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 CPB Contractors Pty Limited
 Level 18
 177 Pacific Highway
 NORTH SYDNEY NSW 2060

Attn: Kevin Pan

Nepean Hospital Stage 1 - Construction - Compliance with Condition 30 - Mechanical Plant and Equipment Operational Noise

Condition B 30 is provided below:

Operational Noise – Design of Mechanical Plant and Equipment

B30. Prior to commencement of construction, the Applicant must incorporate the noise mitigation recommendations in the Acoustic Assessment (Rev 9) prepared by Acoustic Logic dated 15/11/2018, into the detailed design drawings. The Certifying Authority must verify that all reasonable and feasible noise mitigation measures have been incorporated into the design to ensure the development will not exceed the recommended operational noise levels identified in the Acoustic Assessment (Rev 9) prepared by Acoustic Logic dated 15/11/2018.

The criteria nominated in Condition B30 (and C53 referenced below) are summarised below:

Table 7 – Project Amenity Criteria (Amended for High Traffic Areas – Parker Street)

Receiver Location	Land Type	Time of Day	Amenity Noise Objective dB(A) $L_{eq(15min)}$
All Potentially Affected Residential Properties	Suburban	Day Time (7am – 6pm)	56*
		Evening (6pm – 10pm)	56*
		Night (10pm-7am)	42*
Commercial	All	When in use	63

 *Being the L_{eq} traffic noise level (table 3) minus 15.

Table 8 – Project Amenity Criteria (Amended for Plant Noise Affected Areas – Somerset Street)

Receiver Location	Land Type	Time of Day	Amenity Noise Objective dB(A) $L_{eq(15min)}$
All Potentially Affected Residential Properties	Suburban	Day Time (7am – 6pm)	53
		Evening (6pm – 10pm)	43
		Night (10pm-7am)	37*
Commercial	All	When in use	63

*Pre-existing plant noise level minus 10, and consistent with the amenity criteria that would be adopted in the event that all pre-existing plant noise is eliminated.

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Condition C53 states the following:

Operational Noise – Design of Mechanical Plant and Equipment

C53. *Prior to commencement of the installation and associated construction of plant and equipment, a detailed operational noise and vibration impact assessment shall be submitted to the Certifying Authority and the Department.*

The assessment must:

- (a) prepared by a suitably qualified person.*
- (b) detail the operational noise and vibration sources and activities, including mechanical plant.*
- (c) outline all feasible and reasonable noise and vibration mitigation and management measures to be implemented.*
- (d) demonstrate that noise levels will not exceed the recommended operational noise levels identified in the Acoustic Assessment Report (Rev 9) prepared by Acoustic Logic dated 15/11/2018.*

The Applicant must incorporate the noise mitigation recommendations in the Acoustic Assessment Report (Rev 9) prepared by Acoustic Logic dated 15/11/2018 into the detailed design drawings. The Certifying Authority must verify that all reasonable and feasible noise mitigation measures have been incorporated into the design to ensure the development will not exceed the recommended operational noise levels identified in the Acoustic Report.

The sources of noise emissions includes:

- Air handling unit plant rooms located on various levels including on the roof.
- A chiller plant room on level 4.
- Cooling towers located on the roof.

The proposed treatments have been reviewed and a number of noise control methods employed include:

- Selection of low noise cooling towers and the provision of fan speed control to reduce noise levels when duty requirements are below maximum duty to reduce noise levels at night. Location of cooling towers on the roof and a location screened from sensitive receivers.
- Blanking off of non-active louvres to prevent noise egress (e.g. in the chiller plant room).
- Application of absorptive treatments to ducting connected to louvres or intaking/discharging externally.
- Enclosing of fans and other plant within sound rated plant rooms.
- Provision of acoustic attenuators behind louvres as required.

We are able to confirm that reasonable and feasible treatment has been provided to comply with the noise criteria nominated in Condition B30 and C 53.

Yours faithfully,



Acoustic Logic Consultancy Pty Ltd
Victor Fattoretto