

Apple Store, Marina Bay Sands

Complete	Area	Client	Architect
2020	South Asia	Apple	Foster and Partners

Apple Marina Bay Sands includes a 30-metre diameter dome which is fully glazed and surrounded by water. The main front of house retail space is accommodated within the glazed dome and this allows for panoramic views of the entire marina and the city skyline through the large panes of curved glass. The dome features an array of fabric baffles that spiral around the perimeter, which provide both solar shading and acoustic control within the store. Access to the dome is via a bridge to the boardwalk, and also via an underwater avenue tunnel from the Marina Bay Sands shopping mall.



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3D acoustic modelling was carried out using Odeon software. The model was used to determine the amount and performance requirements for the sound absorbent baffle treatment, as well as assessing and advising on the control of sound focussing from the curved reflective surfaces. Advice was provided on loudspeaker positioning and directivity to minimise focussing from both the front-of-house sound system and fire alarm sounders.

In addition to the dome modelling, we provided detailed building services noise calculations to determine attenuation requirements for the air handling and fan coil units, and for the control of crosstalk. We also provided design advice and specified the acoustic requirements for sound insulating elements including floors, partitions and doors.