



Ref: L22321/PAK/21-014

18 August 2021

Sunshine Coast Council  
Locked Bag 72  
Sunshine Coast Mail Centre Qld 4560

**Attention: Mr Jeff Dodd**

Dear Jeff,

**Re: Noise Amenity Review  
Amended Proposal  
Animal Keeping Facility (Kennels)  
2312 Steve Irwin Way, Landsborough**

Further to your request I have considered the material provided by the Applicant to Council by way of email dated 5 August 2021 which provided:

- 1 Letter from Adams+Sparkes Town Planning (5 August 2021);
- 2 Report – Environmental Noise Assessment RoadPro (5 August 2021); and
- 3 Bundle of Drawings – 180606 SK1 to SK9 (30 July 2021).

The above information provides a response to matters requested by Council in regard to their previous correspondence outlining a changed proposal.

On the basis of the material now provided the development proposal comprises:

- Stage 1 Proposed Breeding Kennels – 40 pens, 20 runs with 60 dogs maximum (assumed adult dogs)
- Stage 2 Proposed Boarding Kennels/Admin/Office – 24 kennels each with enclosed grassed yard, 2 large grassed outdoor run areas, 48 dogs maximum.
- Associated storage areas, driveways and carparking.
- 2.5 metre high acoustic barriers and buildings enclosing the outer perimeter of the outdoor runs.

On the basis of the further information requested of the Applicant by Council I provide a summary of their responses to each item and my comments as necessary.

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1. Provide a revised acoustic report which is specific to the amended proposal and provides assessment on the basis of the amended scale of the proposal, the noise barriers now proposed and provides specific detail on the noise mitigation requirements in regard to:
  - a. Likely building construction ie walls, roof/ceiling, doors, windows, including required design sound rating of each element.

**Comment:**

Section 5.1 of the Roadpro report identifies that kennel construction for housing dogs (6pm to 7am) should achieve a noise reduction of 35 dB(A).

The report provides the following construction details for the kennel structures and associated ventilation supply.

The basic blockwork construction of the boarding kennels is amenable to this level of attenuation with the inclusions as shown the plans in **Appendix A**:

- The roof / ceiling of the kennels should have an acoustic  $R_w$  rating of 45 e.g. 13 mm acoustically rated plasterboard or equivalent density fibre cement sheeting with 100 mm thick bulk insulation in the roof cavity.
- Doors to the outside of the building should be solid timber / heavy plywood at least 45 mm thick, and be fitted with acoustic seals.
- There are no penetrations to the kennels except for the ventilation ducting, which is designed to have a single point of entry at one end of each building wing to minimise loss of acoustic integrity.
- Internal common ventilation will comprise of circular ducting to limit break-in and break-out noise to reduce cross-talk (barking) between kennels at night time.
- Acoustically absorptive lining is incorporated into each individual kennel ceiling.
- Attenuation at the point of penetration of AC / ventilation ducting is recommended to utilise a plenum box arrangement as indicated in **Figure 6**.

Ventilation plenum construction – Steve Irwin Way proposal 5/9/2021

1. 90mm timber frame (larger dimension shown) with 5mm FC sheet facing front and back.
2. 90mm thick insulation in cavity minimum 45kg/m<sup>3</sup>. Alternatively 100mm thick insulation slightly compressed.
3. Internal lining with 100mm thick mineral wool with perforated foil facing.
4. All jointing surfaces to have non-hardening mastic applied prior to assembly.
5. Penetrations to be acoustically sealed.

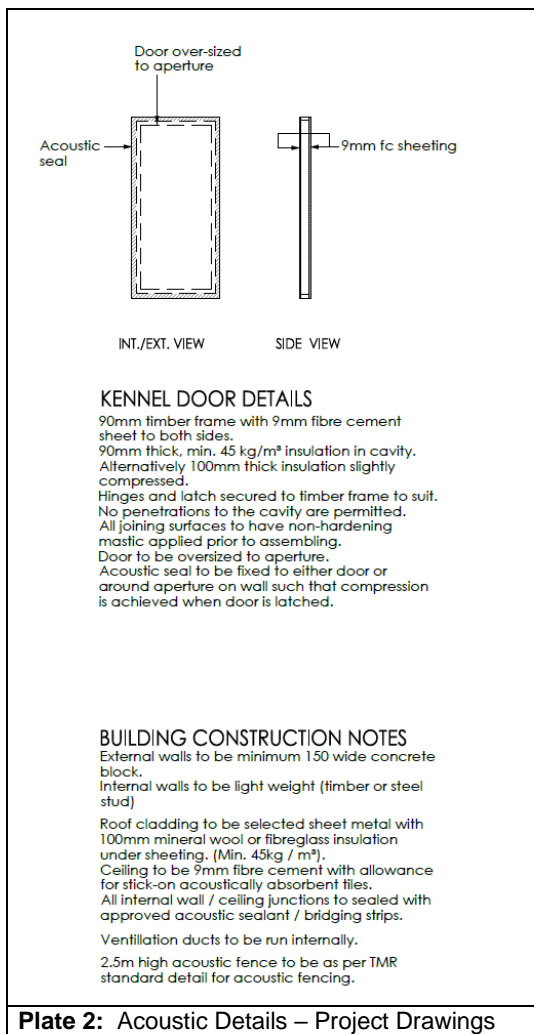
**Figure 6** Ventilation penetration recommended construction.

**Plate 1: Proposed Kennel Construction Details (RoadPro)**

The project design drawings provide the following construction details:

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**Plate 2: Acoustic Details – Project Drawings**

It is my opinion that the above proposed construction details are appropriate in providing acceptable noise containment of dogs enclosed in the kennels during the 6pm to 7am period. Further, the proposed acoustic barriers and acoustic absorptive elements provide containment of daytime noise of dogs outdoors which was not a feature of the original development proposal.

*b. Details on proposed air-conditioning/ mechanical ventilation of the kennel areas, specifically the enclosed kennels where dogs will be housed during the time period 6pm to 7am. The details should include as a minimum, schematic drawings which demonstrate how each kennel will be provided with airconditioning/mechanical ventilation and the acoustic controls proposed to maintain the acoustic effectiveness of the overall building ie acoustic treatments to fresh air supply and*

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*exhaust air discharge such as acoustic silencers, acoustic duct systems and the like.*

**Comment:**

The detail provided as Figure 6 of the RoadPro and the details in Section 5.1 (Extract above) are considered to provide suitable detail on the acoustic containment to be achieved by a mechanical ventilation (air distribution system) for the kennels.

*c. Recommendations with respect to the maximum number of dogs in outdoor play areas at the one time.*

**Comment:**

The RoadPro report Appendix D – Draft Noise Management Plan identifies a maximum of 5 dogs per play area in the common dog run areas at any one time.

*d. Identification of the likely noise management measures that should be implemented at the kennel to minimise dog barking.*

**Comment:**

The RoadPro report, Appendix D – Draft Noise Management Plan Sections 3.2 and 3.3 provide details of noise control and management measures as per below extract.

**3.2 Stimulus Management**

- Individual pens have opaque screens between them to limit visual stimulus.
- Olfactory masking is a control that can be employed if required i.e. timed scent masking sprays
- Internal masking noise can be installed if considered to provide benefit.
- Cross-talk between kennels is limited by the design of the kennels and ventilation system.
- Dogs in the common dog run will be limited to 5 animals per play area at a time.

**3.3 Active Positive Behaviour Management**

- Use of spray collars on problem animals
- Predictable routines
- Comfortable bedding
- Warm and draught-free accommodation
- Familiar toys
- Regular exercise
- Moderate stimulation
- Good interaction with kennel staff

**Plate 3:** Proposed Noise Management Measures (RoadPro)

The above proposed management measures are considered relevant to operations of a kennel facility in management of noise emissions.

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In addition it is noted that the project drawings also identify provision of 1.2 metre high opaque screens to form part of the dividing fences between outdoor runs to provide visual screening between different pens and reduce potential barking. These are considered a necessary inclusion into the design.

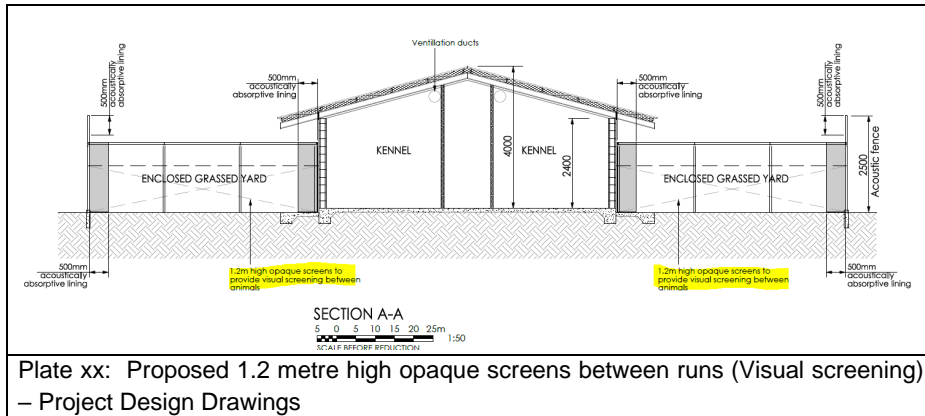


Plate xx: Proposed 1.2 metre high opaque screens between runs (Visual screening) – Project Design Drawings

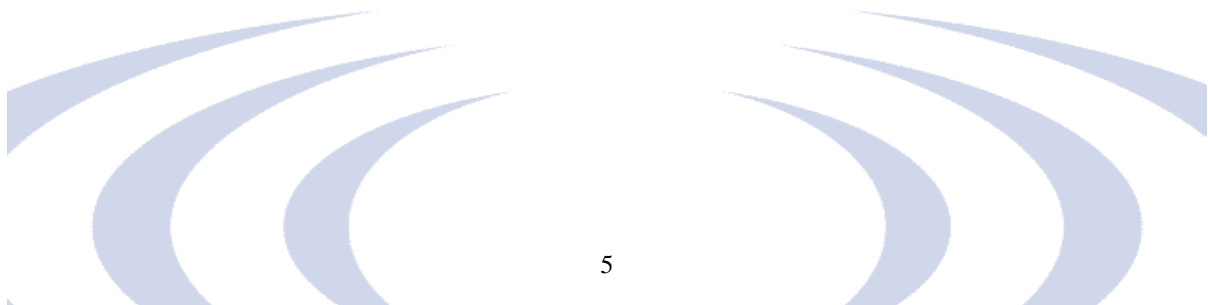
*e. Details the specific locations, heights and construction materials of the acoustic barriers.*

**Comment:**

The RoadPro report (Section 1) identifies that the outdoor areas of the kennels will be surrounded with 2.5 metre high acoustic barriers with strategically located acoustic absorptive surfaces.

The project design drawings SK4 and SK7 identify that the acoustic barriers are to be constructed to TMR standard detail for acoustic fencing, this is assumed to relate to Transport and Main Roads MRTS15 which requires 15 kg/m<sup>2</sup> surface area density.

The drawings also identify 500mm wide acoustically absorptive linings are proposed in corner areas of outdoor yards and top edge of perimeter acoustic fence. There is no specification provided for the likely materials to be used in outdoor areas for absorptive treatment nor the acoustic properties of the materials (ie Noise Reduction Co-efficient).



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- 2. The revised acoustic report must provide all necessary supporting data and assumptions used in preparation of the noise predictions including justification of the criteria adopted.*

**Comment:**

The revised acoustic report has now been prepared on the basis of the amended design proposal and provides specific acoustic detailing and recommended noise management measures.

It is considered that the report adequately addresses noise amenity impacts of the now proposed development.

- 3. Provide a Noise Management Plan which details the operation of the facility and how noise will be managed and provides a complaints receipt, handling and response procedure.*

**Comment:**

The Draft Noise Management Plan (NMP) is included as Appendix D of the RoadPro report. The NMP provides noise management recommendations and the proposal for noise monitoring to be conducted at established locations external to the buildings as part of site management.

It is my opinion that for the NMP to be effective it requires some additional details including:

**Hours of Operation**

1. Opening hours for drop-off or collection of dogs is to be in the time period 6am to 7pm with early or late drop-offs/ pick-ups by appointment only.
2. Dogs are to be kept within the enclosed kennel buildings with all external doors closed during the time period 6pm to 7am.

**Noise Monitoring**

The NMP should identify noise levels at the designated monitoring locations which are comparable to the resultant noise levels at surrounding noise sensitive receptors for compliance with the project noise criteria. This will provide the operator with specific guidance as to whether noise levels at the nominated on-site monitoring locations are acceptable or otherwise to inform the requirement for any changes in noise management of the site.

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It is suggested that prior to commencement of use, that a revised (final) Noise Management Plan be provided to Council for Approval.

*4. Provide updated drawings which represent the amended proposal and include:*

*a. Amended site plan;*

**Comment:**

This has been provided.

*b. Amended Sections and Elevations of the buildings including details on likely construction materials and including the recommended acoustic ratings/ treatments from the revised Acoustic Report; and*

**Comment:**

The drawings provide amended sections and elevations and detail specific acoustic construction requirements.

*c. Details on the proposed noise barriers in respect of location, construction materials and heights.*

**Comment:**

The location of the 2.5 metre high noise barriers is now provided on the project drawings and identify that the barriers are to surround outdoor run areas. The drawings nominate that the acoustic barriers are to be constructed to TMR Standard. This is taken to refer to the Transport and Main Roads Specifications "MRTS15 Noise Fences" (Current version March 2019). All noise barriers must achieve a minimum surface density of 15 kg/m<sup>2</sup>.

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### **Recommendations**

On the basis of the amended proposal and the supporting documents provided on 5 August 2021 it is my opinion that adequate assessment and detail has now been provided such that the proposed use can be designed, constructed and operated such that the acoustic amenity of surrounding sensitive uses is not adversely affected.

Should Council decide to approve the development it should be done so on the basis of very specific conditions relevant to operating parameters, acoustic construction and noise management.

It is my opinion that conditions should include:

1. Operating hours – Drop of and pick up – 7am to 6pm (unless otherwise by appointment for out of hours)
2. Hours of use of outdoor run areas – 7am to 6pm
3. Dogs to be housed within kennel buildings with external façade elements closed (6pm to 7am).
4. Limit the number of dogs in each common dog run to 5 animals per play area at the one time and to be supervised by staff at all times.
5. Noise Criteria - requirement for compliance with the noise criteria of Section 3.1 of the RoadPro report of 5 August 2021. This applies to all noise from the development including dog barking, car movements, car parking, mechanical plant and equipment and service and delivery activities.
6. The requirement for mechanical ventilation/air conditioning to be supplied to all internal kennel areas housing dogs.
7. The requirement for 2.5 m high acoustic barriers to MRTS15 specification.
8. The requirement for the acoustic absorptive treatment proposed in the outdoor run areas to achieve a minimum noise reduction coefficient (NRC) 0.7.
9. The requirement for acoustic absorptive lining to the underside of the internal kennel ceilings with the lining to achieve a minimum NRC 0.6.
10. The requirement for kennel construction to accord with RoadPro report and the project drawings.
11. The requirement for the use to operate with an approved Noise Management Plan.
12. The requirement to have a Sound Level Meter on site (not a phone app) for the purpose of noise measurements as recommended in the Noise Management Plan.
13. The requirement for an updated Noise Management Plan to be approved by Council prior to the commencement of use (to include relevant approval conditions relevant to noise and operating hours within the Noise Management Plan and the setting of noise levels to be used in assessing overall noise compliance when measured at nominated locations on the project site).



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14. Post construction certification by qualified acoustic consultant that the development incorporates all of the required noise mitigation measures and complies with the numerical noise conditions.

Please contact the undersigned for any clarification of the above as necessary.

Yours sincerely,



Paul King  
Principal Engineer

