

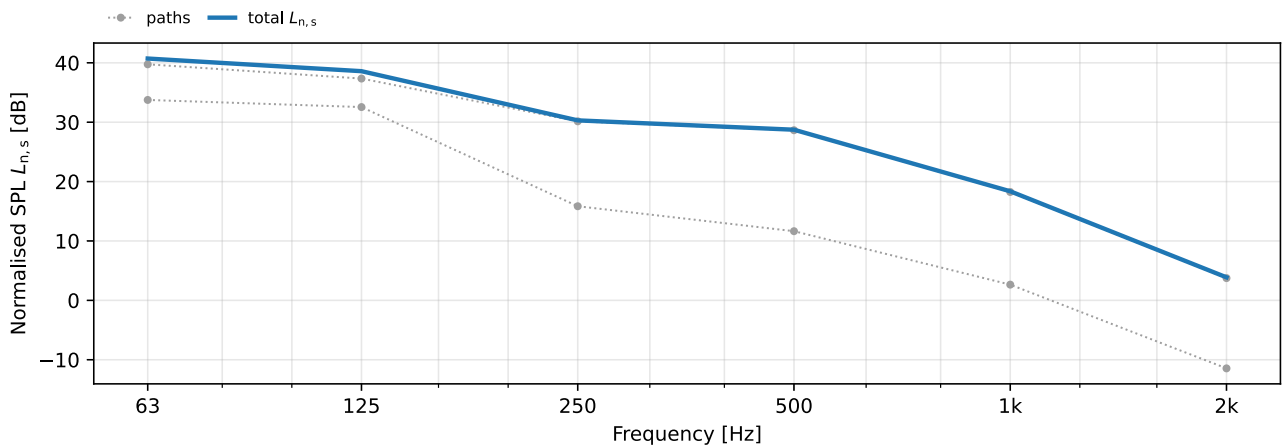
# Predicted installed structure-borne sound

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] | $L_{W_{s,inst}}$ [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  $L_{W_{s,inst}} = 70.5$  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  $\leq 45.0$  dB → **PASS**

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

Generated by phonometry.