

Sound Test to Measure Effect of Outbuilding

At Driftwood Café, Emsworth

Date

Test Conducted @08:00 to 09:00 Hours on 19.10.18

Weather

10°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 constant 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	66	49	48
On	Open	Open 50 %	65	66	63
On	Open	Open 100%	65	57	54
On	Closed	Closed	68	52	50
On	Closed	Open 50 %	68	58	55
On	Closed	Open 100%	67	60	56
Off	Open	Closed	45	47	47
Off	Open	Open 50 %	46	47	47
Off	Open	Open 100%	47	47	47
Off	Closed	Closed	42	47	47
Off	Closed	Open 50 %	45	47	47
Off	Closed	Open 100%	46	47	47

Interpretation.**When the noise is active**

- The roof and the doors in the closed position had an effect of reducing the noise that is outside the enclosure [by about 4 to 5db]
- The noise inside the outbuilding is greater with the roof and doors closed.

When the noise is not active

- The roof and doors have the effect of shielding noise from outside to inside – ie it is quieter within the enclosure.

Observations.

- The interior of the enclosure and its structure consists of mainly hard surfaces and as such there is little sound absorption. Changing some of these materials for a more sound absorbent material will reduce the reverberation.
- Agreeing to close the roof at a pre set time would reduce the sound to adjoining properties.