Keays Engineering

First Floor
367 North Road
Caulfield South 3162
Victoria Australia

Phone & Fax:
(03) 9578 5844

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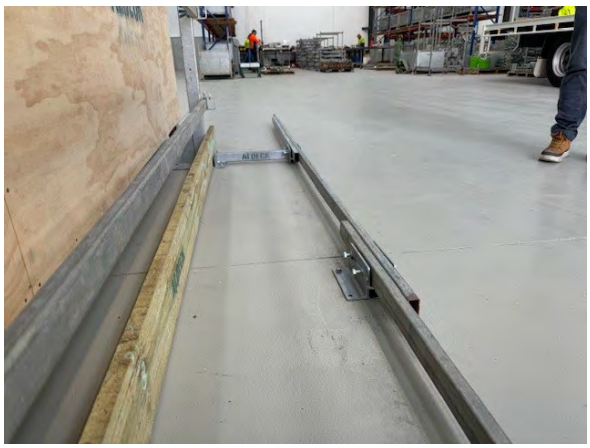
Anton Buenemann
Aldeck Group
1 Jutland Way,
Epping Vic 3076

Dear Anton,

ALDECK BUMPER STOP
STRUCTURAL DESIGN CERTIFICATION

1. The Aldeck Bumper Stop is a system designed to provide an additional layer of protection to prevent mobile construction access equipment (scissor-lifts etc) from unnecessarily hitting the handrail system and potentially falling over the edge of floors on buildings during the construction process.

2. The Bumper Stop rail is a 50x25RHS set approximately 30mm above floor level, and about 400mm inside the Handrail System. It is secured to the handrail at each post by a steel strut, and two M8x60mm screw bolts as illustrated in the photos below. Intermediate brackets are also fixed to the floor at approximately 1.5m centres with at least one M8x60mm, again as per the picture below. (Sitting the RHS 30mm above the floor gives the bar an overall height of about 80mm, allowing dewatering without hindrance from the bumper stop system.)



3. I witnessed testing of the system using a standard 19’ Scissorlift. It was successful in stopping the machine when operating at the crawl speed setting.

4. I also witnessed the 19’ scissor lift hit the Bumper Stop at full pace. During this test the scissor lift hit the Bumper Stop and jumped over it. The scissor lift then completely stopped as it became wedged on top of the bumper rail, and lost all momentum, and did not impact the handrail system.

5. I have checked the bumper stop system and I am satisfied that is it will provide a significant additional layer of protection in preventing mobile plant from hitting into the handrail system and potentially falling over the edge of the building whilst it is in place. At this point I would normally refer to an Australian standard,

but as there is not one relating to this system, I can only say that I am satisfied that the system will perform as intended.

6. It is recommended that mobile plant be operated only at the crawl-speed setting when in the vicinity of the handrail.

7. Further photos of the tests are shown below.

Yours faithfully,

Dr Russell Keays, BE, PhD, FIEAust
RBP EC-2223