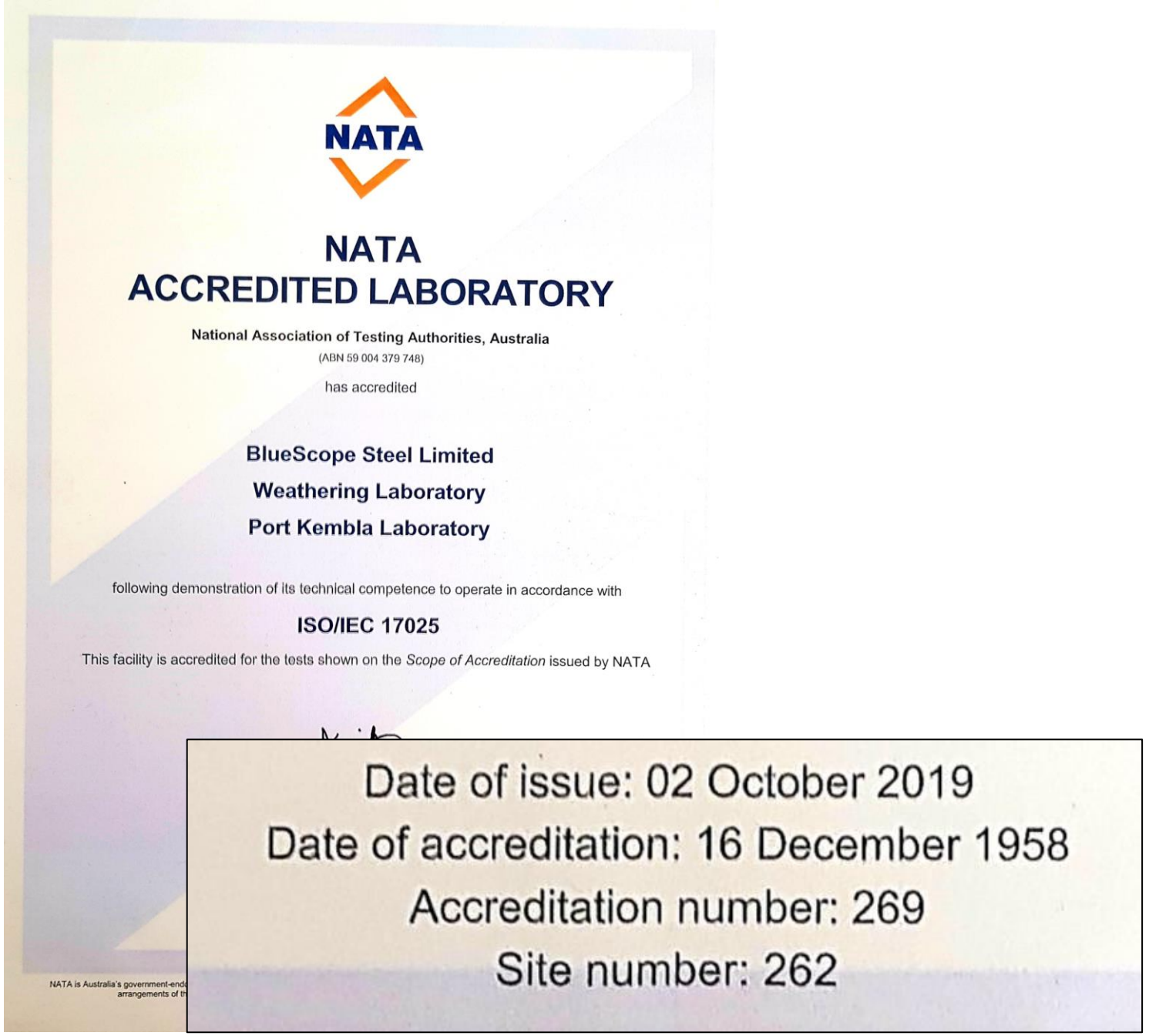
Jennifer Evans
Chief Executive Officer

Date of issue: 02 October 2019
Date of accreditation: 16 December 1958
Accreditation number: 269
Site number: 262

NATA is Australia's government-endorsed accreditor of laboratories, and a leader in accreditation internationally. NATA is a signatory to the international mutual recognition arrangements of the International Laboratory Accreditation Cooperation (ILAC) and the Asia Pacific Accreditation Cooperation (APAC).

AP8-1-9 / Issue 5 / May 2019

ACCREDITED LABS CERTIFICATION



NATA

NATA ACCREDITED LABORATORY

National Association of Testing Authorities, Australia

(ABN 59 004 379 748)

has accredited

BlueScope Steel Limited

Weathering Laboratory

Port Kembla Laboratory

following demonstration of its technical competence to operate in accordance with

ISO/IEC 17025

This facility is accredited for the tests shown on the *Scope of Accreditation* issued by NATA

Date of issue: 02 October 2019

Date of accreditation: 16 December 1958

Accreditation number: 269

Site number: 262

NATA is Australia's government-end
arrangements of th

ACCREDITED LABS CERTIFICATION

BlueScope

steel CONNECT

QUESTIONS & ANSWERS

BlueScope

steel CONNECT

Colorbond VERMOE Zincalume TrueCore

events@bluescope.com.my

NS BlueScope Malaysia