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DELIVERING SOUND ADVICE

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Innovate Architects

Attention: Cameron Jones

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Acoustical Design Statement re. Planning Proposal at 138-142 Cronulla Street, Cronulla NSW

Koikas Acoustics Pty Ltd has been engaged to provide an acoustical design statement in support of a Planning Proposal to be submitted to Sutherland Shire Council regarding a commercial development proposed at 138-142 Cronulla Street, Cronulla.

The proposed development, as designed by Innovate Architects (dated October 2019), is currently shown as having:

- Three (3) basement levels,
- Two (2) floor levels of 'hospitality/hotel areas',
- Six (6) floor levels of commercial space,
- Five (5) levels of hotel rooms, and
- A rooftop pool/bar/communal area.

The site is located in a B3 Commercial Core zone as defined in the Sutherland Shire Council Local Environment Plan 2015. In accordance with the Sutherland Shire Council DCP 2015, there are a number of acoustical planning requirements that would apply to the proposed development to ensure adequate acoustic amenity for future occupants of the building and for surrounding development.

Based on the presumed use of the proposed building being licensed bar areas on the ground floor and Level 1, commercial space on levels 2 to 7, hotel rooms on levels 8 to 12, and licensed bar areas on the rooftop, the following acoustical considerations would need to be addressed prior to the proposed development being approved:

- Sutherland DCP 2015 – Chapter 19 (B3 Commercial Core – Cronulla) would require that all noise generating equipment installed for the proposed building is assessed to background + 5dB, and rail noise attributed to the adjacent rail corridor is addressed in the design of the facades such that suitable internal noise amenity is provided for future occupants.
- Sutherland DCP 2015 – Chapter 37 (Late Night Trading) would establish trading hours limitations for the hotel licensed bar areas and provide controls limiting hours for loading of goods and removal of waste.
- In addition to the above, where licensed bar areas are provided within the development, noise emission would be assessed to the standard noise conditions imposed by Liquor and Gaming NSW.
- Certain areas of the building would also be subject to sound insulation requirements under Part F5 of the Building Code of Australia to ensure adequate acoustic privacy for occupants with shared partitions.
- A review would be conducted of existing industry/mechanical plant noise attributed to neighbouring commercial development to ensure that suitable building façade designs insulate indoor areas of the proposed development against this existing noise.

To provide preliminary comment on the feasibility of the proposed development in achieving a compliant outcome with respect to the above acoustical considerations, Koikas Acoustics has reviewed the current architectural design provided by Innovate Architects (dated October 2019, Job Number 2627) and makes the following comments:

1. Mechanical plant noise can be suitably mitigated to compliant levels through a number of design strategies including one or more of the following:
    a. Selection of equipment that is appropriately sized and rated with low sound levels.
    b. Installing equipment in dedicated internal plant rooms, applying suitable inline acoustic treatment where necessary to mitigate noise prior to it escaping into the local environment, providing acoustically treated ventilation systems to the plant rooms.

c. Installing equipment on the roof of the building and acoustically screening the equipment to shield noise-sensitive areas of the subject building and surrounding buildings.

2. Recommending suitable construction materials for external walls and windows exposed to noise from the adjacent rail corridor. Given the intermittent nature of rail movements, the equivalent rail noise levels assessed over a 15-hour (day) and 9-hour (night) period are generally not significant enough to require substantial acoustic systems. It is expected that simple laminated glass facades would provide sufficient noise reduction.
3. Licensed bar areas would be limited in trading hours and operation uses as per the relevant DCP guidelines. Noise egress from bar areas can be controlled in a number of ways by limiting patron numbers, closing windows/doors, applying internal acoustic treatments. Critical receiver locations to be assessed include a number of residential apartment buildings located south-east of the proposed development site.
4. There are numerous options available, both heavyweight and lightweight, for providing adequate sound insulation within the proposed building. The design-specific solution would be reviewed prior to construction.
5. As with potential rail noise mitigation, the facades of the proposed building can be specified to insulate indoor areas against existing local area noise attributed to rooftop mechanical plant and equipment installed on neighbouring buildings.
6. Furthermore, prior to the construction of the rooftop pool, a suitable vibration isolation design solution would be required to ensure that occupants on the below floor level are not affected by structure-borne noise.

In conclusion, Koikas Acoustics is satisfied that there is sufficient scope within the current building design to ensure that noise amenity for future occupants and neighbouring receivers will not be adversely affected by the proposed development.

Regards,

Adam Semple

Senior Consultant

Koikas Acoustics Pty Ltd