



SUITE 17, 808 FOREST ROAD, PEAKHURST 2210 ABN 73 107 291 494  
P. 02 9046 3800 ACOUSTICS@DAYDESIGN.COM.AU WWW.DAYDESIGN.COM.AU

Mr Mathew Pryce  
1 Diamantina Avenue  
Windsor Downs NSW 2756

6 March, 2019  
Refer: R \ 6308-3.2L

Attention: Mr Mathew Pryce  
Telephone: 0404 713 356

Dear Mr Pryce,

**38 - 44 KEECH ROAD, CASTLEREAGH**  
**GREYHOUND FACILITY - ACOUSTIC ASSESSMENT**

Penrith City Council granted approval of an amended **Development Application**, number DA12/1295.01, for the use of the property 38-44 Keech Road Castlereagh as a site for a greyhound boarding, training and breeding establishment, on 6 May 2014. Condition 2 of DA12/1295.01, however, restricted the use of the site to a 12 month trial period, from the date of determination.

Day Design prepared an Environmental Noise Impact Assessment (**DD Report**, dated 1 September 2017) for the submission of a further **Development Application**, number DA17/1344, on 21 December 2017, seeking consent for the continued use of the site for the purposes outlined above. In addition to this, Day Design then prepared an Operating Scenario Assessment (**DD Letter 1**, dated 8 August 2018), in response to a request for further information from Penrith City Council.

Penrith City Council prepared a **Major Assessment Report** (DA17/1344), Version 1 dated 19 September 2018, in response to this Development Application. The result of this assessment was a recommended Refusal of said Development Application, due to a series of key issues, several of which were related to acoustics and the acoustic assessment performed.

A Local Planning Panel Meeting was held on 26 September 2018 with Penrith City Council, the applicant and Day Design staff present, to clarify the issues raised in the **Major Assessment Report**. During this meeting, Day Design tabled an Acoustic Assessment (**DD Letter 2**) in order to rectify these issues. The matter of jurisdiction over the determination of the application was also raised in this meeting, with the responsibility being subsequently delegated to Penrith City Council.



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Penrith City Council has since prepared a **Major Assessment Report** (ID.8555303), Version 1 dated 1 February 2019, in response to Development Application number DA17/1344 for the continued use of the site as a greyhound boarding, training and breeding establishment.

The **Major Assessment Report** identifies several reasons for refusal, one of which was related to noise impact causing sleep disturbance, mainly:

- The use of multiple acoustic descriptors in the assessment of night-time noise and sleep disturbance; and,
- Apparent data correlation between the closest residential receptor, R3, and noise levels from the outdoor 'pup' kennel and the indoor 'dog' kennel.

Day Design is of the opinion that the reasons provided by Penrith City Council are based on an incorrect interpretation of the measured noise data. We seek to demonstrate our reasons below.

### Sleep Disturbance

The **DD Report** provides a sleep disturbance assessment in accordance with the Noise Guide for Local Government, using a noise criteria of  $L_{1,1min}$  (or  $L_{max}$ ) 48 dBA.

The Noise Policy for Industry (NPI) was published in October 2017, after the **DD Report** was prepared. The sleep disturbance criteria in that document in Section 2.5 of the NPI is:

- $L_{Aeq,15 min}$  40 dB(A) or the prevailing RBL plus 5 dB, whichever is the greater, and/or
- $L_{Amax}$  52 dB(A) or the prevailing RBL plus 15 dB, whichever is the greater.

In both cases above, the criteria from the NPI is higher (less stringent) than the criteria in the DD Report. Therefore we have relied on the sleep disturbance noise criteria in the DD Report, which is the most stringent of the criteria available, being  $L_{1,1min}$  (or  $L_{max}$ ) 48 dBA.

The DD Report presents short term data as  $L_{eq, 1 sec}$  in Appendices C to K. The highest  $L_{eq, 1 sec}$  in any given time period is equal to the  $L_{max}$  noise level for that same time period.

Concern was raised with regard to the correlation between noise events at the residential receptor R3 (46-50 Keech Road) and noise levels from the outdoor 'pup' kennel and/or indoor kennel areas. The example events quoted by the Penrith City Council include:

- ~~Night 1~~ **Night 2** 22/08/2018 - 23/08/2017  
6:00 am to 6:05 am
- ~~Night 2~~ **Night 3** 23/08/2018 - 24/08/2017  
5:58 am to 6:04 am
- **Night 4** 24/08/2018 - 25/08/2017  
5:58 am to 6:04 am.

<sup>1</sup> Council's report incorrectly identifies the first event as being during Night 1. We suspect this should refer to Night 2 based on the dates and times provided.

<sup>2</sup> Council's report incorrectly identifies the first event as being during Night 2. We suspect this should refer to Night 3 based on the dates and times provided.



From the graphs presented in Appendix C to I of **DD Report**, it can be seen that this early morning period of approximately 5 minutes on each day (approximately 5:58 am to 6:05am) shows a similar noise event across all seven mornings when the noise was recorded.

From observational data for sunrise in the Castlereagh region (see Table 1 below), it can be seen that these noise events in the early hours of morning strongly correlate with the recorded periods for Morning Twilight, just prior to the sun rising. As such, it is the opinion of Day Design that the increase in noise level at the residential receptor at this time is likely to originate from other natural sources, the most likely of which would be bird noise.

**Table 1 Rating Background Levels – 46–50 Keech Road, Castlereagh**

	<b>Morning Sunrise Data (Morning Twilight – Sunrise) <sup>3</sup> (AM)</b>	<b>Period of Increased Noise Levels (AM)</b>
<b>Night 2</b>	06:02 – 06:27	06:00 – 06:05
<b>Night 3</b>	06:00 – 06:26	05:58 – 06:04
<b>Night 4</b>	05:59 – 06:24	05:58 – 06:04

Additionally, the recorded noise levels from both indoor and outdoor kennels during the same period of Morning Twilight do not correlate with the measured increase in level at the residential receptor.

At times of prolonged increase of noise from inside the dog kennel (> 90 dBA), such as Appendix J of the DD Report or from the outdoor Pup Kennel (>80 dBA), such as Appendix K of the DD Report, the measured noise level at the residential premises is no greater than 45 dBA (Appendix J) or 44 dBA (Appendix K).

<sup>3</sup> Data taken from <https://www.timeanddate.com/sun/australia/penrith?month=8&year=2018>



Since the noise logger inside the dog kennel did not register dog barking for a 5 minute period during Morning Twilight on each morning, we are confident that the increased noise levels during twilight are not dogs barking, rather it is very likely to be morning bird calls.



**Stephen Gauld**, BE(Mech), MEngSc (Noise and Vibration), MAAS, MIEAust

Principal Acoustical Engineer

for and on behalf of Day Design Pty Ltd

#### AAAC MEMBERSHIP

Day Design Pty Ltd is a member company of the Association of Australasian Acoustical Consultants, and the work herein reported has been performed in accordance with the terms of membership.



The undersigned hereby certifies that this Report has been checked and approved in accordance with our Quality Management System.



Date: 6/3/19

