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ATTN: MR BRUNO GALLACE

2 Factory Street, Granville - Preliminary Assessment of Truck Noise Intrusion

1 INTRODUCTION

This letter presents our preliminary assessment of potential noise impacts on 2 Factory Street, Granville from the adjacent Post International Mail Centre. The current proposal is for the rezoning of 2 Factory Street, Granville for residential land uses. This letter presents the outcomes of a desktop study of potential impacts on the future residents of the development from the Post site, based on acoustic data for heavy vehicles held on file by this office. Acoustic treatments have been presented to achieve compliance with internal noise levels in accordance with Australian Standard AS2107:2000 and Parramatta DCP 2001 Section 4.3.1.

The findings of this assessment were that in considering noise from the Post site, it was feasible to achieve suitable amenity within the future residential apartments at 2 Factory Street, with appropriate treatment to the façade.

A detailed assessment of noise intrusion from the Post site will be required as part of the Development Application documentation for residential development on the site. The DA Acoustic Assessment would need to include attended measurements on site and would take into account the precise window opening sizes, room layouts and building constructions as shown in the DA Architectural drawings.

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2 OTHER ACOUSTIC IMPACTS ON THE SITE

To the North of the subject site is Clyde railway station and associated rail carriageways. Due to its proximity an assessment of noise and vibration impacts on the site will be required during the design phase for compliance with the Clause 87 of the SEPP (Infrastructure) 2007. There are numerous residential developments near or adjacent railway lines across the Parramatta local government area, including near Granville station to the west of the subject site. On that basis and on our experience on similar sites, noise and vibration from the nearby railway line presents a manageable impact. Particular treatments will need to be determined during the design stage, but the site itself is suitable for residential uses provided that appropriate acoustic mitigation treatments are determined and installed in the future development.

A detailed assessment of noise and vibration impacts from the Railway to the North will be required as part of the Development Application documentation for the proposed residential development on the site. The DA Acoustic Assessment would need to include attended measurements on site and would take into account the precise window opening sizes, room layouts and building constructions as shown in the DA Architectural drawings.

No further assessment of rail noise and vibration is included in this letter as it addresses the potential impacts on the site from the adjacent Post site, which is of greater concern.

3 SITE ANALYSIS

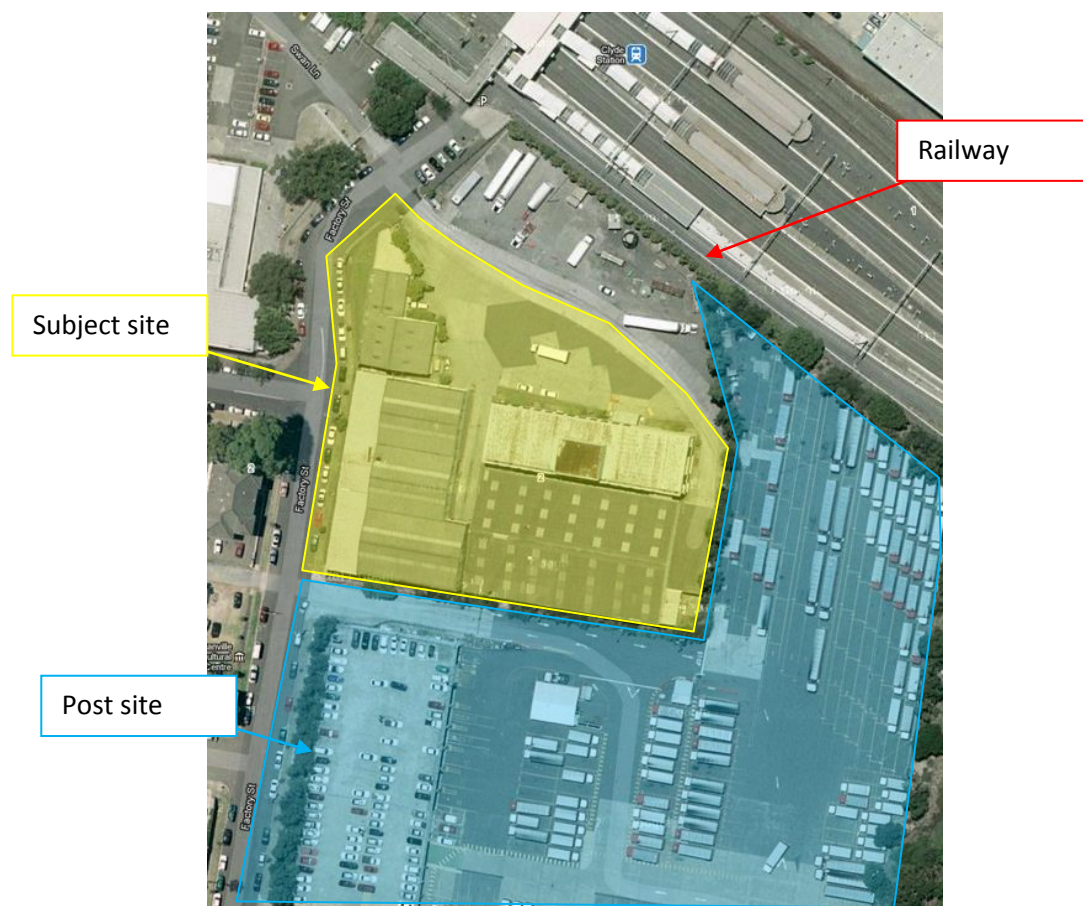


Figure 1 – Aerial view of site proposed for rezoning to residential

4 INTERNAL NOISE GOALS

4.1 NOISE FROM THE POST SITE

In accordance with Australian Standard AS2107:2000, the following internal noise goals apply to the proposed residential development:

Table 1 – Internal Noise Goals – 2107:2000

Space/Use	Design Internal Noise Level dB(A)
Bedrooms	40dB(A) $L_{eq(15hr)}$ Day time 35dB(A) $L_{eq(9hr)}$ Night time
Living Areas	40dB(A) $L_{eq(9hr/15hr)}$ Day/Night time

In accordance with Parramatta DCP 2001 Section 4.3.1, the following table presents the maximum internal noise level.

Table 2 – Internal Noise Goals – Parramatta DCP 2001 Section 4.3.1

Space/Use	Internal Noise Level dB(A)
Habitable Rooms	50dB(A) L_{eq}

5 NOISE INTRUSION ASSESSMENT

A noise intrusion assessment into the future residential apartments was conducted based on the following assumptions:

- Bedroom dimensions 3.5m x 3.5m x 2.7m, with total glazed area of 2.4m x 2.4m = 5.8m² and Living room dimensions 5m x 7m x 2.7m, with total glazed area of 2.4m x 5m = 12m²
- Sound Power Level of a Semi-Trailer driving slowly (i.e. 10km/hr) is 105dB(A) L_{eq};
- Sound Power Level of a Semi-Trailer idling is 99dB(A) L_{eq};
- Sound Power Level of a truck air brake is 114dB(A) L_{max};
- An average of one truck in and one truck out of the adjacent Post driveway every 5 minutes i.e. 24 movements per hour.

The potentially worst affected areas on site are as follows:

- The Southern facades of Buildings B and D which are approximately 13m from the line of a truck passing by;
- The south west corner unit of Building D which is approximately 21m from a truck airbrake release at the driveway entrance;
- The eastern side of Building C is approximately 6m from the nearest truck airbrake release location;
- The western facades of Buildings A and B which are approximately 13m from the line of a truck passing by.

Based on the above assumptions and the proposed alignment of the buildings on 2 Factory Street, the following table presents the required glazing for compliance with the project internal noise goals, assuming doors and windows are closed.

Table 3 – Required Glazing – Worst affected facades

Building + Facade	Space/Use	Required Glazing	Acoustic Seals
B+D – South C+D – East A+B – West	Bedrooms	12.38mm Laminated	Yes
	Living Areas	10.38mm Laminated	Yes

The glazing was recommended above for the potentially worst affected facades. The treatment to other facades will be less. Urbania have included in their documentation the indicative glazing treatments to bedrooms for truck noise intrusion. Note: Building A and Building C glazing may need to be upgraded for rail noise intrusion.

Given that doors and windows need to be closed for compliance with the project internal noise goals, the affected apartments will need to be mechanically ventilated in accordance with AS1668.

6 CONCLUSION

A preliminary assessment of potential impacts on future residential occupants of 2 Factory Street, Granville from the adjacent Post International Distribution Centre has been conducted. The outcome was that it is practical and feasible to ensure appropriate internal acoustic amenity to the proposed future residential apartments with appropriate treatment to the affected facades, with preliminary indicative treatments presented herein. On the basis that the external noise impacts are manageable, the site is determined to be acoustically acceptable for residential uses. The facade treatments will need to be refined as the design progresses through DA and CC stages.

Due to the proximity of the site to the railway lines to the North, an assessment of rail noise and vibration will need to be conducted at DA/CC stage for any residential development proposed on the site for compliance with the SEPP (Infrastructure) 2007.

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

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Hilary Pearce'. The signature is fluid and cursive, with the first name 'Hilary' written in a larger, more prominent script than the last name 'Pearce'.

Acoustic Logic Consultancy Pty Ltd
Hilary Pearce