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20110987.1/2604A/R1/YK

26/04/2012

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**ATTN: ACCOUNTS DEPARTMENT**

**Port Macquarie Base Hospital Expansion - Response to Council Queries**

The following letter in conjunction with the our amended acoustic report (*Port Macquarie Base Hospital - Acoustic Assessment for Expansion*, reference: 20110987.1/2604A/R1/HP) addresses the concerns raised by Port Macquarie – Hastings Council in their letter dated 5 April 2012.

*Q. The noise impact assessment supporting the application mainly assesses potential noise impacts on adjoining sensitive receivers (i.e. nearby residences) and with the exception of section 6.6 does not appear to consider the operational noise impacts on the hospital patients residing within the hospital. Ideally, the potential operational noise impacts on hospitals patients residing within the hospital should be assessed against the Industrial Noise Policy amenity criteria for a hospital ward which is given for the noisiest 1-hour period as being 35 dB(A) ANL with a recommended maximum of 40 dB(A). Externally, the ANL and recommended maximum are 50 dB(A) and 55 db(A) respectively. These stated noise levels indicates the noise attenuation (externally to internally) is assumed to be 15 dB(A) and this refers directly to the following point.*

A. Noise impacts from proposed developments to surrounding receivers (outside of the hospital) are generally required to be assessed as part of DA/3A application works. This establishes relevant noise goals for the future development to comply with, so as to not intrude on the amenity of the surrounding land users.

In our experience, noise impacts to internal/external areas within the hospital are not a Council issue which is addressed in the DA/3A application. Rather, noise impacts to areas within the hospital are typically required to be assessed in order for the hospital to be “fit for purpose”, rather than being a Council/consent authority issue. Typically, noise levels from mechanical plant will be acoustically designed so as to be compliant with AS2107 for internal areas (the most relevant standard for services noise to indoor spaces) and to 50-55dB(A) for occupied outdoor

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areas (consistent with EPA guidelines for passive outdoor areas). It is proposed to adopt these standards on the Port Macquarie project. Detailed acoustic design is being undertaken as services design for the hospital is being developed.

*Q. With regard to construction noise and vibration, under Section 5.4.1.1 the report assumes there is a 25 dB(A) noise attenuation due to the hospital building construction. Refer to the asterisked note under Table 8 on page 12. The INP Table 2.1 amenity criteria on page 16 for 'Hospital ward – internal and external ANL' and recommended maximum noise levels appears to assume a 15 dB(A) noise attenuation from outside to inside a hospital building, not 25 dB(A) on which the potential noise impacts have been assessed.*

A. Section 5.4.1.1 of the report assumes a 25 dB(A) noise reduction from external to internal areas. This is based on previous measurements undertaken by this office for construction works occurring on or adjacent to existing hospitals, where the noise reduction resulting from standard façade construction with windows closed (as is typically the case) was found to be in the order of 20 – 25 dB(A).

Council has referred to allowable external noise levels of 50dB(A) externally and 35dB(A) internally, and from this inferred that typical noise reduction through façade is 15dB(A). With respect, in our opinion this is not correct. 50dB(A) is a target noise level for appropriate amenity of external areas, 35dB(A) for internal areas. They are separate noise goals for separate spaces, and not an inference as to façade performance.

As noted in our Acoustic Assessment, construction noise impacts are an important consideration for the Hospital. We note that the project is now moving towards an Early Works phase, and a detailed construction program including selection of construction methods (excavation, soil compaction and piling most notably), is being developed. Acoustic review of both noise and vibration has been a part of the development of the program, and a Construction Noise and Vibration Management Plan which includes both nearby development and the hospital itself is being developed to ensure noise and vibration impacts are mitigated and managed as much as practicable.

*Q. The report does not appear to have assessed the potential impact of mechanical plant noise as the mechanical plant was unknown at the time of the acoustic assessment being carried out however the report concludes that currently unknown mechanical plant will comply with the relevant criteria. The report notes that an acoustic assessment of the mechanical plant is required at Construction Certificate stage, once the mechanical plant has been selected and the installation location is known.*

A. Please refer to sections 6.4 and 7 of the amended acoustic report (reference: 20110987.1/2604A/R1/HP). Detailed acoustic design of mechanical services can only be undertaken once plant is selected. This process is not underway, with acoustic treatments for all major plant items to be determined at the Detailed Design Report milestone.

*Q. The report appears to have inconsistent use of the now superseded ECRTN and the current NSW Road Noise Policy.*

A. This has been corrected in the amended Acoustic Assessment (reference: 20110987.1/2604A/R1/HP)- refer to sections 5 and 6.3 of that report.

We trust this information is satisfactory. Please contact us should you have any further queries.

Yours faithfully,

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke extending to the right.

Acoustic Logic Consultancy Pty Ltd  
Yogendra Kalkunte