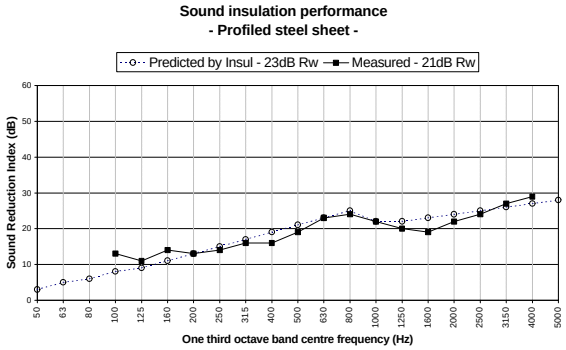
INSUL

Examples of Predicted vs Measured Sound Insulation Performance

Example 9
Profiled Steel Sheet

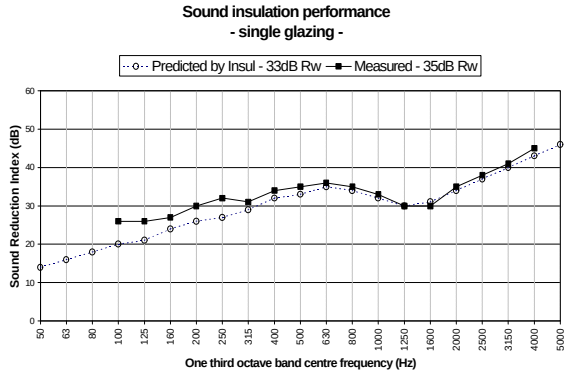
Kliplock 0.7mm corrugated steel sheet



	One Third Octave Band Centre Frequency (Hz)																				
	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
Predicted by Insul - 23dB R_w	3	5	6	8	9	11	13	15	17	19	21	23	25	22	22	23	24	25	26	27	28
Measured - 21dB R_w				13	11	14	13	14	16	16	19	23	24	22	20	19	22	24	27	29	

Example 10
Glazing

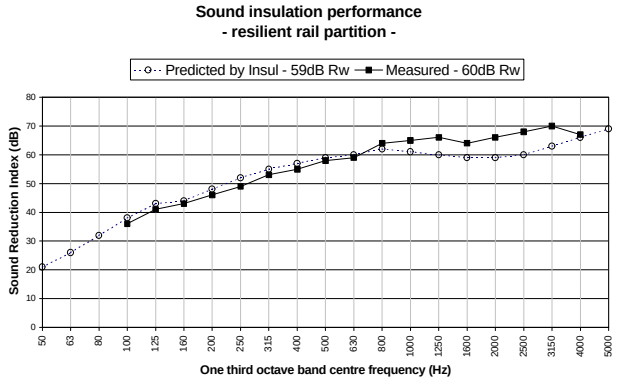
3/8” (9.5mm) single glazing



	One Third Octave Band Centre Frequency (Hz)																				
	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
Predicted by Insul - 33dB R_w	14	16	18	20	21	24	26	27	29	32	33	35	34	32	30	31	34	37	40	43	46
Measured - 35dB R_w				26	26	27	30	32	31	34	35	36	35	33	30	30	35	38	41	45	

Example 11
Resilient Rail

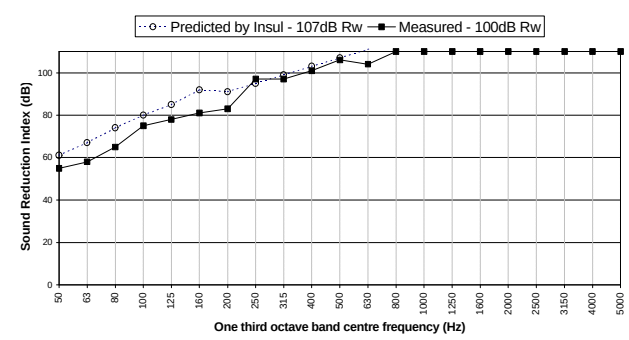
2 layers of 12.5mm plasterboard on one side of a 100x50mm timber stud, with two layers of 12.5mm plasterboard on a resilient rail on the other side



	One Third Octave Band Centre Frequency (Hz)																				
	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
Predicted by Insul - 59dB R_w	21	26	32	38	43	44	48	52	55	57	59	60	62	61	60	59	59	60	63	66	69
Measured - 60dB R_w				36	41	43	46	49	53	55	58	59	64	65	66	64	66	68	70	67	

Example 12
Anechoic room wall

300mm thick concrete outer shell with 150mm thick inner concrete shell, floating on springs. Absorption in the cavity.



	One Third Octave Band Centre Frequency (Hz)																				
	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
Predicted by Insul - 107dB R_w	61	67	74	80	85	92	91	95	99	103	107	111	115	119	123	127	131	135	139	143	147
Measured - 100dB R_w	55	58	65	75	78	81	83	97	97	101	106	104	110	110	110	110	110	110	110	110	110