



# KOIKAS ACOUSTICS PTY LTD

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## ACOUSTIC CERTIFICATE STATEMENT 50 mm LOXO PANEL EXTERNAL WALL SYSTEM

Calculations were undertaken by Koikas Acoustics utilising a software program called Insul V6.4.13 of eight (8) 50 mm Loxo panel external wall systems. This software program reports accuracy of  $\pm 3$  Rw rating points.

The 50 mm Loxo Panel External Wall Systems are to be constructed of the following building materials:

- One layer of 10 mm thick plasterboard on the internal side;
- One layer of R1.5 insulation batts on the inner side of the plasterboard and fitted between timber/steel studs;
- 20 or 40 mm cavity battens, and
- One layer Loxo 50 mm aerated autoclaved concrete (AAC) panel on the external side.

Following is a summary of the calculated acoustic ratings of the eight wall systems:

50 mm Loxo Panel External Wall System	Rw [dB]	Ctr [dB]	Rw + Ctr [dB]
1. 70 mm timber studs + 20 mm cavity battens	45	-4	41
2. 70 mm timber studs + 40 mm cavity battens	45	-3	42
3. 90 mm timber studs + 20 mm cavity battens	45	-3	42
4. 90 mm timber studs + 40 mm cavity battens	45	-3	42
5. 76 mm steel studs + 20 mm cavity battens	53	-7	46
6. 76 mm steel studs + 40 mm cavity battens	53	-6	47
7. 92 mm steel studs + 20 mm cavity battens	53	-6	47
8. 92 mm steel studs + 40 mm cavity battens	54	-6	48

Furthermore, if the Loxo 50 mm aerated autoclaved concrete (AAC) panel was to be replaced with the Loxo 75 mm AAC panel, the Rw rating will increase by approximately 2 dB.