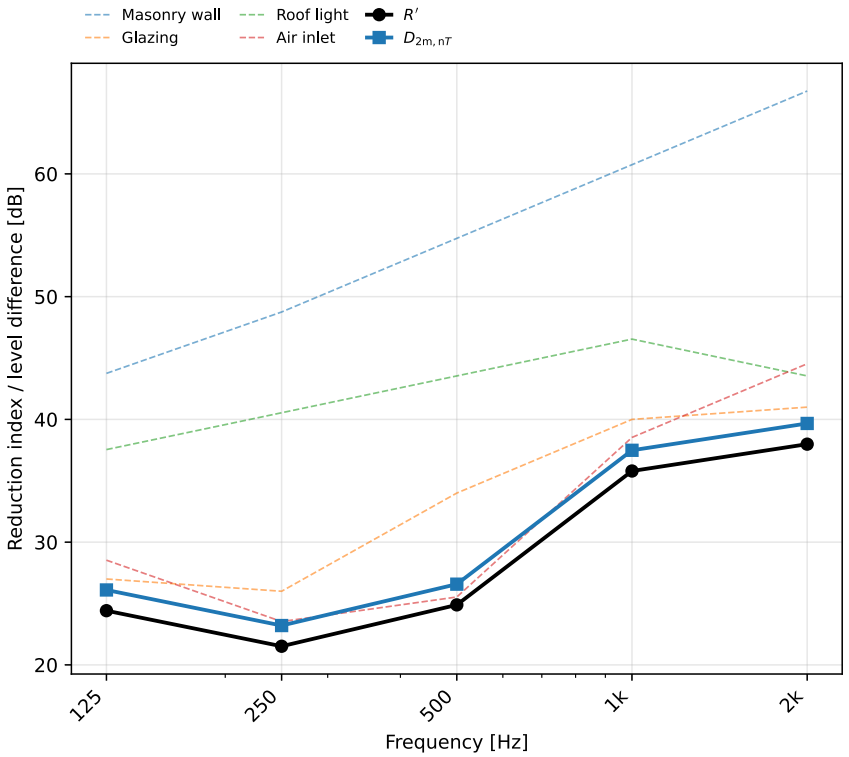
Predicted facade sound insulation

Predicted standardized level difference of a facade $D_{2m,nT}$ (the envelope elements' apparent sound reduction index R′ combined energetically with the room geometry) estimated in accordance with EN 12354-3:2000 (simplified model, Formula 13). This is a prediction from element data, not a measurement. $D_{2m,nT,w}$ (with apparent index $R'_{tr,s,w}$ = 31 dB and C_{tr} = –3 dB) per ISO 717-1.

Client:	Example client	Sample area S [m²]:	11.3
Description:	Masonry wall + window + roof light + air inlet (Annex F)	Test room:	Road-traffic facade, flat reflecting (ΔLfs = 0 dB)
Date of test:	2026-07-21	Receiving room volume [m³]:	50

Facade elements $R_{p,w}$ [dB]

Masonry wall	59
Glazing	37
Roof light	45
Air inlet	33



$D_{2m,nT,w}$ = 33 dB

Predicted (estimated) result computed from the building elements' performance by the EN/ISO 12354 simplified single-number model; it is not a measurement. The reported standard deviation of the model is about 2 dB.

Result vs requirement: $D_{2m,nT,w}$ = 33 dB, required ≥ 30 dB → **PASS**

Laboratory: Phonometry reference example
Report no.: EXAMPLE-12354-3
Date: 2026-07-21
Notes: Envelope: masonry wall Rw = 52, window 30, roof light 30, air inlet Dn,e (small element). Flat facade, ΔLfs = 0 dB (Annex C). Energy summation of transmission factors (Formula 10 / 13).
Operator: phonometry Signature: _____

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