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**BLIGH  
TANNER**

6 December 2019

Ref. No 2019.0555

Vaughan Brown  
PSP  
320 Rosedale Road,  
Albany, Auckland, New Zealand

Dear Sir

**Subject: ALPOLIC A2**

I have reviewed the Performance Test Report No. 15/02 by Facadelab, dated July 2017, which confirms the performance of a wall assembly consisting of aluminium composite panel cassettes supported on a structural sub frame and sealed to aluminium framed windows. The testing was undertaken in accordance with AS/NZS 4284:2008 Testing of Building Facades to the following performance requirements:

- Serviceability Wind Pressure  $\pm 1750$  Pa,
- Water penetration by Static pressure;  $+ 525$  Pa
- Water penetration by Cyclic pressures up to  $+ 525$  to  $+ 1050$  Pa
- Structural Test at Ultimate Limit State  $\pm 2500$  Pa

Panel Deflections at Serviceability and Ultimate pressure were not measured however no damage or permanent deflection was observed. Panel deflection may be determined by use of Finite Element analysis software with the model incorporating the cassette stiffeners and support frame structure.

The wall assembly tested, utilised the Mitsubishi ALPOLIC/fr aluminium composite material product in the cassette fabrication. ALPOLIC/fr consist of outer skins of 0.5mm coated Aluminium sheet (3105-H14 alloy) with a mineral core inclusive of up to 30% PE (Polyethylene).

Mitsubishi have developed a structurally equivalent product, ALPOLIC A2 which has significantly lower proportion of PE in the mineral core for improved fire performance. The A2 product has identical 0.5mm outer aluminium skins. With equivalent structural and weatherproofing properties of ALPOLIC A2 to ALPOLIC/fr between panels of the same thickness, substitution of ALPOLIC A2 for ALPOLIC/fr would yield the same performance in the assembly tested in the aforementioned Test Report. Fabrication and Installation methods for ALPOLIC A2 are identical to ALPOLIC/fr.

Yours faithfully,



**Rod Bligh BE MSc (Structures) FIEAust CPEng APEC Engineer IntPE ( Aust)**  
Director  
BLIGH TANNER PTY LTD