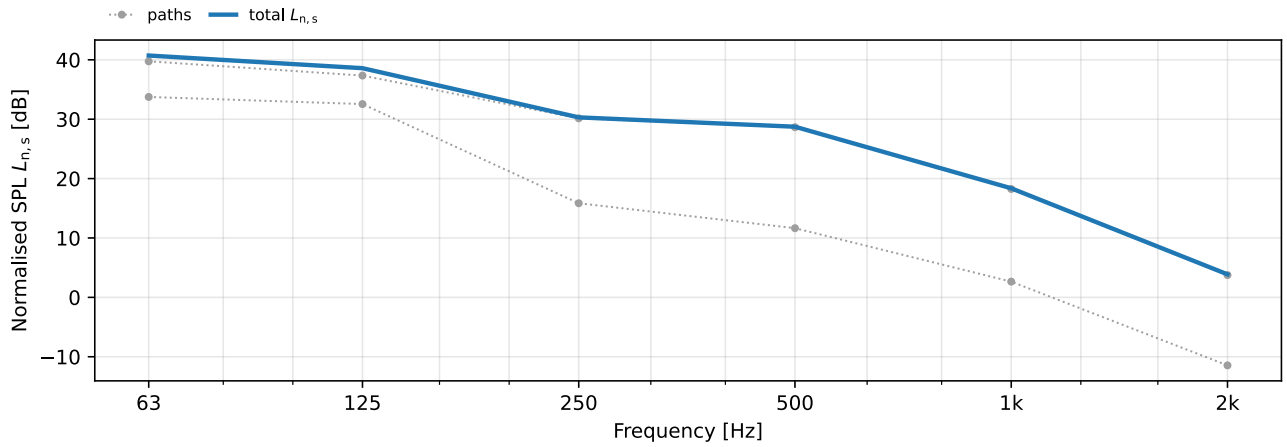
Predicted installed structure-borne sound

Predicted normalised structure-borne sound pressure level $L_{n,s}$ in the receiving room from building service equipment, estimated in accordance with EN 12354-5:2009 (installed power Formula 18b, per-path Formula 18a, energetic path sum Formula 17). This is a prediction from the characteristic source power and the transmission paths, not a measurement.

Client:	Example dwelling refurbishment	Noise source:	WC flushing cistern (wall-fixed)
Test environment:	Receiving room: adjacent bedroom	Instrumentation:	Predicted from EN 15657 source data and element mobilities
Date of test:	2026-07-21		

Octave-band normalised structure-borne SPL by path

f [Hz]	$L_{Ws,inst}$ [dB]	$L_{n,s}$ [dB]
63	68.2	40.7
125	66.3	38.6
250	53.7	30.3
500	51.4	28.7
1000	45.4	18.4
2000	33.7	3.9



Predicted normalised SPL $L_{n,s}$ = **43.2 dB**

Installed power total $L_{Ws,inst}$ = 70.5 dB re 1 pW
Transmission paths: 2
Prediction (EN 12354-5:2009), not a measurement.

Result vs requirement: $L_{n,s}$ = 43.2 dB, declared limit ≤ 45.0 dB → **PASS**

$L_{n,s,ij} = L_{Ws,inst,i} - D_{sa,i} - R_{ij,ref} - 10\ \lg(S_i/S_0) - 10\ \lg(A_0/4)$, $S_0 = A_0 = 10\ m^2$ (EN 12354-5:2009 Formula 18a), with the installed power $L_{Ws,inst,i} = L_{Ws,c} - D_{C,i}$ (Formula 18b) and the energetic path sum $L_{n,s} = 10\ \lg(\Sigma_j\ 10^{L_{n,s,ij}/10})$ (Formula 17).

Predicted (estimated) result computed from the characteristic structure-borne source power and the building transmission paths by the EN 12354-5:2009 model; it is not a measurement. The accuracy depends on the input source and element data.

Laboratory: Phonometry reference example
Report no.: EXAMPLE-12354-5
Date: 2026-07-21
Notes: Predicted installed structure-borne sound (EN 12354-5:2009, Formulae 17/18); prediction, not a measurement.
Operator: phonometry Signature: _____

■ Predicted result: the values relate only to the modelled configuration, not to a tested specimen.