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1 August 2022

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JOB NO: 2021.79

Arenco (NSW) Pty Ltd
184 Adderley Street West
Auburn NSW 2144

Our Ref: 2021.79-PremierDek20

Attention: Mr Zani Buzevski

**STRUCTURAL PremierDek20 ON-SITE TEST OBSERVATION REPORT FOR
THE PRECAST GIRDER AT ST LEONARDS PLAZA.**

Dear Zani,

We advise that a qualified structural engineer from this office has observed the on-site test loading on PremierDek20 0.75mm BMT at Truedek Steel Decking Solutions factory located at 229 Newton Road, Wetherill Park on 1 August 2022. The test rig was set up for is as shown in Photo 1.

The test was setup to match the width of the Super-T precast girder bridging width of 835mm clear (Refer to Drawing CV0827734 Rev A). The test was carried out using 0.75mm BMT PremierDek 20 for equivalent wet concrete thickness of 350mm (892kg) and additional live load of 400kg. The required total weight is therefore 1292kg. We understand that Arenco intended to use the 1.0mm BMT PremierDek 20 for this project.

The on-site test was done using steel coil weight of 1145kg and 15kg of timber as dead weight (Refer Photo 2). The combine dead weight is 1160kg. The test was not carried out to the required 1292kg as the material thickness used for the test rig is 0.75mm and not 1.0mm as intended for on-site installation. However, the weight difference is only 132Kg (1292kg -1160kg = 132kg).

The intention of the test is to ensure that there is no bearing slippage and plastic yielding of the sections. The average deflection of the PremierDek is 8.0mm based on 0.75mm BMT for 1160kg (Refer Photo 3 to 6). With 1.0mm BMT and 1292kg the anticipated calculated deflection is approximately 4.0mm. There was no observable slippage at the bearing ends and the section is still elastic when unloaded. The bearing width was 25mm at each side and is therefore sufficient. We advised that the PremierDek 20 1.0mmBMT is structural adequate for the St Leonard's Plaza project.

In undertaking this review, we have exercised the same degree of skill, duty of care and diligence normally exercised by consulting engineers in a similar circumstance.

Should you have any queries, please do not hesitate to contact Michael Chuah on 0414 405 005.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Michael O.K. Chuah', with a horizontal line underneath.

Michael O.K. Chuah
B.E., M.I.E.Aust. (891675),
C.P.Eng, NER (Civil/Struct)
ACCREDITED CERTIFIER (STRUCTURAL)



Photo 1: The test rig.



Photo 2: The steel 1145kg steel coil and timber loading.



Photo 3: The deflection on the 0.75mm BMT PremierDek 20 at time of loading.

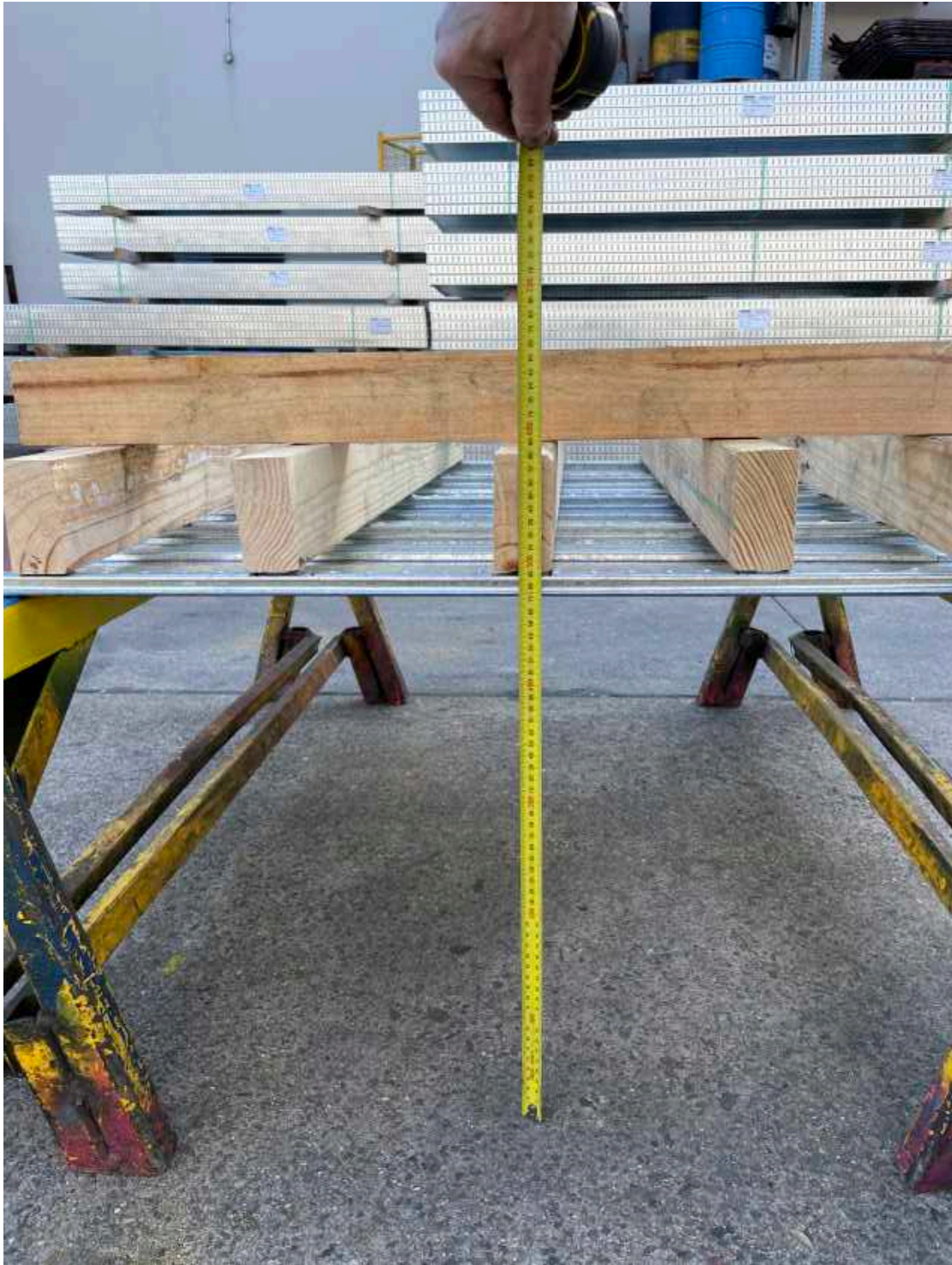


Photo 4: The 0.75mm BMT PremierDek 20 after unloading.



Photo 5: The deflection on the 0.75mm BMT PremierDek 20 at time of loading.

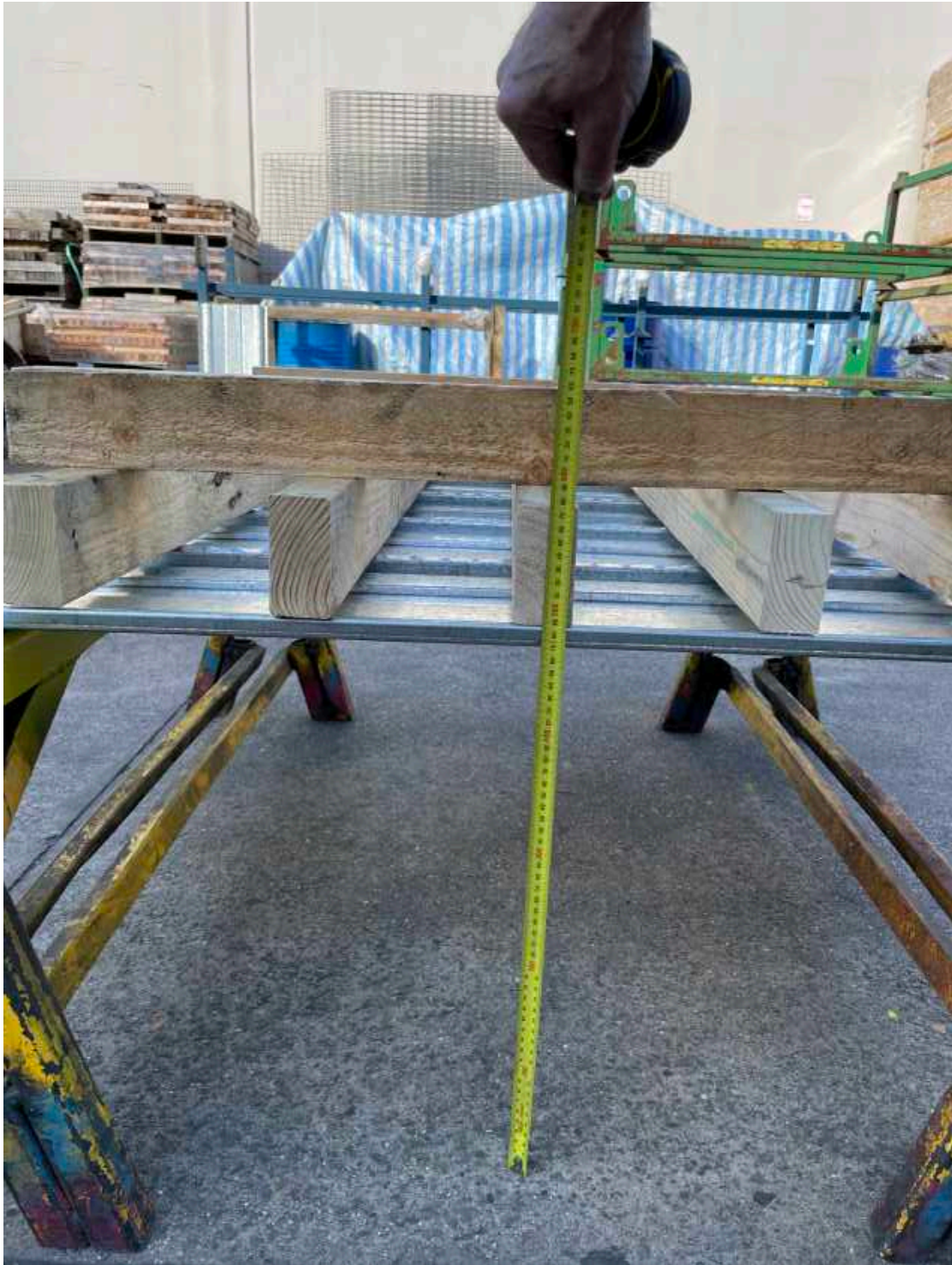


Photo 6: The 0.75mm BMT PremierDek 20 after unloading.