

City of Botany Bay
141 Coward Street
MASCOT NSW 2020

Attention: Ms Cathy McMahon

18 August 2012

NOISE ASSESSMENT REVIEW
EASTLAKES TOWN CENTRE REDEVELOPMENT
MIXED USE DEVELOPMENT



**ATKINS
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Introduction

The Department of Planning & Infrastructure has placed on exhibition an application for the redevelopment of the Eastlakes Shopping Centre. The Application is for a mixed-use redevelopment of the site, incorporating the following:

- Ground floor development comprising approximately 12,420m² of retail floorspace;
- Two (2) levels of basement car parking providing a total of 1,038 car parking spaces (including 26 accessible spaces) + 35 motorcycle parking spaces;
- Three hundred and sixty one (361) residential apartments providing a mix of studio, 1, 2 and 3 bedroom units in buildings above the retail level. These buildings will be between 2 - 6 storeys in height above the ground floor retail level, with one building of 6 storeys with a mezzanine elevated 8 metres above ground level; and
- Eighty two (82) serviced apartments; and

The proposal would be undertaken in Stages. Stage one includes for the construction of the basement and retail development on that part of the site to the north of Evans Avenue. The residential development would follow completion of the retail level. Stage two would be the development on the southern part of the site.

Atkins Acoustics was requested by Botany Bay City Council (*Council*) to review documentation provided and advise Council of any outstanding noise issues associated with the proposal.

Our assessment of noise issues and the material relied upon include;

- (a) Documents provided on the Department of Planning & Infrastructure website, including:
 - (i) Acoustic Impact Assessment prepared by VIPAC dated 6 July 2012;
 - (ii) Architectural Plans prepared by Rice Daubney;
 - (iii) Environmental Assessment Report prepared by Don Fox Planning dated 18 July 2012;
 - (iv) Traffic Assessment prepared by Colston Budd Hunt & Kafes;
 - (v) Sydney Airport Aircraft Noise Exposure Forecast (ANEF) 2029
 - (vi) Australian Standard AS2021-2000. Acoustic - Aircraft noise intrusion - Building siting and construction;
 - (vii) Botany Bay City Council. Aircraft Noise DCP
 - (viii) Botany Bay City Council. Development Control Plan No 35. Multi Unit Housing and Residential Flat Buildings
 - (ix) Botany Bay City Council. Minimum Requirements for New Development
 - (viii) DECC, Interim Construction Noise Guideline.

Acoustic Issues

From a review of the information it is our opinion that the main issues relate to;

- (a) road traffic noise on Evan Road and Barber Avenue;
- (b) loading dock noise including truck site access and egress on Evans Avenue and Barber Avenue;
- (c) noise from aircraft departing north on the Sydney Airport Third Runway;
- (d) mechanical plant noise referenced to Council Policies; and
- (e) construction noise and vibration.

Review

Road Traffic Noise

The VIPAC assessment reports existing measured traffic noise levels for Gardeners Road and Barber Avenue (VIPAC Table 9) and predicted existing and future traffic noise levels (VIPAC Table 13). The predicted traffic noise levels reported are for peak morning and afternoon traffic flow conditions reported in Colston Budd Hunt & Kafes and show that the increases are general less than 2dB.

VIPAC has not confirmed that the measured existing traffic noise levels for day and night of 66dBA day and 59dBA night (Barber Avenue) exceed the OEH external criteria of 55dBA day and 50dBA night and that the proposal would result in a further increase in traffic noise.

VIPAC provides no assessment of truck noise on the local roads.

With respect to the residential component of the proposal that provides for 542 car spaces (Don Fox Planning Section 5.2), VIPAC has not assessed traffic noise impacts from these vehicle movements which one would expect would occur outside the peak flow conditions referenced for the shopping centre. It is understood that the Colston Budd Hunt & Kafes traffic report was prepared to address intersection performance and not prepared for the purpose of assessing traffic noise impacts throughout the day/night. Additional traffic and noise information is required from the Applicant to confirm existing and predicted changes in traffic flow conditions and noise impacts associated with the residential component (542 vehicles) of the development.

Loading Dock Noise

VIPAC (Section 5.2.2) discusses restricting delivery and collection vehicles to between 07:00am and 22.00 hours. VIPAC provides no assessment of truck noise on the local roads, onsite truck movements or trucks accessing and egressing the site.

From our experience noise impacts from loading docks include vehicle movements, reversing alarms, fork lift activities, trucks starting, braking, accelerating, impact from pallets handling, truck refrigeration, garbage collection, garbage compactors, etc. and should be assessed in terms of Councils Minimum Requirements for New Development

Aircraft Noise Exposure

VIPAC refers to procedures in AS2021 and confirms that aircraft noise exposure has been assessed assuming the site is only exposed to aircraft noise from the east-west runway. The VIPAC noise modelling (VIPAC Table 10) is based on an offset distance from the centre line of the east-west runway of 800m and 2420m from the closer end of the runway.

VIPAC makes no reference to height corrections (AS 2021 Section 3.1.3.3) when predicting noise exposure levels for the site ie., the multi storey residential component.

VIPAC has not addressed noise exposure for aircraft take-off's from the Third Runway. From our experience the site is exposed to direct aircraft flyovers departing from the Third Runway.

Mechanical Plant Noise

VIPAC (Section 3.4.1) refers to Councils minimum standards for assessing noise and confirms that the $L_{Aeq\ 15min}$ levels should not exceed background plus 5dBA, 50dBA (day) and 40dBA (night).

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However VIPAC (Section 5.2.1 Mechanical Plant) refers to compliance with intrusive criteria and Project Specific Noise Level criteria referenced in VIPAC Table 8. The criteria in VIPAC Table 8 of 55/50/44 and 55/45/40 are different and exceed the Council criteria of 50dBA day and 40dBA night.

Construction noise and Vibration

VIPAC provides no assessment of construction noise and vibration and recommends that a management plan be prepared. With respect to vibration impacts VIPAC confirms that usual practice is to consider potential building damage and annoyance. VIPAC makes no reference to vibration criteria or assessment.

From our experience in the Eastlakes area ground vibration is a sensitive issue and has been the source of many complaints referenced to structural damage and annoyance. It is our opinion that a detailed noise and vibration assessment should have been provided in VIPAC together with recommendations for controlling impacts. In our opinion Council should recommend that the Applicant undertake extensive dilapidation inspections and reporting for existing properties before and after construction in addition to permanent vibration monitoring during construction.

Conclusion

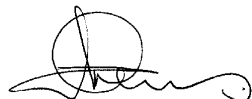
From our review of the acoustic information reported in VIPAC, it is our opinion that;

- road traffic noise (including trucks) has not been adequately addressed for Barber Avenue and Evans Avenue;
- aircraft noise has not been assessed for Third Runway takeoff;
- the aircraft noise assessment has not considered height correction for the multi storey buildings;
- loading dock noise has not been quantified;
- noise from trucks entering and leaving the load dock areas has not been assessed;
- Councils 'Minimum Requirements for New Development' have not been assessed;
- Project Specific Noise Criteria recommended in VIPAC is non-compliant with Councils Standard Noise Conditions;
- there is no criteria referred to or assessment of construction noise and vibration;
- there is no assessment of construction traffic noise.

We trust the information in this letter assists Council with their assessment. Please do not hesitate to contact me if further information or clarification is required.

Yours sincerely,

ATKINS ACOUSTICS & ASSOCIATES PTY LTD.



Graham Atkins