

Case Study: Carpark Noise – Hyatt Regency

Challenges:

- The car park has 4 shafts, each with 2 fans (supply and exhaust).
- Each fan delivers 13 m³/s at 250 Pa.
- Noise levels at 2m from fans range from 85–88 dBA.
- Ambient noise inside reaches a minimum of 75 dBA.
- Environmental noise outside peaks at 65 dBA.

Solution:

- Studied sound propagation, considering reflective surfaces.
- Designed custom attenuators to reduce noise with minimal pressure drop.
- Applied acoustic treatments at shaft outlets to reduce external noise.

Results:

- Noise reduced to 54–55 dBA at 2m from fans (with 2 running).
- Noise barely noticeable beyond 6m inside the car park.
- External noise reduced to 50–52 dBA at 1.5m from shaft openings.

