

**Acoustic Solutions** 

# Case Study: AYLA RESORT

Block12 [Marina Village]

Mob. + 962 79094 73 58
Mail <u>info@sg-acoustics.com</u>
Mob. + 962 79651 75 06

Amman 11118
P.O. Box 182409
www.sg-acoustics.com





#### SoundGood

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## Challenges

- Mechanical Equipment, located at the roof of a residential block.
- Noise & Vibration of machineries are transmitting to the apartment & restaurant below.
- Noise of machineries is propagating toward the adjacent residential block.
- Sound reflections during the night where reaching to the cascade pool.
- Any solution should keep good air ventilation to avoid machineries overheating.





### Solutions

- Direct rubber mounts are used beneath machines to reduce vibrations caused by the rotation of fans and compressors.
- An acoustic barrier was the best solution for noise control and right ventilation.
- The height of the barrier must be carefully studied to ensure an effective sound shadow behind it.
- The acoustic barrier should include an acoustic louver to allow airflow for ventilation while continuing to absorb sound effectively.





### Results

- The total sound level directly behind the acoustic barrier was reduced to 55dBA, down from 70dBA before isolation.
- The sound level on the balcony of the nearby residential block dropped to below 45dBA, meeting the Ministry of Environment's requirements for residential housing.
- Low-frequency noise from the machinery in the cascade restaurant below was completely eliminated.
- Noise in the cascade pool area was entirely eliminated.





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# Contact Us

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