

Construction Noise and Vibration review for SSD-30759158

Construction Noise And Vibration Report-- Day Design

1.1 Overview

I refer to Report 7280 – 1.3R Construction Noise & Vibration Dated 14th April 2022 Prepared by Day Design Pty Ltd: I have little experience in building and construction projects but have considerable experience with regard to trucks and transport equipment and mining logistics.

Page 6 of the report Section 1.2 refers to the various stages being “aligned to the growth in population”. I contend this is false and misleading as all discussions with the proponents representatives (Midson’s) has clearly indicated on multiple occasions that the staged development reflects the growth of the school in terms of early enrolments in the lower grades then expanding the stages to the later school years as the kids move through the following years.

In the same section under site access, there is a direct reference to a bus zone which is not on the site and therefore requires significant civil works on public land. They will need council approval to do this and be assured that the ratepayers will oppose public land being given over to a private enterprise for the operation of a business.

Also within Section 1.2 is a reference to 138 parking spaces and depending on which report you read is insufficient under current school development rules (1 space for every FTE plus student parking requirements). The Social report states that there are 106 full time staff plus 12 casual so total parking spaces should be 158 **plus** visitor parking.

In Executive Summary on (p7) “proposed hours of construction are standard working hours” This is very loose and open to interpretation. The document further states on P17 section 5.4.1 that “normal construction hours as defined by the EPA are 7.00am to 6.00pm Monday to Friday and 8.00 to 1.00pm on Saturday”

On P8 in the “Executive Summary” there is a direct admission (that there is potential at least on some some occasions for noise emissions from construction works to exceed the noise management level at some residences during various stages of the works) Whilst these are weasel words to minimise the impact of what will inevitably happen, I note that in all of the noise and vibration tables, my property will be worst affected. I am location R4 in figure 1. NB: I do have a name and I am not just a number as represented in this report.

Page 12 section 4.2 Development Description Phase 1 Demolition will take 2 weeks. Phase 2 Earthworks is estimated to take 4 weeks and phase 3 states; the time frames for construction of the five stages of construction Expected timeframe:

<u>Stage 1</u>	<u>52 weeks</u>
<u>Stage 2</u>	<u>40 weeks</u>
<u>Stage 3</u>	<u>40 weeks</u>
<u>Stage 4</u>	<u>52 weeks and</u>
<u>Stage 5</u>	<u>40 weeks</u>

This totals to 224 weeks of construction and a further 6 weeks of demolition and earthworks all up 230 weeks or 4.42 years of work over a 20 plus years total time frame. This is totally unacceptable to all of the neighbours and surrounding properties and is a violation of our right to quiet enjoyment of our homes. At present we have farmland over our back fence which is currently zoned RU4 primary production – small holding and that is precisely why we bought here on the boundary of a small village with all of those rural surroundings to enjoy.

Section 5 Noise Criteria and specifically 5.1 talks about the sound data loggers used to establish the background noise levels in locations A and B

I note at the bottom of P13, 5.1 there is a reference to the data logger in position A being stolen and never recovered containing data between Wednesday 25th August and 2nd September.

Table 3 on p14 shows results for that same period. One of these statements must therefore be false and misleading. How can you show data that you supposedly don’t have?

I also note that there is data in Table 3 purporting to be between 15th September and 22nd September but there is no supporting data in Appendices B1, B2, B3, B4 for these dates also.

At the bottom of p14 referring to Table 3 a statement about meteorological conditions appears contradictory as it talks about “where applicable rain or wind affected data has been removed from the assessment period” Given that the data in Appendices B1-B4 has a mixture of rain affected days and clear days it is confusing at best. Dates not covered in Table 3 also have a mixture of wet and dry days causing one to wonder if the dates used have been cherry picked to achieve a specific set of numbers?

The writer has no specific training or qualifications in the area of noise and vibration so all comments here are a layman’s view of the information provided:

Table 4 on p18 (Noise Management Levels from Construction Activities) and intervening commentary seems to be worded in such a way as to minimise the importance of the information regarding the effects of noise on neighbours. The same can be said for Tables 5 and 6 which go to the EPA vibration Guidelines. Table 5 refers specifically preferred and **maximum** levels and Table 6 - Transient Vibration Guide Values for Cosmetic Damage actually refers to peak component particle velocity in frequency range of predominant pulse. This appears to be the maximum pulse speed in a particular range for cosmetic damage to result on near neighbours. The report then states that “in our opinion” the likely levels of intermittent vibration will not result in cosmetic damage to our homes. The writer as an affected neighbour, finds no comfort in such weasel words as “our opinion” and “likely levels” when the report also states that they have no idea of what if any rock will

be encountered during the earthworks which will have a major effect on both noise and vibration. The writer therefore concludes that these statements are misleading and deceptive.

Section 5.5 on p20 Project Noise Trigger Levels states “**In our opinion** the most relevant noise and vibration management levels for this development are those outlined in Sections 5.4.1 and 5.4.2 and are summarised as follows....” The report then goes to 5.5.1 Noise Management Levels being 46.dBA for residential receptors for 15 minute time periods. I should be noted that “residential Receptors” is a euphemism for families living in surrounding houses.

Section 6 NOISE EMISSION:

The second paragraph claims that readings presented will represent worst case scenario being, all equipment operating on the nearest boundaries unless otherwise stated.

Section 6.1 Refers to demolition works and specifically excludes worst case scenario stating that “concrete breaking is unlikely to take place at the same time as any other activity” but in all cases it will exceed the 46.dBA noise limit and I am confident that it will not stop after 15 minutes as all equipment used will most likely be on hourly hire contracts as this is standard building work practice. Table 7 in 6.1 purports to represent sound power levels for each machine likely to be used in the demolition. There are 7 different types of equipment listed and each single piece of equipment and each individual type far exceed the noise levels recommended (46.dBA). Demolition work by its nature requires multiple types of equipment operating during each part of the operation. Misleading and deceptive.

Section 6.2 Phase 2 refers to excavation and earth works and again specifically excludes worst case scenario stating “it is unlikely that this activity will take place at the same time as any other activity”

It should be noted that again recommended sound levels are well and truly exceeded at all adjoining residential receptors during this phase. Further to this as the underground rock formations are unknown, how can they state with any certainty as to what the likely readings will be as the worst affected residential neighbours (R3 to R7 on the southern boundary) are likely to have significant earthworks right on this boundary in the known overland flood zone. This boundary is also the closest boundary that the buildings will be adjacent to. It should be further noted that only one piece of equipment in the excavation works list operates at under 100.dBA This whole section is again therefore misleading and deceptive in all aspects.

Section 6.3 Phase 3 Construction

Table 11 of this section purports to represent sound power levels for typical construction equipment. The explanatory note below the table talks about the work being more dispersed across the site and therefore less concentrated but further claims that the resultant calculated noise levels are “worst case scenario”. This is confusing and could be misleading.

Section 6.4 is a summary of preceding sections and shows exceedance on all adjoining properties except R3 which has been deemed by Day Design to be an industrial property and subject to a different set of noise/vibration levels.

The exceedance levels are above acceptable levels in all of the residential properties surrounding the site, many as high as 40 dBA above the acceptable levels. This is not acceptable to any of the neighbouring properties.

On P28 in the last paragraph notes that the rock breaking is not considered cumulatively as it is unknown at this stage if it will be required. This is double speak for it has been left out of the summary data in the report. On that basis then the whole summary is most likely misleading and deceptive.

Section 6.5 Vibration Emission

Para 1. The following statement is made: “It is difficult to accurately predict levels of ground borne vibration at remote location as there are many variables to consider including the surrounding terrain, strata, rock density, etc.” Given the earlier statement that the rock density etc is unknown then all previous statements on vibration are effectively null and void and all comments on this matter is clearly misleading and deceptive.

Section 7: NOISE CONTROL RECOMMENDATIONS

This section is an admission that the whole development does not meet the noise levels established in Section 5.5 and contains recommendations to control noise. Table 15 refers to possible control methods as being:

Distance: reducing noise by 6 dBL for each doubling of distance. – How do you reduce the noise by moving the work away from its planned position or relocation all of our houses until the construction is finished? This is in most cases impossible to do.

Enclosure: How do you enclose the earthworks or the building? Perhaps they can build sound walls around everyone’s houses? Again these suggestions are both impractical and in most cases impossible.

Silencing: It is possible to get plant that is silenced more than others but how to you quieten the actual operation. You can fit a silencer to a rock breaker but that won’t stop the noise of the rock breaker on the rock.

It is reasonable to assume that contractors and their equipment will be chosen firstly on cost and then productivity. To suggest that the first priority is silencing is both fanciful as well as misleading and deceptive.

The statement that they operate should only one machine at a time is just as silly and in practice will not happen so again it is misleading and deceptive.

Periods of respite: no one hires a machine on an hourly basis and then only operates it in 2 – 3 hour blocks, again it just won’t happen. The example quoted that if a rock breaker is operating in a specific location, then all other construction activities will cease in that area. Pull the other one – It plays Dixie

Work Practices: All of these recommendation are possible but again they just wont happen as talking loudly and shouting is the only way to be heard over equipment noise on a building site.

Heavy Vehicles and Staff Vehicles:

All of these recommendations are great but not very practical. As a logistics operator with 40 years experience I can assure everyone that the truckies will do whatever they please and will intentionally park where they shouldn't so they get the "express service" to get them off site ASAP. All transport operators know that if you want to get in and out quickly then you need to be first in line so they will arrive early and park anywhere. If they are bringing product long distance then they will try to get as close as possible to the site or on it before hitting the bunk.

Community Relations

This is all good and well but, not much of it will work in accordance with all these recommendations.

Section 7.5 Is a disclaimer to any knowledge of building construction and as such, all the recommendations for noise attenuation should be viewed in the light of this disclaimer. Many of the recommendations contained within, attest to that lack of knowledge.

8.0 Conclusion

The conclusion states in part that *"provided all of the recommendations in Section 7 are implemented then the noise and vibration will be minimised as far as reasonably practical"* This is a motherhood statement that means nothing. The totality of this document shows that Day Design cannot accurately predict the vibrations likely to be experienced by all or any of the **"RESIDENTIAL RECEPTORS"**

The comprehensive sections on noise showed in summary that all **RESIDENTIAL RECEPTORS** will have statutory noise limits exceeded on a daily basis for at least 230 weeks and most likely more. There is no guarantee anywhere in this document that noise and vibration statutory levels will be complied with and as such it must be discarded in its entirety as it can only be treated as a totally misleading and deceptive document.

On the basis that this document contains factual errors and is misleading and deceptive I oppose the granting of permission to develop Mariah College application number SSD-30759158.