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Matt Norwell / Evita Key
Barker & Associates
PO Box 1986
Shortland Street
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By email: mattn@barker.co.nz and evitak@barker.co.nz

Dear Matt and Evita,

RE: Request for information from Silk Road Management Limited, Pudong Housing Development Company Limited and Foodstuffs North Island Limited (the applicants) in relation to Dominion Road Mixed-use Development application under COVID-19 Recovery (Fast-track Consenting) Act 2020

We are responding to the Expert Panel Further Information Request contained in the EPA letter dated 28 May 2021.

In responding we confirm we are retained by our Client Foodstuffs as the noise and vibration specialist providing expert noise and vibration advice on this project.

8. *Appendix 14 (Geotechnical report) advises that up to 1.2m of basalt is to be excavated from the site, with an expected volume of 2,000m³. Appendix 20 (Acoustic Report) refers to rock breaking but identifies the piling rig as the noisiest activity and anticipates rock breaking is only expected for 3 - 6 days. Please clarify whether the proposal is to break and remove 2,000m³ of basalt within 3 - 6 days and confirm whether that is expected to generate less noise or vibration than the operation of a piling rig.*

Dominion Contractors are providing a detail response to this query. The following provides the supporting acoustic information and should be read in conjunction with the Dominion response.

The durations given in section 3.3.6 of the Original Assessment (OA) are not intended to represent the total duration of any rock breaking. To explain, section 3.2 of the OA notes that bulk excavation (which includes the rock) is expected to take six weeks (but which I now believe has been shortened to four weeks). While much of this rock is expected to be fractured, meaning it can simply be lifted out with an excavator, breaking cannot be ruled out. Essentially, the noise assessment is therefore required to assess an unknown amount of breaking in an unknown location. The way in which this was dealt with in the OA was to assume that breaking could occur anywhere on site, which is the same as saying the entire site would require breaking. In this way OA considers breaking occurring in the most exposed location to each of the surrounding properties. If this were to occur (which it may not), the resulting levels are those reported in Table 1 of the OA. Further work was then undertaken for sites where

exceedance of the AUP limits were predicted to determine how long this might occur for. This was estimated by applying the percentage of the total site area where a breaker would exceed the AUP limits to the overall duration of the bulk excavation (explained in detail in the final paragraph of section 3.3.2). The estimation of total times given in Tables 2 and 4 of the OA are estimates and assume that not only is rock breaking required, but also that it will be in the most exposed location to any particular residence.

From this point, this response to query 8 must be read in conjunction with that of Dominion Contactors who note that a total of 3 – 6 days of breaking may be necessary. Tables 2 and 4 of the OA show how these days could be apportioned across the site but represent a worst case scenario as, for this to eventuate, all breaking must be concentrated to be adjacent to the most exposed neighbours. If the 3 – 6 days of breaking were limited to the centre of site for example, there would be full compliance with the AUP requirements.

With respect to noise from the bored piling rig and rock breaker, rock breaking is the louder activity. This is partly by design as the project has been developed using bored piles rather than the noisier driven piles. This base noise data used for the noise modelling reported in the OA used sound power levels of 110dBA for bored piling rig and 118dB for the rock breaker. However, the base data is of limited use, as the noise to the individual dwellings is also dependent upon the distance between the source and receiver and the available mitigation. Table 1 of the OA provides the resulting noise levels to the neighbouring properties and as expected from the above explanation, shows a varied relationship between breaker and piling noise levels to each property. Table 1 does confirm that the highest level of construction noise to any of the neighbours results from the use of the breaker (Site 30 – 378 – 388 Dominion Road.)

I do note that in Section 3.3.3 of the OA, I describe the piling rig as one of the noisiest activities and have therefore used it to determine the extent of properties that should be included in the assessment. The reason that piling was used for this exercise was that it is an activity that is known to be required across the entire site. Rock breaking, on the other hand, is only expected to be required in discrete locations and it was therefore considered that of the two, piling was a better activity for the preliminary assessment.

For vibration, Table 7 provides a full list of the resulting levels expected from piling and breaking at each of the neighbouring properties based on source levels and their location. In this instance, piling results in the highest resultant levels. It is noted that piling data allows for casings to be vibrated in and/ or out.

Should you have any questions regarding the above please do not hesitate to contact me.

Yours sincerely
Hegley Acoustic Consultants



Rhys Hegley