

Sound Test to Measure Effect of Outbuilding

At Driftwood Café, Emsworth

Date

Test Conducted @16:00 to 17:00 Hours on 29.04.19

Weather

14°C – Dry, Clear sky, Wind 7mph SSW

Source

A pre recorded noise was used to establish a constant noise. We could not accurately use the café in use as we would need the customers to make the same level of noise for the variables of the roof and doors. The customer noise would not be constant and would vary according to customer numbers, personality and type of group etc.

With the constant background noise on the tests and then changed the variables of the roof, doors etc at varying distances. What we are trying to establish is not the actual noise but the effects of the building on the noise at various distances.

Results

				Outside Out Building	
Noise	Roof Position	Doors	In Outbuilding	2.5m	5m
On	Open	Closed	61	44	46
On	Open	Open 50 %	59	49	46
On	Open	Open 100%	57	48	46
On	Closed	Closed	62	48	46
On	Closed	Open 50 %	51	48	46
On	Closed	Open 100%	55	48	46
Off	Open	Closed	42	46	46
Off	Open	Open 50 %	44	46	46
Off	Open	Open 100%	45	46	46
Off	Closed	Closed	45	46	46
Off	Closed	Open 50 %	45	46	46
Off	Closed	Open 100%	45	46	46

Interpretation.

- The Acoustic treatments have dampened the noise. The combination of the, timber slatted wall, chair covers and mainly the carpet have reduced the hard surfaces that previously bounced the sound back / around.
- The acoustic comfort within the structure has increased. It is noticeably quieter and sounds are absorbed.
- With the roof closed we had to increase the volume [than previously] on the sound source to get a similar level to the previous experiment. The 61db source is louder than the average noise made by the occupants of the enclosure normally.
- The back ground noise [or road/ village life etc] is about 46 db and louder than the noise of structure at 2.5 / 5m.