

22 November 2023

TL936-04F01 Climbing Wall Noise (r0)

Project + Infrastructure

Att: Robert Woolf

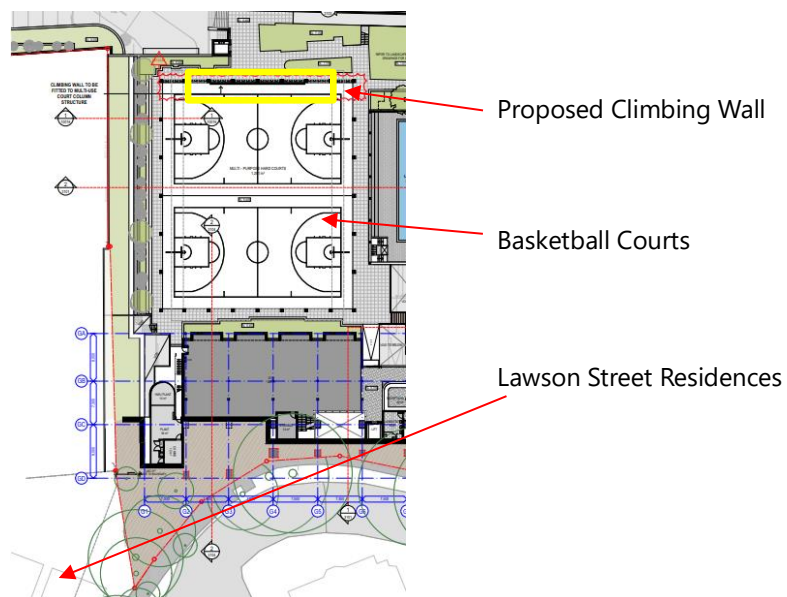
Dear Sir,

White City Redevelopment Stage 2 (LEC 2020/64018) – Section 4.56 Application – Proposed Climbing Wall

We have been asked to comment on the acoustic impact of an outdoor climbing wall proposed to be incorporated in the above site.

With respect to the proposed climbing wall:

- The wall is to be constructed along the northern edge of the two outdoor basketball courts at the above sites.
- The climbing surface would be on the southern side of the wall. When the climbing wall is in use, the northern of the two basketball courts would not be used. See below.



Noise generated by the two basketball courts has been assessed previously in the Renzo Tonin acoustic report *White City Redevelopment Stage 2 – Noise Impact Assessment* dated 1 August 2021 Rev 2. That formed part of the Development Application package for the redevelopment of the White City site. WE note in that report:

- The critical noise receiver locations that were identified in the report were the residences at 5 and 7 Lawson Street, which have the highest degree of noise exposure to the basketball courts.
- Noise from the use of the basketball courts was predicted to be $45\text{dB(A)}_{\text{Leq}(15\text{min})}$ at the Lawson Street residences, which complied with project noise goal of $49\text{dB(A)}_{\text{Leq}(15\text{min})}$ (Day) and $47\text{dB(A)}_{\text{Leq}(15\text{min})}$ (Evening).

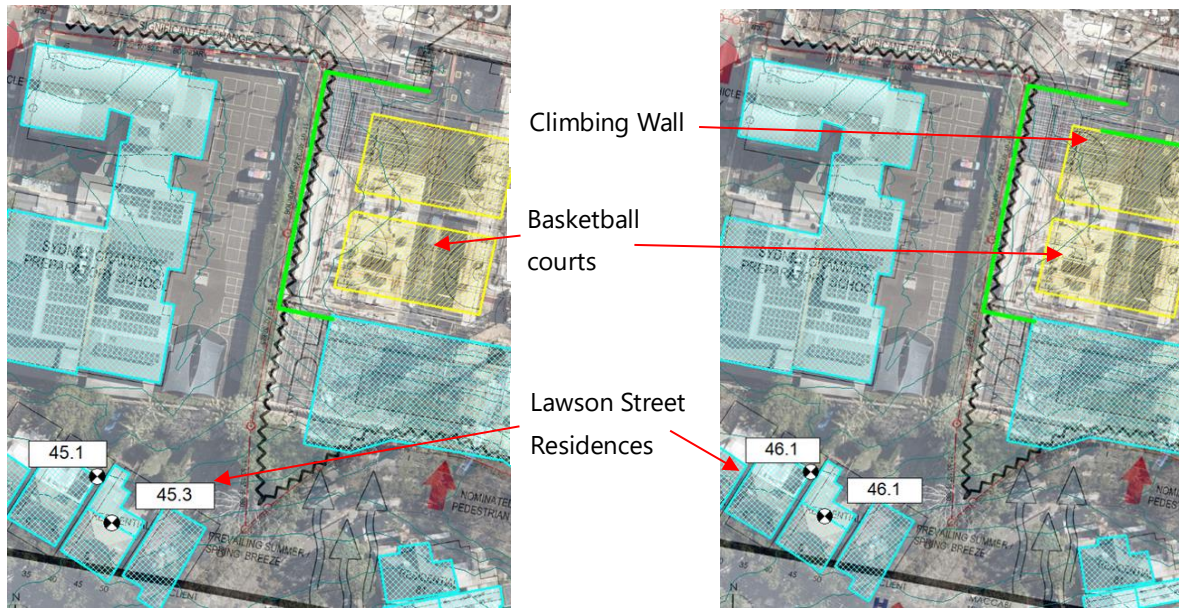
Basketball is typically a noise intensive activity, with whistles, raised voice for 10-20 people (depending on if there is one game or two) and from the ball bouncing. The DA Stage acoustic report identified a sound power level of a basketball game as $93\text{dB(A)}_{\text{Leq}(15\text{min})}$. Given there are two courts, the total sound power of basket ball activities will be $96\text{dB(A)}_{\text{Leq}(15\text{min})}$.

The noise generated by a climbing wall would be expected to be less than that created by the basketball court:

- Given the size of the wall, it would be unlikely to have large groups of people with raised voice.
- Assuming a group of 10-15 people, and 5 people speaking with raised voice at once, the sound power generated by the climbing wall would be 82-85dB(A), significantly less than the basketball, and noise emitted from the wall would be less than that generated by the basketball courts.
- If the climbing wall is in use, only one of the basketball courts can be used. The combined noise level of two basketball courts in use is louder than the noise that would be created by one basketball court and the climbing wall.

We understand that a further concern has been raised that the timber climbing wall will cause noise from the basketball court to be reflected back to the houses at Lawson Lane, and resulting in the basketball courts generating more noise to them than they would have previously.

- In order to address this, we have modelled the difference in noise level that is expected with and without the climbing wall (and assuming that the wall itself is a noise reflective surface).
- A snap shot of the model and results is presented below. The snap shot is representative of a worst case scenario – with both basketball courts in use. In the second model, the change in noise level as a result of the reflected noise from the climbing wall is taken into account.



Noise Level (Lawson Street) – No Climbing Wall

Noise Level (Lawson Street) –
WITH Climbing Wall

As shown, the increase in noise level as a result of the reflection off the new wall is 1dB(A).

We note:

- An increase in noise level of 1dB(A) would not be a perceptible change compared to the noise level predicted in the DA Stage acoustic report (being 45dB(A) $L_{eq(15min)}$).
- Even with the 1dB(A) increase in noise level, the noise emitted from the site will still comply with the permissible noise levels identified in the DA Stage Acoustic Report (being 49dB(A) $L_{eq(15min)}$ (Day) and 47dB(A) $L_{eq(15min)}$ (Evening)).

Please contact us if you have any queries.

Signed:

Thomas Taylor
Principal Engineer
BE, MAAS