

Attention: Habib Hayek

Company: SM Tavana Pty Ltd

From: Fu Siong Hie

Date: 10/10/2022

Subject: Childcare Centre at 9 Stuart Ave, Normanhurst - Noise Impact Assessment

Document Reference: SYD2022-1081-R001D

Habib,

Acouras Consultancy was engaged by Gardner Wetherill Associates on behalf of SM Tavana Pty Ltd to assess noise activity from the additional eight (8) children for the Childcare Centre at 9 Stuart Ave, Normanhurst. The location of the centre and nearest receivers are shown in Figure 1.



Figure 1 – Site Location and Nearest Residents¹

¹ Figure 1 from Day Design 'Environmental Noise Assessment' (Report No: 6661-2.1 Rev C), dated 27 July 2020.

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The proposal seeks to increase the capacity of the childcare centre from a maximum of 40 children to 48 children as shown in Table 1 below.

Table 1—Current and Proposed Children Numbers

| Children Age Group | Approved No. of Kids | Proposed No. of Kids | Increased No. of Kids |
|--------------------|----------------------|----------------------|-----------------------|
| 0–2 Year olds | 8 | 8 | 0 |
| 2–3 Year olds | 15 | 15 | 0 |
| 3–5 Year olds | 17 | 25 | 8 |
| TOTAL | 40 | 48 | 8 |

Hornsby Shire Council requires that children activity noise associated childcare centre is to comply with the Condition of Consent No.60 and No.61.

60. Noise

The cumulative noise generation from the use of the premises (including mechanical plant) is not to exceed background +10 dB(A) up to a total of 2 hours per day with background +5dB(A) for the remainder of the day when assessed as a Leq (15 minute) noise contribution at any point on the residential side of the common boundaries or at any point in or on the adjacent residential properties.

61. Child Care Centre Noise Management

The child care centre must be managed in accordance with the approved Plan of Management prepared by Urbanesque Planning dated July 2020.

The 'Environmental Noise Assessment' (Report No: 6661-2.1 Rev C) prepared by Day Design, dated 27 July 2020, states the allowable noise limit (more than 2hrs per day) for children activity at this childcare:

'R1' to 'R6' – Based on measured noise levels in Location 'A' and Location 'B'

- (46 + 5 =) **51 dBA** $L_{Aeq, 15 \text{ minute}}$ during the day and in the evening shoulder period.

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The assessment of children activity noise increase in the outdoor playarea have been predicted based on the following parameters:

- The assumed sound power level from children activity is presented in Table 2 have been extrapolated for each playarea or activity room as previously outlined. We have based the logarithmic increase on the average sound power level.

Table 2—Typical Sound Power Levels from Children (Source: AAAC)

| Description | Sound Power Level |
|----------------------------|-------------------|
| 10 Children aged 0-2 years | 77-80 |
| 10 Children aged 2-3 years | 83-87 |
| 10 Children aged 3-6 years | 84-90 |

- According to the Day Design acoustic report, only the predicted noise at R2 exceeded the noise limits. Noise levels at R1, R3 to R6 complies with the noise limit.
- According to the Day Design acoustic report, the indoor noise level (with windows partially open) were predicted to be between 31dBA to 47dBA at the boundary.
- As part of the noise management plan that:
 - Windows on the northern and southern facades of the lower indoor play areas are to be closed during noisy activities.
 - Windows in the southern and eastern façade of the lower ground level 3-5 year old indoor play areas should be closed while outdoor play is taking place.
- For the outdoor playarea, we recommend the following maximum number children to be divided into the following groups as shown in Table 3 below. Also refer to the Operational Plan of Management prepared by Urbanesque Planning.

Table 3—Recommended Children Number

| Children Age Group | Approved Plan of Management for 40 Place Child Care Centre | | Proposed Noise Management Plan for 48 Place Child Care Centre | | | |
|--------------------|--|------------|---|---------------|---------------|---------------|
| | Scenario 1 | Scenario 2 | Scenario 1 | Scenario 2 | Scenario 3 | Scenario 4 |
| 0–2 Year olds | 8 | 8 | 8 | 8 | 8 | 8 |
| 2–3 Year olds | 15 | 0 | 15 | 0 | 0 | 0 |
| 3–5 Year olds | 0 | 10 | 0 | 8 (10 max) | 8 (10 max) | 9 (10 max) |
| TOTAL | 23 | 18 | 23 | 16 | 16 | 17 |

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- Taking the above into consideration, the proposed overall net increase of the additional eight (8) children would theoretically result in a logarithmic increase in noise level of less than 1dB.
- The predicted overall change in noise level for each play group is presented in Table 4.

Table 4 – Predicted Noise Level at Receivers

| Receiver | Predicted Noise Level, L _{eq15min} dBA - Current Children | Predicted Change in Noise Level for Increased Children | Noise Limit L _{eq15min} dBA |
|----------|--|---|---|
| R2 | Outdoor Playarea :51 Indoor Playarea: 36 | Scenario 1: 0.0 Scenario 2: -0.7 Scenario 3: -0.7 Scenario 4: -0.3 | 51 |

Therefore, with the implementation to manage the number of children outside for each of the proposed scenarios, overall there would be no change (or a decrease) in the predicted children activity noise compared to the existing noise levels.

Regards,



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