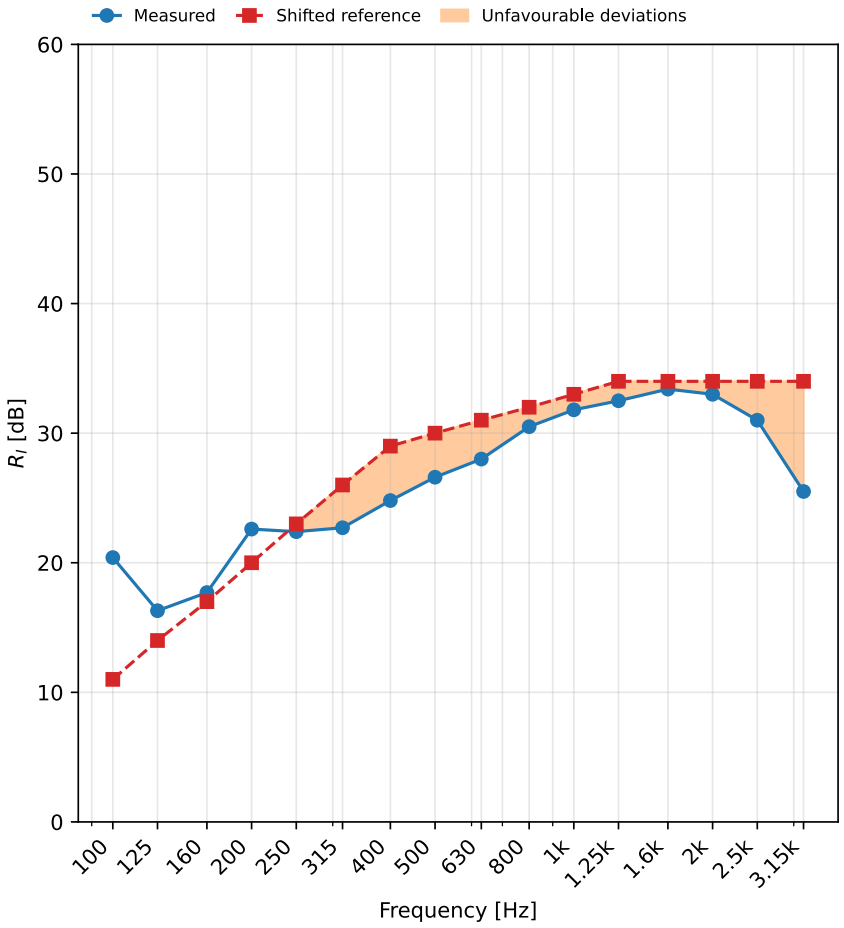
Laboratory sound insulation by sound intensity

Intensity sound reduction index R_I measured in accordance with ISO 15186-1:2000 (transmitted sound power measured directly with an intensity probe). Rating per ISO 717-1:2020.

Client:	Example client	Sample area S [m²]:	10
Manufacturer:	Example blockworks	Description:	100 mm autoclaved aerated concrete block wall
Test room:	Transmission suite (example)	Date of test:	2026-07-21
Source room volume [m³]:	53	Receiving room volume [m³]:	50
Receiving room temp. [°C]:	20.8	Receiving room humidity [%]:	46
Ambient pressure [kPa]:	101.3	Mass per unit area [kg/m²]:	75
Mounting:	Type A mounting, mortar-bedded perimeter (ISO 10140-1)		

One-third-octave R_I [dB]

Frequency f [Hz]	R_I [dB]
100	20.4
125	16.3
160	17.7
200	22.6
250	22.4
315	22.7
400	24.8
500	26.6
630	28.0
800	30.5
1000	31.8
1250	32.5
1600	33.4
2000	33.0
2500	31.0
3150	25.5



$R_{I,w}$ (C; C_{tr}) = **30 (-2; -3) dB**

Evaluation based on laboratory measurement results obtained by the sound-intensity method (transmitted sound power measured directly over the measurement surface). S = 10 m²; S_m = 12 m² (ISO 15186-1:2000 Clause 8).

Result vs requirement: $R_{I,w}$ = 30 dB, required ≥ 30 dB → **PASS**

Laboratory: Phonometry reference example
Report no.: EXAMPLE-15186-1
Date: 2026-07-21
Operator: phonometry Signature: _____

■ The results relate only to the tested specimen.