

12 October 2015

WM Project Number: 10232-B5
Our Ref: MB 121015 bceltr

Mark Burns
Lend Lease
30 The Bond, 30 Hickson Road
MILLERS POINT NSW 2000

Dear Mark

**Re: South Barangaroo Block 5 -SSD 6533
Response to Noise Issues**

The following information is provided in response to construction noise queries raised in submissions to the Block 5 Development Application.

Low Frequency Construction Noise

The issue of construction "low frequency noise" has been raised in a submission in relation to operation of construction equipment, particularly self-powered lights and generators in the night period.

It is noted that this equipment generates constant noise of engine operation whose noise spectrum is characteristic of frequencies between 63 and 500 Hertz. Table 1 illustrates the frequency content of a typical generator.

Table 1: Sound Power Level of a Typical Generator - dB

Frequency Hertz	63	125	250	500	1000	2000	4000	8000	A
Noise Level	109	106	104	100	99	98	91	85	105

It is noted that a qualitative assessment of construction noise in accordance with the Interim Construction Guideline does not require any adjustment of predicted noise levels for noise sources such as the noise spectrum associated with generators or the like. The only items that require a penalty to be applied are:

- use of power saws, such as used for cutting timber, rail lines, masonry, road pavement or steel work
- grinding metal, concrete or masonry rock drilling
- line drilling
- vibratory rolling rail tamping and regulating
- bitumen milling or profiling

- jackhammering, rock hammering or rock breaking
- Impact piling.

As these activities are generally unlikely (noting some limited rock breaking could be required to chase contamination) no adjustment to predicted noise levels has been made to the assessment.

However the assessment did identify that night activities will require acoustic controls to be implemented as follows:

- Where practicable, installing attenuators on the exhaust fans, filtration and air handling plant associated with the odour control structures;
- Localised treatment such as barriers, shrouds and the like around fixed plant such as pumps, generators and groundwater extraction plant and by "stepping down" the plant settings out of construction hours where able. The detailed design of acoustic treatments will be undertaken during the detailed design phase; and

Therefore these measures should be included in the site Environmental Management Plan whereby control measures are adopted at the beginning of works to protect the acoustic amenity of nearby residences. This approach avoids impacting on residences and rectifying as a result of noise complaint.

Barriers / Hoarding

It is noted that there is a 2.4 metre barrier / hoarding proposed around the site. This barrier will not provide attenuation to upper levels at multi-level residences.

It is worth noting that noise levels at residences on Hickson Road are at upper levels where the barriers have no attenuating affect. Further construction noise levels at residences in high-rise buildings behind Hickson Road on Kent Street can expect slightly lower noise levels due to the increased distance from the construction site.

Reflections from Surrounding Buildings

Noise predictions were conducted using computer noise modelling that included the three main towers located to the south of the site. The predictions included any reflections from the building, however as these buildings are located to the south of the site any contributions from noise reflections off these buildings at residences to the East will be small.

I trust this information is sufficient. Please contact us if you have any further queries.

WILKINSON MURRAY



Brian Clarke
Senior Associate