

Calculation Sheet 1 (Rev A) - Plant sound levels

Line	Details					dBA	Notes
1	Sound pressure level (Lp) 1m from CVP					62	Manufacturer's data
	Unit dimensions & area correction	1240	785	1680	41.3	16	Correction = $10 \log_{10}(\text{Area})$
	CVP sound power level (Lw)					78	Lp + Area Correction
2	Approx. area 5m from CVP					-17	$-10 \log_{10}(\text{Area})$
	Calculated Lp 5m from CVP		47			61	Lines 1 + 2
3	Measured level 5m from CVP					61	From Graph 1
4	Measured level at enclosure face					75	From Graph 1
	Enclosure open area & correction				2	3	Correction = $10 \log_{10}(\text{Area})$
	Calculated CVP Lw					78	Sum of above
5	Attenuation System Insertion Loss					-26	
6	Attenuated CVP Lw					52	Lines 4 + 5
7	Attenuated Lp 5m from CVP					35	Lines 3 + 5
8	Background level ($L_{A90,T}$)					40	
9	Difference to background level					-5	Lines 7 - 8
10	Difference between 5m level and in nearest bedroom					-14	Assuming open window
11	Corresponding level in nearest bedroom					21	Lines 7 + 10