



Speech Privacy Potential (SPP)

The Speech Privacy Potential (SPP) is an industry standard measurement used to express the degree of speech privacy in open and closed spaces.

SPP is expressed as a percentage and can be calculated by adding together the **Weighted Apparent Sound Index (R'w dB)**, and the **Noise Rating (NR)** of mechanical service noise levels.

By first measuring the NR of a space (the NR will vary at different locations around the building), we can set the specification for the partition and/or ceiling construction to ensure we obtain the correct Speech Privacy Protection levels for individual rooms and areas. These levels are described fully in the table at the foot of the page and range from total privacy (>85) to no privacy (<60).

SPP example calculation

An office has an NR value of 40 and an R'w dB value of 30. Add these together to get the SPP.

$$\text{NR } 40 + 30 \text{ R'w} = 70 \text{ SPP}$$

Result = Good

Normal voices are audible but unintelligible most of the time. Raised voices are partially intelligible.

What is...

Weighted Apparent Sound Index (R'w dB)

An EN ISO 717-1 standard figure expressed in decibels that is used to describe the sound insulation performance of a partition or ceiling.

Noise Rating (NR)

The background noise level from mechanical services and traffic. A well designed, unoccupied office should have a noise rating in accordance with the design guidance found in the British Council for Offices guidance, the CIBSE Guide and BS 8233:1999.

Room type	A-weighted level dB(A)	Noise Rating NR
Cellular offices and meeting rooms	40-45	35
Board/conference rooms	30-40	25-35
Open plan offices	45-50	38

Speech Privacy Protection levels

Privacy rating	SPP	Description of privacy
Total privacy	85	Shouting is only barely audible.
Highly confidential	80	Normal voice levels are not audible, raised voices barely audible but not intelligible.
Excellent	75	Normal voice levels barely audible, raised voices audible, but mostly unintelligible.
Good	70	Normal voices are audible but unintelligible most of the time. Raised voices are partially intelligible.
Fair	65	Normal voices audible and intelligible some of the time. Raised voices are intelligible.
Poor	60	Normal voices audible and intelligible most of the time.
None	less than 60	No speech privacy.



Oxford law firm Clyde & Co required their client meeting suite to be highly flexible, with complete privacy during confidential discussions.

Legal practice client meeting rooms often suffer from confidentiality breaches, generally due to the quiet nature of activities that happen within them, creating low Noise Ratings.

The extra effort and cost undertaken to reinforce the insulation properties of the partition and ceiling are often to no avail as the base build construction has inherent weak points such as, hollow external window mullions, mechanical and electrical building services and partition doors.

To ensure complete confidentiality Acoustic Comfort installed the LogiSon Sound Masking System, which manages the ambient noise level in the space, creating client meeting rooms with total privacy. The system adjusts and controls the NR of the cellular rooms to ensure there is no cross talk which could result in the breakdown of confidentiality between these spaces. Installed overnight, the client was unaware of its introduction into the design.

Sound level illustrative tests

These example test results measure sound leaking from a closed meeting room into an open plan area.

- For both tests, a person was positioned in the conference room with the door closed.
- Sound pressure measurements were taken in the open plan area.
- For the first half of each test, there was no speech.
- For the second half, the person in the conference room spoke with a 'presentation' voice.

