

GYDE

Response to Submissions

Animal Boarding and Training Facility
1949 Martindale Road, Martindale

submitted to Muswellbrook Shire Council
on behalf of Greyhound Racing NSW

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APPENDICES

APPENDIX	DOCUMENT	PREPARED BY
A	Response to further information letter 21 February 2022	GYDE Consulting
B	Response to submissions 21 February 2022	GYDE Consulting
C	Floor Plan of existing cottages	CMS Surveyors
D	Drought Security Strategy	Larry Cook
E	Drought Security Strategy	Warren Smith Consulting Engineers
F	Greyhound Turnover Information	GRNSW

1. INTRODUCTION

This report addresses submissions that have been received in response to public notification of the application and additional community consultation undertaken by the applicant.

This report also addresses matters raised by Muswellbrook Council following their preliminary assessment of the application and as outlined in their Request for Further Information letters (RFIs).

The report divides the matters into topic categories, and then sub-categorises them into Council and community responses.

It should be noted that matters raised by agencies (such as the NSW National Parks and Wildlife Service) have been addressed separately within the NSW Planning Portal.

We note that a partial response to the RFIs and the submissions were provided to Council already. These are provided as **Appendix A** and **Appendix B** respectively.

2. GENERAL PLANNING MATTERS

2.1. Council submission

NO.	ISSUE	RESPONSE
2.1.1	<p>Crown Road Reserve</p> <p>Subject No. 1 in Council's 21/01/2022 letter states:</p> <p>As discussed at the Regional Planning Panel 'Kick Off Briefing' the subject site is intersected by an unformed Crown Road Reserve. The relationship between the proposed development and this reserve requires further consideration. The review of the proposed plans by Council Officers suggest that the APZ Building Envelope Map extends into the Crown Road Reserve.</p> <p>Where the proposed development, Asset Protection Zone, any wastewater transpiration area or other components of the proposed are to be located within the Road Reserve, a Road Occupancy License or similar permit will need to be obtained from the Crown and an application made to close and purchase the part of the land that the development would include. Alternatively, where it is not intended for the proposed development to involve this land, further plans and information will need to be provided to demonstrate that this would be the case. This issue will need to be resolved and any Crown Land approval obtained prior to the determination of the application.</p> <p>Council has not referred the proposed development to NSW Crown Lands. Once a response is received to this issue Council may refer the application to this government agency for comment.</p>	<p>Tzannes have updated the architectural plans which have relocated the kennels off the crown roads which run through the site.</p> <p>The following plans have been updated to reflect this change:</p> <ul style="list-style-type: none"> • Hydraulic • Civil • Landscape <p>The following reports have been updated with either addendums or revised reports to reflect the revised plans</p> <ul style="list-style-type: none"> • Bushfire • Odour • Acoustic <p>Also, as per recent changes to the Regulations, we formally apply to Council to lodge the amended plans for the application.</p> <p>Given the changes to the plans, a referral to NSW Crown Lands is not required with the revised application.</p>
2.1.2	<p>Review of Integrated Development criteria</p> <p>Subject 2 of Council's letter dated 21/01/2022 states:</p> <p>It is requested that the documentation accompanying the Development Application is updated to include a more comprehensive review of the criteria for Integrated Development particularly in relation to integrated requirements under the <i>Water Management Act 2000</i> and the <i>Protection of Environment Operations Act 1997</i>.</p>	<p>The SEE has been updated to respond to the Integrated Development criteria. Please see Section 4.2.2 for the full assessment.</p> <p>In summary, there are no triggers for Integrated Development under any of the listed legislation. The key ones have been highlighted below:</p> <ul style="list-style-type: none"> • <i>Water Management Act 2000</i>: The plans have been revised to ensure that there are no buildings and works within 40 metres of a watercourse, therefore not triggering Integrated Development provisions under this Act. • <i>Protection of the Environment Operations Act 1997</i>: Schedule 1 of the Act sets out scheduled activities which require a licence. We do not believe that the proposed development meets any of the definitions or triggers outlined in

NO.	ISSUE	RESPONSE
		<p>Schedule 1, particularly in relation to 'composting' where many of the triggers relate to organics being brought in from off site.</p> <ul style="list-style-type: none"> <i>Rural Fire Service Act 1997</i>: The proposed development did not trigger the 'Special Fire Purpose' under 100B of the <i>Rural Fires Act 1997</i>.
2.1.3	<p>Workers Accommodation</p> <p>Subject 12 of Council's letter dated 21/01/2022 states:</p> <p>Council's Building Surveyors are reviewing the proposed development to identify any Clause 93 or Clause 94 requirements relating to the change of use of existing buildings and/ or fire safety considerations. To inform Council Officers considering this issue and identifying the building classification of the proposed workers' accommodation details will need to be provided regarding the total number of rooms to be made available to worker accommodation within the building.</p>	<p>GRNSW has confirmed that there is a maximum of 6 people proposed on site in emergency situations.</p> <p>The architectural plans have been updated to highlight the specific uses for each of the cottages.</p> <p>A copy of the floor plan for each cottage is provided as Appendix C of this letter.</p>
2.1.4	<p>Public Submissions</p> <p>Subject 19. of Council's RFI letter dated 21/01/2022 states:</p> <p>As previously discussed, Council has received a number of public submissions through its notification of the proposed development. A copy of this submission has been provided with earlier correspondence. As part of a response to this request for additional information you may provide a response to the matters raised by the submission for consideration with the assessment of the application.</p>	<p>GYDE has responded to all of the submissions as part of this response under their relevant subject headings, and under the 'Community Submissions' sub-heading.</p>

2.2. Community Submissions

NO.	ISSUE	RESPONSE
2.2.1	<p>The application has failed to identify, respond to, and address all risks and impacts (including cumulative risks and impacts) as required under Section 4.15 of the <i>Environmental Planning and Assessment Act 1979</i> (the Act) and adequately demonstrate how they would monitor, avoid, minimise, mitigate and manage risks and impacts pursuant to the Act</p>	<p>The SEE is a comprehensive document which has adequately assessed all matters of consideration as required under the Act.</p>
2.2.2	<p>The application has relied upon numerous assumptions and the SEE is generally void of adequate justification or evidence to support many</p>	<p>The submitted application has an SEE which has addressed all relevant matters of consideration under the Act, and which is accompanied by</p>

NO.	ISSUE	RESPONSE
	non-evidenced assumptions and conclusions	several technical reports to further demonstrate the suitability of the proposal.
2.2.3	The application has failed to demonstrate adequate consultation with or consideration of sensitive receptors and the community including consideration of applicable buffer zones and amenity, adequate assessment of noise, odour, biosecurity, disease management and emergency management planning considerations	The submitted application has an SEE which has addressed all relevant matters of consideration under the Act, and which is accompanied by several technical reports to further demonstrate the suitability of the proposal.
2.2.4	The application has failed to identify, differentiate and address the risks and impacts included in the separate 'construction' and operational' phases of the proposed development.	The submitted application has an SEE which has addressed all relevant matters of consideration under the Act, and which is accompanied by a number of technical reports to further demonstrate the suitability of the proposal.
2.2.5	The proposed development provides no benefit to the local community or the public at large and is not in the 'public interest'	The proposal provides an economic benefit to the local community by way of the support staff and goods needed from the nearby town, and a social benefit in terms of the animal welfare elements it is providing.
2.2.6	The proposed development includes significant 'development' and 'operational' risks and impacts to the greyhounds, surrounding neighbours and the environment that cannot be managed or mitigated by site design or operational practices	We disagree with this statement. This application is accompanied by a comprehensive SEE which has addressed all relevant matters of consideration under the Act and which is accompanied by several technical reports to further demonstrate the suitability of the proposal.
2.2.7	AL contend that the lack of detail and omission of detail in the application will restrict the ability of Council to undertake a comprehensive assessment	We disagree with this statement. This application is accompanied by a comprehensive SEE which has addressed all relevant matters of consideration under the Act and which is accompanied by a number of technical reports to further demonstrate the suitability of the proposal.
2.2.8	The location of the development is poorly chosen, which is well out of town, hidden from public view, has poor infrastructure and with a creek crossing which is regularly closed	We disagree with this statement. The site was selected in order to minimise the number of direct neighbours around the property. The development is designed to minimise its visual impact on the locality. The development is not 'hidden from public view' to conceal the operations of the facility. The proposed buildings and landscaping have been carefully considered and designed to respond to the rural context with the intention to recede into the existing landscape. The flooding impacts and implications have been assessed by a qualified flood engineer and are considered satisfactory. The servicing requirements for the site have been

NO.	ISSUE	RESPONSE
		assessed by qualified professionals and is considered to be satisfactory. These technical reports accompany the application.
2.2.9	Much of the weather data used for various studies is not referencing long term weather data from BOM for Doyles Creek or Sandy Hollow. This means that the results of these studies are inaccurate and need to be redone using local data.	<p>This provision has come up under the individual themed responses and will also be responded to separately. It is noted that all different consultants have attempted to use the closest and most consistent weather data possible for the area.</p> <p>In regard to wastewater, no temperature, evaporation or rainfall data are available for the Site.</p> <p>Paterson station (89.4 km distant) was used because it is the closest official weather station with rainfall data matched against official pan evaporation data and the period of operation is considered satisfactory.</p> <p>It is understood that Scone SCS BOM site (40.7 km distant) may have evaporation data. These data not readily available, so it could not be sought.</p>
2.2.10	It is considered that the applicant couldn't control all of the potential adviser impacts on the neighbourhood.	<p>We disagree with this statement.</p> <p>As already indicated the application is lodged with a range of technical report demonstrating how the impacts of the development can be controlled on the neighbourhood.</p>
2.2.11	Visual, noise, light and non-owner operated business impact of this development as being out of character with the residential area and inconsistent with the existing and future desired character of the area.	<p>We disagree with this statement.</p> <p>This application is accompanied by a comprehensive SEE which has addressed all relevant matters of consideration under the Act and which is accompanied by several technical reports to further demonstrate the suitability of the proposal.</p>
2.2.12	It is not clear nor has the applicant addressed as to what degree the development would service the day to day needs of residents and having regard to our neighbours there is overwhelming opposition confirms it is not in the public interest.	<p>We disagree with this statement.</p> <p>This application is accompanied by a comprehensive SEE which has addressed all relevant matters of consideration under the Act and which is accompanied by several technical reports to further demonstrate the suitability of the proposal.</p>
2.2.13	The proposal represents a proposed overdevelopment of the site in its present form.	<p>We disagree with this statement.</p> <p>The development has been designed to minimise its visual impact as the building and the landscaping will assist the development receding into the landscape.</p>
2.2.14	If the application is approved, it will have an impact on property prices	Property prices are not a valid reason for objection under the Act.
2.2.15	The application has failed to consider other relevant	The submitted application has an SEE which has

NO.	ISSUE	RESPONSE
	and applicable SEPPs and other relevant planning instruments contained within the LEP and DCP	addressed all relevant matters of consideration under the Act, and which is accompanied by a number of technical reports to further demonstrate the suitability of the proposal.
2.2.16	The application has failed to adequately consider and/ or address all matters of 'public interest' and the required relevant NSW animal welfare legislation and has paid scant attention to the daily and ongoing welfare of the 'discarded GRNSW greyhounds;'	<p>We disagree with this statement.</p> <p>The proposal provides an economic benefit to the local community by way of the support staff and goods needed from the nearby town, and a social benefit in terms of the animal welfare elements it is providing.</p> <p>The social benefit of the facility is outlined further in Section 3. In summary the development has been designed with the highest animal welfare standards in mind and quite often exceeds these requirements.</p> <p>One key part (out of many) of the proposal is the ability to keep greyhounds within the facility for as long as they need for training purposes before being considered for adoption in the GAP program. However, greyhounds which are not deemed to be sufficiently trained for adoption will live comfortably on the facility for the rest of their natural lives, as outlined in Section 3.1 of the submitted SEE.</p> <p>Overall, we consider that the proposal meets the matters of public interest as required under the Act and is worthy of approval.</p>
2.2.17	The proposed development doesn't meet many objectives of the RU1 zone	<p>We disagree with this statement.</p> <p>Section 4.7.1 of the LEP addresses the objectives of the zone.</p> <p>We maintain that the proposed development is consistent with the zone objectives.</p>
2.2.18	Within the LEP there is no definition of 'animal boarding or training establishment' therefore the words have been taken in the context of the definition of the object of the zone	<p>The <i>Muswellbrook Local Environmental Plan 2009</i> in the dictionary has the following definition for an animal boarding or training establishment:</p> <p><i>animal boarding or training establishment means a building or place used for the breeding, boarding, training, keeping or caring of animals for commercial purposes (other than for the agistment of horses), and includes any associated riding school or ancillary veterinary hospital.</i></p> <p>The proposed development clearly meets the land use definition as prescribed within the LEP</p>

NO.	ISSUE	RESPONSE
		dictionary.
2.2.19	The development is not primary industry because it is neither an animal boarding or training establishment nor intensive livestock agriculture	The proposal is properly characterised as an animal boarding or training establishment which is a permissible use within the RU1 zone.
2.2.20	The development is not intensive livestock agriculture	As noted above, the proposal is properly characterised as an animal boarding or training establishment which is a permissible use within the RU1 zone.
2.2.21	The development is incompatible with adjoining properties	We disagree with this statement. As outlined in the submitted SEE, the proposed development has been carefully considered and designed to sit within the landscape and not be incompatible with adjoining properties in terms of visual impact or adverse amenity impacts.
2.2.22	AL contends that the proposed development should be Designated Development given its scale and character.	<p>This has been addressed in Section 4.3.4 of the SEE.</p> <p>Designated Development is categorised in accordance with Schedule 3 of the <i>Environmental Planning and Assessment Regulation 2000</i> (the Regulations).</p> <p>The proposal doesn't meet the thresholds as prescribed in the Regulations. This was addressed in Section 4.3.4 of the submitted SEE.</p>
2.2.23	AL contends that the proposal should be Integrated Development	<p>The proposal is not considered to be Integrated Development for the reasons outlined in the revised SEE.</p> <p>We note that Council referred the application to the Rural Fires Service however as outlined in the Bushfire Report, this was not Integrated Development under the <i>Rural Fires Act 1997</i>.</p> <p>A DA only deals with the requirements under the <i>Environmental Planning and Assessment Act 1979</i>.</p> <p>Should any further permit or approvals be necessary under different legislation, they will be obtained in due course.</p>
2.2.24	The response to SEPP 55 is inadequate	<p>We disagree with this statement.</p> <p>The risks of contamination on the property through previous uses are low. It is noted that this has not been questioned by Council in its Request for Further Information.</p>
2.2.25	The proposal requires referral to TFNSW under the Infrastructure SEPP.	The proposal didn't trigger the vehicle movements prescribed for referral, and Martindale Road is a

NO.	ISSUE	RESPONSE
		local road, not a classified road.
2.2.26	The proposal is not consistent with the objectives and controls of Section 8.2.1 of the DCP	<p>We disagree with this statement.</p> <p>Objectives</p> <p>a) To ensure that the location of buildings do not detract from the natural or rural setting or scenic qualities of a site.</p> <p>b) To ensure that buildings do not dominate the surrounding natural landscape features.</p> <p>As per our SEE, the proposal has been carefully designed to sit within its landscape and not be a dominant feature of the landscape.</p> <p>Once established the landscaping will become the dominant feature on site and sit comfortably within this rural area.</p>
2.2.27	The development should be evaluated as potentially offensive development using SEPP 33 with reference to a Tweed Council case of 14 dogs	The proposal does not trigger the provisions of SEPP 33 therefore an assessment under this environmental planning instrument is not required.
2.2.28	The submitted documents indicate that a flying fox has been installed for staff to use in an emergency. A recent inspection indicates one is not there and they are not aware of a DA for such a device.	<p>There will be no flying fox pursued with this application. We respectfully reserve the right to install it at a later date subject to any relevant approvals.</p> <p>The flying fox is one element of evacuation that is being considered and will require further approvals before it is installed, should that be required.</p>
2.2.29	The SEE is not detailed enough to allow for a comprehensive and objective assessment to be carried out.	The SEE is in itself a detailed assessment against all required provisions of the Act.
2.2.30	The SEE relies on numerous assumptions which means it does not address all risks and impacts as required in the Act nor does it explain how these impacts will be monitored and mitigated.	The SEE has been prepared using the numerous technical reports and plans prepared for this application and addresses all necessary requirements of the Act.
2.2.31	Council should consult a recognised and authorised animal welfare agency (such as the RSPCA) before determining the application.	<p>While Council does have the discretion to do this, it is not mandatory and should not hold up the determination of an application.</p> <p>We note that GRNSW has already consulted with several external animal welfare formally and informally over the course of the project.</p>
2.2.32	The application has failed to consider other relevant and applicable SEPPs and other relevant planning instruments contained within the LEP and DCP	The submitted application has an SEE which has addressed all relevant matters of consideration under the Act, and which is accompanied by a number of technical reports to further demonstrate the suitability of the proposal.
2.2.33	The application has failed to adequately consider	We disagree with this statement.

NO.	ISSUE	RESPONSE
	<p>and/ or address all matters of 'public interest' and the required relevant NSW animal welfare legislation and has paid scant attention to the daily and ongoing welfare of the 'discarded GRNSW greyhounds;'</p>	<p>The proposal provides an economic benefit to the local community by way of the support staff and goods needed from the nearby town, and a social benefit in terms of the animal welfare elements it is providing.</p> <p>The social benefit of the facility is outlined further in Section 3. In summary the development has been designed with the highest animal welfare standards in mind and quite often exceeds these requirements.</p> <p>One key part (out of many) of the proposal is the ability to keep greyhounds within the facility for as long as they need for training purposes before being considered for adoption in the GAP program. However, greyhounds which are not deemed to be sufficiently trained for adoption will live comfortably on the facility for the rest of their natural lives, as outlined in Section 3.1 of the submitted SEE.</p> <p>Overall, we consider that the proposal meets the matters of public interest as required under the Act and is worthy of approval.</p>
2.2.34	<p>The proposed development doesn't meet many objectives of the RU1 zone</p>	<p>We disagree with this statement.</p> <p>Section 4.7.1 of the LEP addresses the objectives of the zone.</p> <p>We maintain that the proposed development is consistent with the zone objectives.</p>

3. TRAFFIC

3.1. Council submission

NO.	ISSUE	RESPONSE
3.1.1	<p>Martindale Road intersection As per Point 2 of Council's RFI dated 1/3/2022:</p> <p>Council Officers have inspected the site and the T intersection between the sealed roadway of Martindale Road and the gravel Crown road to the proposed site. Council Roads and Drainage Officers and Engineers have concerns with the site distances around this intersection and the risk presented by additional light and heavy vehicle movements using this intersection as an outcome of the proposed development. It is Council's view that this intersection will require upgrade works as part of the development. Accordingly, it is requested that a further evaluation of this intersection is undertaken, and a concept design put forward for an upgraded intersection. Any design should include</p> <ul style="list-style-type: none"> • a bitumen seal to the extent of the road reserve in accordance with the Rural Road driveway standard plus suitable sealed apron to prevent gravel entering the roadway, • Appropriate concealed driveway signage along the Martindale Rd in each direction • Appropriate widening of Martindale Road to provide safe acceleration/passing lane for vehicles turning right when exiting the T intersection of the Crown Road into Martindale Road. 	<p>A response to Council's traffic matters as raised in the 1/3/2022 RFI has been provided by SECA Solutions as Appendix 18(b) of the revised SEE.</p> <p>In terms of this intersection, SECA Solutions acknowledges that the sight lines are restricted, particularly to the right. This has been outlined in their technical reports provided with the application.</p> <p>To ensure that the intersection is suitable for the proposal, SECA Solution recommend an upgrade to the driveway connection to the site to Martindale Road in accordance with Austroads Guide to Road Design Part 4 – Intersections and Crossings. Figure 7.4 of the design guide have been replicated on page 3 of Appendix 18(b). The detailed design work can be addressed with the future Section 138 approval.</p> <p>The detailed design of the intersection can be conditioned and addressed with a future Section 138 approval required under the <i>Roads Act 1993</i>.</p>
3.1.2	<p>Traffic Impact Assessment As per Point 3 of Council's RFI dated 1/3/2022:</p> <p>An updated traffic impact should be prepared in relation to the proposed development which gives further consideration staff requiring parking arrangements on the opposite side of the creek from the proposed development due to creek flow and impeded access for a range of vehicles including deliveries</p>	<p>Staff will not be parking on the west side of the creek therefore this point does not require any further assessment.</p>
3.1.3	<p>Road Safety Assessment - As per Point 4 of Council's RFI dated 1/3/2022: – a more detailed analysis of the safety of Martindale Road is required to that included in the Traffic Impact Assessment submitted. It is requested that a detailed safety assessment of the roadway be provided in relation to the proposed</p>	<p>SECA Solution undertook a detailed analysis of the safety of Martindale Road for approximately 2,500m up to the first creek crossing from the subject site.</p> <p>This distance and scope of works was confirmed by Council staff prior to the assessment.</p>

NO.	ISSUE	RESPONSE
	<p>development including a condition assessment/dilapidation survey of the road of between the bridge to the north of the site on Martindale Rd to the Crown access Road plus a minimum 300m further south. This assessment should identify existing road safety requirements and propose any additional measures required to support the safety of light and heavy traffic movements related to the proposed development. Prior to the completion of the Road Safety Assessment additional traffic investigations should be carried out to those detailed in the traffic Impact Assessment to ensure that the Assessment is based on a complete view of the existing Martindale Road traffic conditions. As a minimum it will be necessary for the person carrying out the audit to:</p> <ul style="list-style-type: none"> • Consider of the speed limit of Martindale Road as 100kmph not the 90kmph referenced in the Traffic Impact Assessment. • Consider of the school bus times for the Martindale school bus(es). • Review the public submissions made regarding traffic and transport. • Be provided with additional details related to anticipated heavy vehicle movements related to the proposed development including the types of heavy vehicles proposed to transport material and animals to the site. • Be provided with preliminary details of anticipated construction traffic for the development <p>Measures proposed by the road safety audit to improve the road safety may include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> • Any requirement for the inclusion of pullover or passing bays for traffic including but not limited to construction traffic, delivery vehicles/service vehicles and buses • The provision of additional road safety signage • Vegetation management • Limits to the time of and type of heavy vehicle movements permitted related to the operation of the development • Consider/recommend temporary safety measures to be implemented during the construction phase for the development • Any other traffic safety measures identified or recommended through the carrying out of the audit • The proponent's engineers are to review the road safety assessment and propose recommendations (where necessary) for any 	<p>The key points raised:</p> <ul style="list-style-type: none"> • The posted speed limit is 100km/h however the comfortable driving speed for an unfamiliar driver is 80-90km/h (noting that Council and TFNSW are responsible for amending speed limits). SECA Solutions suggest that the reduction of the speed limit is investigated to improve safety on the road. • The existing traffic flows are very low along this road. During the site visit, SECA Solutions noted less than 10 cars were observed on this section of road in a 1.5-2-hour period. • The vehicles observed on SECA Solution's site visit were cars together with the afternoon school bus run. The width of the sealed road pavement requires the opposing vehicles to slow and place two wheels on the verge to pass. • The vegetation to the side of the road in places is well maintained with grass cut short to both sides. In these locations, the road appears wider and if a driver needs to place two wheels on the verge it is much easier to judge where to drive. <p>SECA Solution make a number of recommendations for safety improvements along Martindale Road. It is noted that these improvements would be beneficial with or without this development. GRNSW would be prepared to make a reasonable contribution towards these improvements, noting that the proposal will increase traffic on Martindale Road by approximately 7.9% according to the traffic survey and trip generation estimates prepared by SECA Solution.</p>

NO.	ISSUE	RESPONSE
	<p>road safety improvements identified by the Assessment to be carried out by the applicant proportionate to the impact of the proposed development and the related traffic increases and to manage the risks associated with additional traffic including construction, delivery, service and general traffic. When considering the improvements put forward the proponent should be guided by the principle of ensuring that the proposal does not negatively impact the overall safety of Martindale Road, and address concerns raised by local residents.</p>	
3.1.4	<p>Preliminary Construction Traffic Management Plan - As per Point 5 of Council's RFI dated 1/3/2022:</p> <p>While Council recognises that it may be difficult for a comprehensive Construction Management Plan to be prepared at this stage of the development design the ability for construction traffic (particularly heavy vehicles) to safely access the site and avoid conflict with other Martindale Road traffic is an important assessment issue for this development. Accordingly, it is recommended that preliminary details of construction traffic are provided to Council to inform their assessment of the proposed development along with a preliminary Management Plan providing a high level overview of any measures proposed to ensure the safe management of construction traffic to and from the site.</p>	<p>SECA Solutions have provided a preliminary construction management plan within Appendix 18(b).</p> <p>This detail can be formulated into a full Construction Management Plan (CMP). The CMP would be a condition of consent and be approved by Council prior to works commencing on site.</p> <p>Key items in the CMP are:</p> <ul style="list-style-type: none"> • Avoiding construction vehicles and delivery vehicles from using Martindale Road during school bus times. • Encouraging construction staff to car share to site. • Having construction staff sign off on a Driver's Code of Conduct as part of employment on site. An example of the Driver's Code of Conduct is provided with the traffic report. • Nominating and documenting the access route to site for delivery vehicles. • Provide written communication to all landowners and residents along Martindale Road to advise of upcoming works and potential impacts, along with contact details for the construction site manager. • For the infrequent occasions for over size mass vehicles to enter the site, this would occur outside school bus travel times and include escort vehicles as per TFNSW requirements. As per the above points, the landowners and residents along Martindale Road will be advised of these movements. <p>We consider that the detail provided is sufficient for the purpose of the assessment of the application, with a full detailed CMP to be conditioned and approved post consent.</p>
3.1.5	Unformed Access Management -	We acknowledge that the gravel access Crown

NO.	ISSUE	RESPONSE
	<p>As per Point 6 of Council's RFI dated 1/3/2022:</p> <p>The gravel access Crown Road between the proposed site and the Martindale Road T intersection is not maintained by Council. In addition to providing access to the subject site this gravel road is used by adjoining properties. Council will require appropriate assurances that the applicant will be responsible for any additional maintenance burden for the maintenance of the gravel access Crown Road (which is not currently maintained by Council). Additionally, an agreement will need to be entered into between the proponent, Council and/or the Crown for the maintenance of the gravel road and/or its construction to an appropriate standard prior to the determination of this application.</p>	<p>Road between the site and the intersection with Martindale Road is not maintained by Council.</p> <p>As indicated by the original Traffic Impact Assessment, the level of traffic on this road for this development is considered to be satisfactory without the need for formal upgrades, i.e. sealing the road.</p> <p>We also note that the previous use of the site as a horse stud involved much heavier vehicles accessing using the road on a regular basis.</p> <p>The applicant would have no objection to a condition being imposed on any consent granted requiring the provision of a maintenance agreement which sets out the terms and timing of the any road maintenance required as a consequence of the development or operation of the proposal.</p> <p>Any agreement should also make provision for circumstances where another user of the road proposes a more intensive use of their land with increased traffic movements. In these circumstances the agreement should be fairly adjusted.</p> <p>We note that Crown Lands are the Roads Authority for this road. As per the Administration of Crown Roads Policy (Policy No. IND-O-250):</p> <ul style="list-style-type: none"> • An application to undertake authorised works on a Crown Road can be considered where the Crown Road doesn't satisfy the criteria for road transfer, which this road would meet that provision. • The proposed works would be in the scope for maintenance to conserve pre-existing access conditions, as it is our view that the road can be maintained to the existing condition, with the formal extent of the nature of works to be negotiated. • We note that under s.110 – Direction to contribute under the <i>Roads Act 1993</i>, where a Crown Road provides access for a small number of landholders, and primarily only benefits those landholders, the department can direct those landholders to pay some or all of the cost of repair or maintenance works. <p>We consider that the proposed maintenance works meet the thresholds prescribed by Crown Lands as small-scale works. Any approvals required can be</p>

NO.	ISSUE	RESPONSE
		granted post consent.

3.2. Community submission

NO.	ISSUE	RESPONSE
3.2.1	All extra traffic would affect the road, as would increase vehicle interactions. Trucks miss turns and go off the end of the road, and trucks have pulled out of the driveway without looking	<p>The extent of extra traffic associated with the project and trucks is low. The extra traffic associated with the project together with the existing traffic flows are well within acceptable capacity standards provided within the <i>RTA Guide to Traffic Generating Developments</i>.</p> <p>All drivers associated with the project will adhere to road rules and made aware of the sight issues around the site access.</p> <p>As per the above, the application also includes the proposed upgrade of the intersection of the Crown Road reserve and Martindale Road which will improve sight lines at this point.</p> <p>A preliminary construction management plan has been submitted with this report and the associated revised SEE to outlines measures for construction vehicles to address safety concerns. GRNSW are able to implement their own driver safety standards in contractors who will be servicing the facility.</p>
3.2.2	Martindale Road needs considerable amount of improvements i.e. road widening, pruning of trees	Any road widening or trimming of vegetation is the responsibility of the road authority. The volume of traffic associated with the project does not warrant the upgrade of the road to provide a wider road pavement.
3.2.3	Martindale Road is a school bus route. While the Williams Bridge was under construction, large construction vehicles were kept off the road during school bus times	<p>Drivers associated with the project will be advised of the times for the school bus activities and drive in accordance with the road rules, including passing a school bus at the appropriate speed.</p> <p>A preliminary construction management plan has been prepared by SECA Solution and submitted with this report.</p> <p>This plan outlines measures for construction vehicles to address safety concerns. GRNSW are able to implement their own driver safety standards in contractors who will be servicing the facility.</p> <p>Where possible, GRNSW are committed to not having heavy service vehicles use Martindale Road at the same time as the school bus run.</p>
3.2.4	Martindale Road has become a busy road in the last few years due to other properties being subdivided/ horse breeding properties and therefore more traffic	The existing traffic flows are well within the capacity of Martindale Road based on the RTA Guidelines. The additional traffic associated with the project will not increase the total traffic volumes over

NO.	ISSUE	RESPONSE
		<p>acceptable limits.</p> <p>SECA Solution has undertaken tube survey data which has been submitted as part of Appendix 18(b) of the revised SEE. This survey data demonstrates that the road operates well within its capacity.</p> <p><i>SECA Solution have indicated in their Traffic Impact Assessment:</i></p> <p><i>'The traffic demands associated with the development will increase the existing traffic by up to 10 vehicles per hour, less if considering those that are additional over the prior use of the site. This is well within the capacity of this road and will not have a noticeable impact upon the operation of this road given the rural nature of the holdings and the set back of properties from the road.'</i></p>
3.2.5	<p>There are sections of Martindale Road which only have single lane bitumen but do not allow heavy vehicles to pass with two wheels on the verge</p> <p>There are also extensive tree branches overhanging, pot holes from wear and tear, and degraded verges.</p> <p>All of these factors make the current state of the road extremely unsafe with the current level of traffic and current speed limit.</p>	<p>Road maintenance is the responsibility of the road authority.</p> <p>Speed limits are controlled by TfNSW and Council. However, SECA Solution have suggested that consideration could be given to lowering the speed limit given the width and nature of the road verge.</p>
3.2.6	The statement that drivers are familiar with the road is irrelevant and unsupported	<p>It is considered that the majority of drivers are familiar with the road as they have an origin / destination there. It does not support through traffic movements.</p> <p>Local drivers will be able to drive to the conditions.</p>
3.2.7	The road is not suitable for existing car traffic, is not suitable for heavy vehicle traffic and definitely not suitable for the increased traffic that will result from this development	<p>The existing traffic flows are well within the capacity of Martindale Road based on the RTA Guidelines. The additional traffic associated with the project will not increase the total traffic volumes over acceptable limits.</p> <p>Please see the tube survey data submitted with the RFI response for further detail.</p>
3.2.8	There is no basis on how some of the assessments were made: services accessing the site transportation of dogs to and from the site staff accessing the site	The operational characteristics of the project have been provided by the study team based on the proposed operations for the project site.
3.2.9	The existing traffic flows adjacent to Bylong Park are not necessarily relevant to the safe and adequate use of the road. The traffic flows further north towards Denman are greater and the safety of the road must be assessed along the whole road	<p>The traffic consultant on the project has undertaken a tube survey to measure the existing traffic flows on the road.</p> <p>This survey information has been submitted with the RFI response.</p> <p>The results of this traffic survey demonstrate that</p>

NO.	ISSUE	RESPONSE
		<p>the traffic flows along Martindale Road are low and the additional traffic is well within the limits of the road.</p> <p>The Council engineer requested further information in relation to the traffic flows and safety of the road, which has been addressed in the RFI response.</p>
3.2.10	The previous horse stud was a small operation with very few staff in addition to the on site manager so any estimates associated with this use is unreliable and irrelevant	The previous use provides some background information and is relevant with regards to horse floats / heavy vehicle access.
3.2.11	The assumption that all drivers will be local is incorrect as many people use the road for scenic drives	<p>Monday to Friday it is considered that the vast majority of drivers will be local.</p> <p>There could be some drivers visiting the area on a weekend but it is not considered these will be high. On a weekend, there would be no requirement for heavy vehicle access to the site, with staff movements only.</p>
3.2.12	The speed limit on the road is signposted at 100kph not 90kph	Noted.
3.2.13	The traffic report does not mention that the driveway is a shared driveway with the neighbours and how this will be maintained and to what standard, and who will pay for and be responsible for this driveway maintenance, particularly with increased usage	<p>As per the response submitted with the RFI, the proposed development will not generate significant demands on the shared driveway.</p> <p>It is proposed that a condition of consent is provided which requires the preparation of a maintenance agreement. This has been outlined in the RFI response.</p> <p>An agreement with regards to maintenance of the driveway can be agreed with the applicant and the adjacent landowner.</p>
3.2.14	The traffic report doesn't consider whether the dirt driveway will become unpassable during wet weather and the effect this will have on the neighbours	As above
3.2.15	It is proposed that the unsealed access is upgraded to a sealed at the cost of GRNSW with signage on Martindale Rd indicating it is a private road.	This is a possibility that has been considered however not necessary as the road is considered adequate and has supported previous traffic loads similar to the expected traffic for the facility.
3.2.16	The DA incorrectly states the bus run times. The correct bus times are between 6:50-8:45am and 3pm-4:45pm with four trips up and down Martindale Road each day.	Noted
3.2.17	Given the condition of the road, an upgrade of Martindale Road verges from 1050 Martindale Road onwards to be undertaken between Council and GRNSW including widening to allow 2 heavy	The maintenance of the road is for the road authority. The Council engineer has requested further detail in relation to road safety which has been addressed in the RFI.

NO.	ISSUE	RESPONSE
	vehicles to pass safely at the reduced speed limit.	<p>The volume of traffic associated with the project does not warrant any significant road upgrades.</p> <p>Any adjustment to the speed limit is subject to review and approval by TfNSW and Council.</p>
3.2.18	The hours of operation require extensive staffing and generates more traffic than what Martindale Road can handle at the moment with Council and residents maintaining sections of road.	<p>The volumes of traffic associated with the project does not warrant any road upgrade.</p> <p>Please see the tube survey data submitted with the RFI response for further detail.</p>
3.2.19	As the current entrance of the property doesn't meet AS1428.1 at 90kmh then it certainly wouldn't meet it at 100kph	<p>Noted.</p> <p>Given the low traffic flows associated with the project and on Martindale Road, the access can continue to operate in a safe manner.</p> <p>As per the RFI response, SECA Solution has recommended that the intersection of the access road and Martindale Road is upgraded, with the details of these works to be outlined in consent conditions and subject to the future Section 138 approval.</p>
3.2.20	The sight lines from the property onto Martindale Road are more like 50-60m rather than the 80-90m as stated in the report.	<p>Sight lines were assessed on site in accordance with Austroads Guidelines.</p> <p>The sight lines can be improved with trimming of road side vegetation.</p>

4. FLOODING

4.1. Council submission

NO.	ISSUE	RESPONSE									
4.1	<p>Flooding – As per Council RFI dated 3/1/2022:</p> <p>The flood impact assessment submitted with the development application predominately considers the impact of the 1% AEP event on the proposed development. Further analysis is required in relation to more frequent flood events and their inundation of the Martindale Creek crossing that provides access to the site. It is recommended that:</p> <ul style="list-style-type: none"> • Further modelling is undertaken to identify the type of rainfall-runoff event that would restrict 2WD and 4WD vehicle access across this crossing, including identification of velocity x depth hazard • Identify the duration in hours and days and frequency that typical rainfall-runoff would restrict abovementioned vehicle access to the site within the identified catchment. • Identify on average how many days access to the site would be restricted by flooding of the creek crossing for relevant peak events (or provide separate averages for years influenced by El Nino, La Nina and neutral weather patterns) • Consider and discuss any findings related to the frequency and duration of the access inundation when affected by flooding give further consideration to the recommended strategy for providing access. Any further evaluation of this issue should have regard to the sites operational requirements, likelihood of greyhounds needing to be transported to or from the site during flood events and how this would be managed with any flood free access provided. • Where it remains proposed for a flood free access to be provided by a flying fox, or a new greyhound friendly pedestrian step bridge or similar a plan should be provided for the flood free access along with any works within the road reserve to provide suitable space and pavement construction for vehicle parking for operational staff and delivery vehicles that may be required to access the site or make deliveries during flood events. • Modelling of flood behaviour that defines the variation over time of flood levels, extents and velocities for each of the critical design events. 	<p>An updated Flood Assessment has been prepared by EMM and has been provided as Appendix 21(b) with the revised SEE.</p> <p>The Flood Assessment shows:</p> <ul style="list-style-type: none"> • The streamflow analysis indicated that site access would be restricted for small cars and large 4WD vehicles when streamflow in Martindale Creek exceeds 1.6m³ (depth of 0.3m) and 3.7m³ (depth of 0.5m) respectively. • Streamflow within Martindale Creek generally rises rapidly with typical streamflow events expected to restrict access to the site for several hours to days depending on the magnitude of the event and rainfall distribution. • Streamflow events that would restrict safe site access occur more than five and six times per year in 50% of years for large 4WD and small cars respectively. • Safe site access would be restricted for approximately 1 day in 50% of events while restrictions of more than 6 days occur in 10% of events. <p>The following table outlines the specific sections to respond to the matters in Council's request:</p> <table> <tr> <th>Point</th><th>Requirement</th><th>Section response</th></tr> <tr> <td>a)</td><td>Further modelling is undertaken to identify the type of rainfall-runoff event that would restrict 2WD and 4WD vehicle access across this crossing, including identification of velocity x depth hazard</td><td>Section 4.2</td></tr> <tr> <td>b)</td><td>Identify the duration in hours and days and frequency that typical rainfall-runoff would restrict abovementioned vehicle access to the site within the</td><td>Section 4.4</td></tr> </table>	Point	Requirement	Section response	a)	Further modelling is undertaken to identify the type of rainfall-runoff event that would restrict 2WD and 4WD vehicle access across this crossing, including identification of velocity x depth hazard	Section 4.2	b)	Identify the duration in hours and days and frequency that typical rainfall-runoff would restrict abovementioned vehicle access to the site within the	Section 4.4
Point	Requirement	Section response									
a)	Further modelling is undertaken to identify the type of rainfall-runoff event that would restrict 2WD and 4WD vehicle access across this crossing, including identification of velocity x depth hazard	Section 4.2									
b)	Identify the duration in hours and days and frequency that typical rainfall-runoff would restrict abovementioned vehicle access to the site within the	Section 4.4									

NO.	ISSUE	RESPONSE		
	<p>This may require modelling of shorter duration 100 year ARI and PMF or equivalent extreme events to provide advice in relation to the potential differences in time available for response</p> <ul style="list-style-type: none"> Consideration of the impacts of the PMF event on the site and the differences in catchment time response to determine flood warning requirements and evacuation requirements as a risk management strategy considering difficulties in SES evacuating the site and/or rescue of hundreds of animals and staff 		identified catchment.	
		c)	Identify on average how many days access to the site would be restricted by flooding of the creek crossing for relevant peak events (or provide separate averages for years influenced by El Nino, La Nina and neutral weather patterns)	Section 4.4
		d)	Consider and discuss any findings related to the frequency and duration of the access inundation when affected by flooding give further consideration to the recommended strategy for providing access. Any further evaluation of this issue should have regard to the site's operational requirements, likelihood of greyhounds needing to be transported to or from the site during flood events and how this would be managed with any flood free access provided.	Chapter 6
		e)	Where it remains proposed for a flood free access to be provided by a flying fox, or a new greyhound friendly pedestrian step bridge or similar a plan should be provided for the flood free access along with any works within the road reserve to provide	Flood free access via flying fox or pedestrian bridge are not proposed.

NO.	ISSUE	RESPONSE									
		<table> <tr> <td></td><td>suitable space and pavement construction for vehicle parking for operational staff and delivery vehicles that may be required to access the site or make deliveries during flood events.</td><td></td></tr> <tr> <td>f)</td><td>Identify on average how many days access to the site would be restricted by flooding of the creek crossing for relevant peak events (or provide separate averages for years influenced by El Nino, La Nina and neutral weather patterns)</td><td>Section 5.3.3 Section 5.4.3</td></tr> <tr> <td>g)</td><td>Consideration of the impacts of the PMF event on the site and the differences in catchment time response to determine flood warning requirements and evacuation requirements as a risk management strategy considering difficulties in SES evacuating the site and/or rescue of hundreds of animals and staff</td><td>Section 5.4.3 Section 7.4</td></tr> </table> <p>As per the report, the flood risk on site is to be managed through operational measures. Our client GRNSW are aware of the flood risks on site and are accepting of these risks and the management elements around their operations to mitigate them.</p> <p>The Emergency Management Plan framework is provided with this letter and is provided with this RFI response with the Operational Management Plan.</p> <p>Key parts are:</p>		suitable space and pavement construction for vehicle parking for operational staff and delivery vehicles that may be required to access the site or make deliveries during flood events.		f)	Identify on average how many days access to the site would be restricted by flooding of the creek crossing for relevant peak events (or provide separate averages for years influenced by El Nino, La Nina and neutral weather patterns)	Section 5.3.3 Section 5.4.3	g)	Consideration of the impacts of the PMF event on the site and the differences in catchment time response to determine flood warning requirements and evacuation requirements as a risk management strategy considering difficulties in SES evacuating the site and/or rescue of hundreds of animals and staff	Section 5.4.3 Section 7.4
	suitable space and pavement construction for vehicle parking for operational staff and delivery vehicles that may be required to access the site or make deliveries during flood events.										
f)	Identify on average how many days access to the site would be restricted by flooding of the creek crossing for relevant peak events (or provide separate averages for years influenced by El Nino, La Nina and neutral weather patterns)	Section 5.3.3 Section 5.4.3									
g)	Consideration of the impacts of the PMF event on the site and the differences in catchment time response to determine flood warning requirements and evacuation requirements as a risk management strategy considering difficulties in SES evacuating the site and/or rescue of hundreds of animals and staff	Section 5.4.3 Section 7.4									

NO.	ISSUE	RESPONSE
		<ul style="list-style-type: none"> • The on-site manager being responsible for the regular monitoring of weather reports and forecasts and emergency warnings supported by an onsite weather station. • Having non-essential staff leave site while it is safe to do so. • On site accommodation being available for staff to stay on site and care for the dogs. This will be stocked with supplies up to 14 days. • Having staff on site trained in advanced first aid in all shifts as well as a defibrillator for use on site in an emergency. • Remote telephone support to be provided by a veterinarian in the case of an animal emergency. • Ongoing staff training in emergency events as part of the standard operating procedures. Training and emergency procedures will be further refined prior to the use commencing on site. • A range of replacement parts for critical equipment to be kept on site to maintain essential services such as the wastewater management systems. Backup generators will provide power in power outages. <p>A more detailed Operational Management Plan (if required) could appropriately form part of any conditions of the consent.</p>

4.2. Community submissions

NO.	ISSUE	RESPONSE
4.2.1	Access to the property can be cut off due to the low crossing in the creek – how will the site manage in an emergency	<p>Section 6.5 and Section 7.4 of the flood risk assessment (Appendix 21(b)) describe management procedures when the site access is restricted.</p> <p>This is also outlined in the above table.</p> <p>The Operational Management Plan also includes an appendix with the Emergency Management Plan listed.</p>
4.2.2	Local resident records indicate that the crossing has been blocked from vehicle movements at least 45 times in the last 30 years	<p>Noted.</p> <p>EMM have undertaken additional analysis to characterise streamflow within Martindale Creek including frequency and duration of site access</p>

NO.	ISSUE	RESPONSE
		restrictions.
4.2.3	Local knowledge indicates that the water can rise quickly and dangerously from storms at the top of the catchment and it s not safe to have staff leave over a rapidly rising creek.	Noted. EMM have undertaken additional analysis to characterise flood hazard thresholds (i.e. the streamflow conditions when vehicle access is unsafe) for the existing causeway. It is not proposed for staff to cross the creek when flow conditions exceed the flood hazard thresholds.
4.2.4	The recommendation for a winch to be fitted to a vehicle is not understood. If the water is deep enough for a vehicle to have to be winched then it is too deep to get the winch rope across. The vehicle will need to be towed out after the water has receded sufficiently to walk a rope across the creek	Noted. Reference to a winch has been removed from the additional flood report.
4.2.5	The flooding impacts have been underestimated and the property can remain cut off regularly for a number of weeks	EMM have undertaken additional analysis to characterise streamflow within Martindale Creek. The additional analysis is considered sufficient to characterise flood risk associated with the site.

5. NOISE

5.1. Council submission

NO.	ISSUE	RESPONSE
5.1.1	<p>Noise Impacts</p> <p>Subject No. 9 in Council's 21/01/2022 letter states:</p> <p>Submissions received by Council raise a number of concerns regarding noise impacts. The issues raised should be considered and a response prepared by an acoustic consultant.</p> <p>This response should also consider/ provide additional information as listed within the letter.</p>	<p>Since the original RFI request and our first response, Council has engaged its own Acoustic Engineer to review the proposed noise modelling and provide feedback. The project's Acoustic Engineer has worked with Council's Consulting Engineer to resolve the questions around the model inputs and outputs.</p> <p>A revised noise report is provided with the amended application and Statement of Environmental Effects (SEE) as Appendix 16(b).</p>
	<p>Control of individually noisy greyhounds</p> <p>Subject No. 10 in Council's 21/01/2022 letter states:</p> <p>The Operational Management Plan includes a noise management procedure for the relocation of noisy animals to a 'more compatible kennel module'. Where it is proposed for the facility to include any kennels with additional noise attenuation measures it is requested that details be provided around the proposed location and number of any such kennels along with information from the Acoustic Consultant related to additional noise control measures proposed to reduce noise from animals that regularly bark and cause disturbances.</p>	<p>Please note that the Operational Management Plan includes measures to manage and relocate noisy dogs.</p> <p>In terms of further detail, the kennels are designed to block off access to the night/day run areas containing the dog inside until they settle. If this does not calm the dog, they or they are reacting to one of the dogs in that kennel block/module or if they are still disturbing other dogs too much, the dog will be moved to another kennel block and alternative kennel buddies will be trialled.</p> <p>The noisy dog management plan also lists some of the next steps including veterinary review, modified behaviour plans.</p> <p>The Acoustic Engineer on the project confirms that if the noisy dogs are isolated inside one of the kennels until the dog settles down, the construction and fabric proposed for the kennels will be sufficient to address the noise associated with the barking.</p>

5.2. Community submissions

	ISSUE	RESPONSE
5.2.1	The documents include conflicting information in relation to 'receptors'	Matters in relation to the acoustic modelling are being assessed between Stantec and Council. No further detail beyond what is required by Council and its consulting engineers is necessary.
5.2.2	Nearby residential properties will be impacted by excessive noise and loss of amenity due to the facility	It is Stantec's findings that the noise levels are predicted to comply with acoustic criteria. The criteria come from a noise policy that defines the

ISSUE		RESPONSE
		criteria in terms of levels required to achieve amenity and limit intrusiveness for residents.
5.2.3	Report appears to not have been done in Martindale which is a natural amphitheatre	The acoustic modelling used accurate topographical information for the area. The model is built in 3D and accounts for the hills, valley and height differences between residents and the facility together with ground absorption and local dominant weather conditions.
5.2.4	The Acoustic Report is inadequate in addressing the disturbance of the development in the valley, particularly how sounds are transmitted in this location.	The reflections of surrounding environment have been included in the model. We will check what is the effect of the distant hills / mountains typically echo is happening for distance between the source and the receivers. It is important to note that the mountain is covered by vegetation which means that part of the incident sound will be absorbed before being reflected. The sound from the source (dogs) will decrease with the distance between them and the receivers which will be more than doubled the direct distance between the source and receivers which means the overall level at the receiver will not change significantly or may not change at all.
5.2.5	The DA is optimistic and gives many reasons why the dogs won't bark due to good management, and even that the manager will get out of bed and quieten the dogs if they bark which is idealistic, unsubstantiated and cannot be relied upon.	<p>The following response is provided from GRNSW in terms of animal behaviour management:</p> <p><i>Greyhounds are generally quieter than most dogs in kennels. You may see some excitement/anticipatory barking at mealtimes, during play, external stimulus such as wildlife or other dogs in other kennel blocks or first thing in the morning if they need to toilet etc. However, the operational plan and the design of the kennels have tried to reduce the amount of anticipatory barking by ensuring the dogs have choice and reduced stress such as needing to wait to be let out to toilet in the mornings. External stimulus that may encourage barking has also been reduced through screens and positioning of the kennels. Efficiency in the kennel build allows for meals to be fed quickly in each kennel block to reduce the amount of anticipatory barking also. Kennel blocks only house 20-25 dogs also ensuring that dogs are also able to be managed efficiently and barking stimulus is reduced also. Calm relaxed dogs with choice and enriched lives are quieter than most back yard dogs. Greyhounds are also renowned for the 'couch potato' lifestyle, sleeping much of the day.</i></p>
5.2.6	Appendix M in part gives a lie to the claims by documenting the number of dogs barking during feeding time at an equivalent but smaller facility at	Stantec can update the report to include more details of the measurements taken including the sound level measured.

ISSUE		RESPONSE
	Wyee. The actual sound level is not mentioned.	These measurements were used to scale accordingly, the percentage of dogs barking at the smaller facility was applied to predictions at the future (larger) facility.
5.2.7	The reality is that mown lawns, surface water and a slashed APZ will attract mobs of kangaroos etc. and the disturbance of these animals will be virtually continuous during the night. The fighting will be noisy as will be the dog's response.	Dog barking has been assessed in terms of night-time maximum levels.
5.2.8	The acoustic report calculated the sound reaching three closest houses only in reference to an industrial standard and with no reference to the way sound is actually transmitted in the valley	See response for comment 5.2.4.
5.2.9	The dogs will be heard barking throughout the valley, and the DA only compares the noise to the industrial standard, not the effect of the noise on adjoining residents or the impact on the rural amenity in the area.	See response for comment 5.2.2.
5.2.10	The project should not be approved until evidence is presented that dog barking is avoided and evidence on how sound will actually be transmitted through the valley.	Dog barking and animal management is addressed in comment 6.5 above. See response for comment 6.4 to address sound through the valley.
5.2.11	The noise report doesn't assess the impact of noise on native animals in the nearby national park	This is correct. The research conducted on the site and surrounding fauna didn't indicate that sensitive species to noise were present such as specific frogs or others.
5.2.12	The source of the wind rose is not stated but the rose is different to the use for the Odour assessment	Stantec's wind rose can be updated if a verified version is provided.
5.2.13	The wind rose is incorrect due to the direction of winds in the valley	Stantec's wind rose can be updated if a verified version is provided.
5.2.14	The documents have optimistic statements that the barking will be almost eliminated by the design of the kennels	Stantec confirmed that the assessment in Scenario 1 assumed 8000 barks during a 15-minute period. We believe this to be a conservative amount of barking.
5.2.15	The analysis is purely related to neighbouring residences and doesn't take into account likely widespread disturbances by other stimulations i.e. wandering wildlife or effects on neighbours dogs or wildlife	The NSW noise policy deals with noise from a source to human receivers. It is acknowledged that wildlife wandering around the dog's shelter has the potential to trigger the dogs to bark. However, it is also expected that the fence around the site will prevent wildlife from getting too close to dogs shelter and wander around for an extended period of time.
5.2.16	The analysis is only against legal limits and doesn't take into account the destruction of rural ambience	See response for comment 5.2.2.

ISSUE		RESPONSE
5.2.17	The sounds within the valley are easily heard from the top of the escarpment	See response for comment 5.2.4.
5.2.18	The report takes no account of the affect of temperature inversions and other atmospheric conditions which will expand how far the dogs can be heard through the valley	Temperature inversions can affect the transmission of sound over the valley. See comment 5.2.3 and 5.2.4 for further detail.
5.2.19	Concerns on how noise is to be managed even with a Plan of Management as the Acoustic report does not sufficiently address how noise is transmitted in the valley and doesn't address sleep disturbances to residents with the extended hours or address how the design of the kennels will mitigate howling.	Refer to 5.2.4 regarding transmission in the valley. Sleep disturbance is assessed during the night-time hours as this is when the natural background noise levels are the lowest and barking events will be most noticeable in comparison
5.2.20	The report estimated 1 n 5 dogs would bark at feed time twice a day with 8000 barks, which seems overly conservative and could be over the tens of thousands	The 8000 barks were assessed over a 15-minute period as worst-case scenario. It is expected that barking could occur at any time, but no more than 8000 per 15-minute period.
5.2.21	The open kennels face towards the northeast which is a natural amphitheatre which will echo the noise	The 3D acoustic model incorporates the local topography including reflections from the terrain.
5.2.22	The assumptions of not hearing animals at such a distance as prescribed are not correct as people can hear animals and neighbours 1-2km away	The assessment was completed for the closest residents with the understanding that they will be the most affected. As noise levels at the closest residents are expected to comply, the residents further away are also expected to comply. It may be possible for noise to travel 1km or further, but the noise levels diminish with distance and would be low in level.

6. WASTEWATER MANAGEMENT

6.1. Council submissions

Council asked for further information in relation to the wastewater system as part of the original RFI letter dated 24/01/2022 and a further RFI was requested by Council's Environmental Health Officer on 19 April 2022.

The following table responds to the matters raised in the RFI dated 19/04/2022.

NO	ISSUE	RESPONSE
6.1.1	Unnumbered – we note that Council requires the Waste Management Plan up front prior to determination given the scale of this development	<p>Updated reports have been provided to address all of the concerns raised by Council. Please note the following updated reports submitted with the revised SEE:</p> <ul style="list-style-type: none"> • Appendix 5: DA Utility Report • Appendix 6: Wastewater Management Plan
6.1.2	A) Further justification on staff numbers and usage/ calculation requirements as the calculations provided are not accepted	<p>There are multiple reports which are based around wastewater management.</p> <p>They have been prepared using the following basis:</p> <ul style="list-style-type: none"> • There is a site manager living on the property on a permanent basis. His dwelling will use standard calculation rates for a rural house. • There are two cottages on site which will be used for up to six people in an emergency. It is noted that these six people will not live on site on a permanent basis. <p>The overall figures on site have been determined on this basis. It is noted that if people are staying overnight on site in the case of an emergency, that they would already be on the property. As such the overall figures in terms of maximum people on site will not increase.</p> <p>Overall, we consider that the number of people on site has been resolved and the systems are designed with sufficient capacity to cater for this development.</p>
6.1.3	B) Achieving appropriate temperatures in the digester – Council accepts that you are targeting operation temperature of 20-22C but as per first request, confirmation is required on how the required temperatures of the digester is going to be achieved. The suburb location experiences temperatures below 0C and temperatures above 40C. How will the temperature of the digester be controlled so as to not adversely impact operating requirements?	<p>The following response was provided by Inoplex on this matter:</p> <ul style="list-style-type: none"> • The anaerobic digester's concrete structure is buried to the water depth, a depth of approximately 2.4m. • The ground temperatures at this depth in the location are quite stable and vary slowly throughout the seasons. It is expected that the soil temperature will vary between 14 and 20 at a depth of 2m. • The anaerobic digester is planned to generally operate over the naturally occurring

NO	ISSUE	RESPONSE
		<p>temperature variation. It will be warmer during summer and cooler during winter, however, the transitions are gradual. It will successfully operate at temperatures between 18 and 30 C.</p> <ul style="list-style-type: none"> • The anaerobic digestion process produces some thermal energy and the pump mixing similarly provides energy. At temperatures below 18 C, the anaerobic digestion process continues, but at a slower rate. The anaerobic digester has been sized to operate at a lower rate as experienced at 18 C. Below 18 C, the destruction of organics will be reduced, so the wastewater will have higher levels of BOD5. • During this period, the aerated wastewater system can be utilised to further treat the wastewater and breakdown organics that are not fully treated. The combination of anaerobic digester and aerated wastewater treatment system will therefore fully treat the effluent throughout the seasons. • Please note that the anaerobic digester is mixed by pumping via an external wastewater loop. Thermal energy from the combined heat and power generator can be added to this loop through a heat exchanger if required, such as at start up or a particularly cold event. • As such, while it is not expected normally to heat the anaerobic digester, a heat exchanger will be include in the installation for heating if required. • The anaerobic digester operating at soil temperatures coupled with an aerated wastewater treatment plant will fully treat the effluent throughout the year.
6.1.4	C) Details on the role of medical waste in the system	<p>Inoplex have confirmed that this is not to be included within the system.</p> <p>This is also confirmed with the revised Site Waste Management and Minimisation Plan.</p> <p>As per Point 10.1.7, medical waste is a separate waste stream which will be disposed of in accordance with the Australian Standards.</p>
6.1.5	D) Details re the pool backwash into the biogas system - Pool backwash is to be considered. This can be demonstrated at a later stage should you not wish to consider pool installation with the initial DA. Otherwise please confirm if backwash is to be generated and if so disposal methods with site plans are to be provided.	<p>Inoplex have confirmed that this is not to be included within the biogas system.</p> <p>Warren Smith Consulting Engineers have also confirmed that pool back wash water is not suitable for treatment within the proposed anerobic digestion system as chlorine will affect the operation. It will be managed by being directed into the post treated water system and diluted in post</p>

NO	ISSUE	RESPONSE
		digestion system tank prior to dispersal.
6.1.6	E) Emergency Management Plan details	<p>Inoplex have advised the following:</p> <p>We note that the systems proposed are a combination of an aerobic digester and an aerated wastewater system. Both are mature, well proven technologies which have established means of emergency management.</p> <p>An Emergency Management Plan for the facility will be prepared as required for the Section 68 application.</p> <p>The Emergency Management Plan is to consider the following:</p> <ul style="list-style-type: none"> • Addressing power outages on site and how the systems will be managed in these events. • Standard operating procedures (SOP) to manage and change the UV lamps in accordance with manufacturers requirements. • SOP to have critical parts on site such as spare lamps at all times. • The provision of a detailed maintenance and performance program to maintain reliable operation of the wastewater systems prior to the use commencing, which is SOP for these systems. • Having provisions in place for spare pumps and back up generators on site. • The provision of an emergency effluent storage on site to deal with a situation of extended power outages. <p>Inoplex have advised that the anaerobic system can operate between 24-48 hours without power, and the aerated system can be powered by a back up generator (which has been included in the system design) and is still able to treat the effluent.</p>
6.1.7	F) Maintenance schedules of the biogas facility	Council has confirmed in the 19/4/2022 email this can be addressed with the future Section 68 application.
6.1.8	G) Operational Performance monitoring	Council has confirmed in the 19/4/2022 email this can be addressed with the future Section 68 application.
6.1.9	H) Validation proposal for QA	Council has confirmed in the 19/4/2022 email this can be addressed with the future Section 68 application. This is accepted.

NO	ISSUE	RESPONSE
6.1.10	I) Address how fur will be minimised from drains and pipes	Council has confirmed in the 19/4/2022 email this can be addressed with the future Section 68 application, subject to confirming the maintenance of these drains in the operational management plan for the system. This is accepted.
6.1.13	J) Food waste in the digester	Council has confirmed in the 19/4/2022 email this can be addressed with the future Section 68 application, subject to confirming the need for staff training on the systems in the operational management plan for the system. This is accepted.
6.1.14	K) How sludge will be managed	Council has confirmed in the 19/4/2022 email this can be addressed with the future Section 68 application, subject to confirming the need for managing the sludge in the operational management plan for the system. This is accepted.
6.1.14	L) Cottage requirements	<p>As per Point No. 6.1.2 above, a maximum of six people will be residing in the cottages only on an emergency basis.</p> <p>Inoplex have also advised the following:</p> <p>While we note that a major system failure and matters to address this can be considered with the Section 68 application, there are options such as the following to address this and ensure that the cottages are still provided with operational on site sewer systems.</p> <p>Tanks will be fitted with dual sewer pump which fail over in the event of a failure to provide redundancy.</p> <p>Power from solar could be considered to be prioritised (on high sewer tank level events) to run the sewer pumps and dispersal units during a power outage and backed up with generators if required.</p>
6.1.16	M) Details on the disinfection of the system	Council has confirmed in the 19/4/2022 email it has accepted this information.
6.1.17	N) Details on the AWTS interim system	<p>Inoplex have advised the following:</p> <p>The aerated wastewater treatment system will be allowed to operate at a very low rate for the whole year. This will ensure that the system is operational, and microbes are sustained.</p> <p>It will be turned up in response to any requirements for additional treatment.</p>

NO	ISSUE	RESPONSE
		<p>Please note 21 February 2022 response below:</p> <p>The Anaerobic Digester (AD) will not be functioning at optimum levels for the first month of operation. An aerated treatment system will act as a temporary support system that works in tandem with the AD while it builds to its optimum design performance. That aerated treatment system is then turned off and becomes the emergency overflow/redundancy.</p> <p>While the AD is being established in its first month, the membrane system will prevent particles larger than 1 um from leaving the AD reactor. Only fine organic materials will pass through the membranes. These dissolved organic materials are quickly broken down in the aerated wastewater treatment system, and the sludge produced in this process is returned to the AD for stabilisation.</p> <p>The extended aeration system will be switched off, drained and left in situ once the AD has reached its design performance. It would then be used as an emergency overflow if there was a failure in the wastewater system. The aeration system would be re-activated to treat emergency overflows. The treated wastewater is slowly pumped through the AD system once the regular operation is achieved.</p>
6.1.18	O) Justification of the nitrogen and phosphorus levels	<p>The Wastewater Management Report prepared by Larry Cook Consulting states the following:</p> <p><i>'The predicted quality of the wastewater discharged by the membrane filtration system (mABR), in particular nutrients, is not available. In lieu of establishing the chemistry of the discharged wastewater, concentrations of 20mg/L total Nitrogen (Total N) and 12mg/L Total Phosphorus (Total P) is adopted in this management plan'</i></p> <p>Design parameters and calculations for the surface spray irrigation are provided within Appendix A of the Waste Management Plan.</p> <p>Inoplex have also advised that their amounts are based on raw sewerage levels which are N 50 and P 20 – this would have to be tested once the dog waste is processed as no data is currently available on dog waste.</p> <p>It is further noted that the nitrogen is readily absorbed by vegetation and the dispersal system can be moved around site.</p>
6.1.19	P) Calculating disposal areas in heavy rain periods	Council has confirmed in the 19/4/2022 email it has accepted this information.
6.1.20	Q) Details required on how surface irrigation will distribute wastewater evenly over the	We note that Council in its email dated 19/4/2022

NO	ISSUE	RESPONSE
	irrigation area	has indicated that a hydraulic design is required but can be done at Section 68 application stage. This is supported.
6.1.21	Not numbered – the proposed anaerobic digester system requires additional information and adequate support from calculations and soil testing.	The revised WMP has also included soil calculations and soil testing.

6.2. Community submissions

NO.	ISSUE	RESPONSE
6.2.1	The Case study provided was for cow manure not dog manure which has more microbial activity than cow manure therefore its relevance is questioned	<p>Inoplex (who prepared the Biogas Report) provide the following response:</p> <p>Anaerobic digestion (AD) is a natural process that occurs under a broad range of conditions. While dog faces are quite different from cow manure, it is the same volatile solids in the material that microbes break down and convert to biogas. AD is successfully used to treat a variety of wastes without significant microbial content. Classic examples are sugary wastes such as wine and beer and chocolate wastewaters. The start-up for these projects will be slower with dog manure than a cow manure project; however, the membrane filtration that retains biomass enhances the biological activity in the AD to compensate.</p>
6.2.2	The DA does not have any redundancy built into the wastewater or stormwater systems that will guarantee that no contaminated water will enter the ground water system and the creek	<p>To prevent contaminated stormwater from infiltrating into the ground water system, it is proposed that an impermeable liner (with a hydraulic conductivity of $<1 \times 10^{-9}$ m/s) is provided at the base of the bio-retention basin. Ongoing maintenance of the bio-retention basins will be required to ensure peak performance of the system is maintained.</p> <p>The nearest receptor to the proposed location of the irrigation system is approximately 130 m distant. This receptor is an intermittent tributary of Martindale Creek, approximately 450m by flow path upstream of its confluence. The location of the irrigation system easily satisfies the guideline buffer setback distances. Surface irrigation is chosen because it is a suitable method of wastewater disposal for the Site of its high evaporation potential. Predevelopment baseline and scheduled sampling and testing of surface water in the subject tributary (if the stream is flowing) would adequately monitor water chemistry.</p>

NO.	ISSUE	RESPONSE
		<p>The indicative permeability value (K_{sat}) of the silty sandy loam is predicted to be between approximately 0.5 and 1.5 m/d. The colluvium overlies strongly weathered sedimentary rock. Typical values of hydraulic conductivity for sandstone in the Sydney Basin are between approximately 0.005 and 0.01 m/day (Cook, 2016 and Coffey, 2014). The sandstone observed on the Site is lithic in nature and 'less clean' (lower effective permeability) than the Hawkesbury Sandstone in the Sydney Basin.</p> <p>These data suggest that the migration (travel) time for groundwater infiltration is 'long'. Viral die-off models indicate that die-off of pathogens typically takes up to approximately 30 days. The distance travelled over the 30 days depends on effective permeability of the rock sequence, groundwater temperature and groundwater gradient.</p> <p>The implication is that any recharge of the groundwater system will be slow ('glacial pace') and insignificant, and almost certainly 'pathogen free'.</p> <p>The most appropriate method of testing this thesis is to construct a small number of properly designed and strategically located monitoring bores (piezometers) peripheral to the down gradient side of the irrigation field. The success, of course, relies on intersecting water bearing zones (aquifers) in the sedimentary sequence, not always an easy task in the Wollombi Coal Measures.</p> <p>In terms of the biogas system, Redundancy is included within the AD system with duty/standby pumps and membrane capacity.</p> <p>Retaining the aeration system as a detention tank with emergency aeration capability also provides a redundant treatment system.</p> <p>This gives the facility a number of layers of redundancy.</p>
6.2.3	<p>There is no redundancy on when the facility is not available particularly when the area is affected by fire, flood or requires maintenance. This may prompt the need for a second facility as a constant water treatment facility would be required</p>	<p>Dual water pipes from the creek will be provided, to draw water from different creek locations for redundancy. Critical water treatment equipment (such as pumps) will operate in Duty/standby arrangement, providing equipment redundancy in case of failure. Also, critical spares (such as UV lamps, filters) will be kept onsite for fast servicing.</p> <p>Typical redundancy arrangements can include dual submersible pumps in the wastewater treatment</p>

NO.	ISSUE	RESPONSE
		<p>system that both operate on scheduled duty cycles and backup power arrangements such as a diesel-powered backup generator.</p> <p>In the event of bushfire and potential damage to the irrigation system, the treatment, transfer and irrigation system would be disabled.</p>
6.2.4	There is no reference on how the grass is to be irrigated by the wastewater management system. Similarly, there is a possibility for the sludge from the system be spread as a fertiliser. But there is no indication or detail if this will occur and where so on the property.	<p>We have documented that grass irrigation will be by treated non-potable water pumped from the creek.</p> <p>The preferred method of disposal of treated wastewater is surface spray irrigation. A design for surface spray irrigation was documented and prescribed in the Wastewater Management Plan in accordance with DLG (1998) and ASA/NZS 1547:2012.</p>
6.2.5	It is assumed that hot water for the admin building and kennels will come from the treatment plant, however given the large distance between the treatment plan and the kennels, this will not be feasible. Therefore, independent hot water systems will be required at the kennels.	Yes, that is correct. An independent hot water system will be designed for the kennels.
6.2.6	There are several discrepancies between the architectural drawings (Appendix C) and the drainage drawings (appendix E) including the location of the grease arrestor and the roadway to the waste water digester. The roadway to the wastewater digester is essential for maintenance and pumping by a large truck.	<p>The 'Drainage Service Site Plan' (Appendix E) is a schematic drawing demonstrating the system design with indicative locations of plant and services. The Architectural Plans (Appendix C) illustrate similar locations of plant contained on the 'Drainage Service Site Plan'. The exact location of plant and services are to be determined and coordinated in the detailed design phase.</p> <p>We note that the lint and grease arrestor are underground and do not inhibit road access to the wastewater digester.</p>
6.2.7	There is no mention of what type of water treatment will be used to purify water for drinking and no recognition that the water treatment plant will have to treat the type of water from the creek.	Refer to the spatial water services site plan for the water treatment components. The utility report documents that topping up of the rainwater tank will be required in periods of low rainfall, using the treated non-drinking water source, which is future treated to drinking water quality.
6.2.8	The report is not final. At the time of writing, no access to the site has been possible so the list of testing has not yet been reported.	<p>Detailed soil sampling and field soil investigations were carried out in the Site in August 2021.</p> <p>A suite of four representative soil samples were submitted to the Australian Precision Agricultural Laboratory (APAL) in South Australia in September 2021.</p> <p>Soil samples were dispatched to a NATA accredited agricultural laboratory in Adelaide in late August 2021 for measurements of pH, Electrical</p>

NO.	ISSUE	RESPONSE
		<p>Conductivity (EC) and soil permeability and a suite of chemical parameters.</p> <p>However, due to Covid-19 courier delays the WMP was issued pending receipt of results.</p> <p>Soil test results are in hand and have been documented in the revised WMP.</p> <p>Calculations of the total size of the land application area will be refined accordingly.</p>
6.2.9	The wastewater report used weather data from Paterson, which is different to the site (i.e. less rainfall at the site than at Paterson).	<p>Regarding wastewater, no temperature, evaporation or rainfall data are available for the Site.</p> <p>Paterson station (89.4 km distant) was used because it is the closest official weather station with rainfall data matched against official pan evaporation data and the period of operation is considered satisfactory.</p> <p>It is understood that Scone SCS BOM site (40.7 km distant) may have evaporation data. These data not readily available.</p> <p>If the annual rainfall amount in the Site is less than Paterson, the size of the land application area is therefore conservative.</p>
6.2.10	The documents indicate that cleaning and odour control disinfectant will be used regularly for cleaning, which will drain into the bio digester. There is no confirmation that the biology of the bio digester will be killed by the disinfectant.	Council has asked a range of similar questions in relation to how the system works, and other technical requirements above. We rely on the above response regarding these matters.
6.2.11	More research is required into the anaerobic wastewater management system given the levels of pathogens in dog faeces which can affect humans	We consider that the proposed reports adequately demonstrate how the dog faeces will be managed on site.

7. WATER AND STORMWATER MANAGEMENT

7.1. Council submissions

NO	ISSUE	RESPONSE
7.1.1	<p>Stormwater Management</p> <p>As per Point No. 7 of Council's RFI dated 1/03/2022:</p> <p>Review by Council's engineer has highlighted concerns with the proposed stormwater management of the site. This includes the use of proprietary devices and other measures that are designed for general stormwater pollutants and sediments instead of the predominant contaminant from the facility is faecal matter from significant animal numbers, which can lead to plumes of contaminants being exported from the proposed devices, and overwhelm the proposed stormwater treatment /detention basins.</p> <p>Further details are required to demonstrate how the proposed systems will work for significant faecal contaminant loads over time and the measures to prevent significant nutrient and effluent discharge into the adjacent creek.</p>	<p>The following advice has been provided by Warren Smith Consulting Engineers on the proposed stormwater management system:</p> <p><i>The runoff within the kennel neighbourhoods is proposed to be captured via grassed swales, which discharge into OceanGuards, back to grassed swales and then the bioorientation basin. The neighbourhoods are also proposed to be grassed, which will assist in retaining a lot of the load and matter.</i></p> <p><i>Maintenance of the system is important. The baskets are going to need frequent cleaning compared with a typical stormwater application especially if the areas are washed down on a daily or frequent basis. The site will require more frequent monitoring/inspection and cleaning.</i></p> <p><i>An alternate to the traditional bio-retention system is a product by Ocean Protect called 'Filterra'. Features of Filterra in comparison to a traditional bio-retention system are as below:</i></p> <ul style="list-style-type: none"> <i>Flow is spread evenly across the system via the bubbler system. Filterra will have a forebay inlet pit that allows for low flow distribution pipes throughout the system whilst also catering for overflow/bypass.</i> <i>Filterra has a 75mm double shredded hardwood mulch layer to protect the media. This mulch layer is removed every 6 to 12mths and replaced with new mulch. The mulch layer will trap a lot of the load but may need more frequent replacement.</i> <i>The media spec for Filterra is certified by Ocean Protect, the manufacturer.</i> <i>Filterra 'treatable flowrate capacity' is approx. 20 - 25 times higher than traditional bioretention.</i> <p>The submitted Stormwater Management Plan and associated report provides further detail on how water quality is managed on site, including MUSIC modelling in line with Council's requirements.</p> <p>As per the Biogas Report and the Wastewater Management Plan submitted with the application, the dog faeces will be collected and managed</p>

NO	ISSUE	RESPONSE
		<p>through the wastewater management systems not the stormwater management system. Therefore, there will not be significant levels of dog faeces to manage within this system.</p> <p>We consider that the detail provided is sufficient for the purpose of the assessment of the application, with a full detailed Stormwater Management Plan to be conditioned and approved post consent.</p>
7.1.2	<p>Water Licence – Subject No. 5 in Council's 21/01/2022 letter states: The information accompanying the development application references that the premises is benefited by a 170ML per year water license (License No. 23952). A copy of this Water License has not been included in the submitted documentation and should be provided for Council's information/ review.</p>	<p>A copy of the Water Licence was provided on 21/02/2022. Council's email dated 25/03/2022 confirms this matter has been satisfactorily addressed.</p>
7.1.3	<p>Water security Subject No. 6 in Council's 21/01/2022 letter states: Additional information should be provided regarding the availability of water to support the operation of the premises. Submissions received by Council reference limited water availability in Martindale Creek during dry time and related Water Sharing Plans limiting the amount of water that can be drawn by Water License holders. Further consideration should be given to the likelihood of droughts and dry periods affecting the water availability to the premises, the anticipated duration of dry periods and contingency plans to kart or provide water to the site by other means. In considering this issue, regard should also be given to traffic impacts related to water karting and the Traffic Impact Assessment updated accordingly. Council Officers provided an advisory referral to NSW Natural Resource Access Regulator on 7 January 2022 to provide any comments in relation to water security considerations.</p>	<p>An assessment on drought scenarios has been prepared by Larry Cook and Warren Smith Consulting Engineers and is provided as Appendix D and E of this report.</p> <p>Water usage on site will be consistently monitored Drought is not an extreme, acute event and water usage can be planned for in periods of reduced rain. This has been planned for in terms of operational details.</p> <ul style="list-style-type: none"> GRNSW have operational management plan details to reduce water levels across the site in order to keep it functioning. Warren Smith Consulting Engineers recommend that the site provides additional back up tanks which will store water on site for up to 1 year (based on reduced water usage levels) <p>Additional tanks are to be provided on site to accommodate this. They are shown on the revised architectural plans prepared by Tzannes.</p> <p>The tanks will secure the water on site in the short to medium term. GRNSW will also investigate further measures to further secure the water on site, such as a dam, which we note would be subject to future approvals and licences (if required). It is noted that there is a maximum harvestable right that can apply to the site. The Maximum Harvestable Right Dam Capacity</p>

NO	ISSUE	RESPONSE
		<p>(MHRDC) is the total dam capacity allowed under the harvestable right for the site (which is 10% of the average regional rainfall on land in the Central and Eastern Divisions). Dams that do not require a licence include dams that capture water under a harvestable right. The MHRDC with reference to 30% of rainfall runoff is 29.4ML (mega litres).</p> <p>Relying on water karting only is not a practical option as per the Larry Cook Report</p> <p>If required, water karting can be used to bring water on site to top up the tanks on an occasional basis, as opposed to waiting until water runs dry. Water levels boosted with this infrequently over an extended period of time i.e. once a month/ fortnight, similar in effect to other larger delivery and service vehicles accessing the property. This will not have significant implications on the traffic generation capacity of Martindale Road.</p> <p>Water karting trucks will be managed in a similar way to other construction and service vehicles, i.e. they won't come during the school bus run.</p>

7.2. Community Submissions

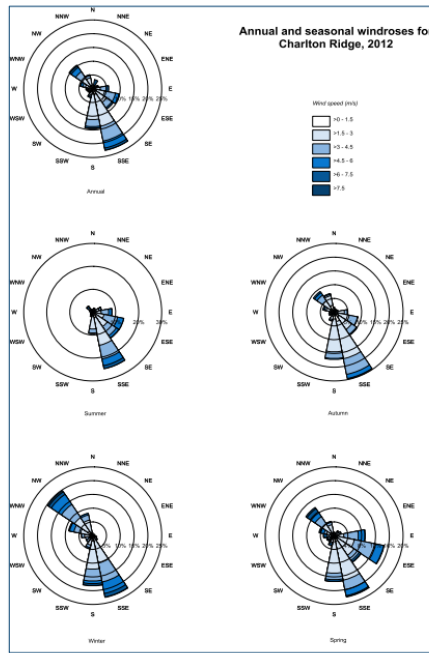
NO.	ISSUE	RESPONSE
7.2.1	We are irrigators of the Martindale Creek and concerned about effluent/ cleaning chemicals running off the property into the water source.	<p>In regard to application of treated wastewater on the Site, the nearest receptor to the proposed location of the irrigation system is approximately 130m distant. This receptor is an intermittent tributary of Martindale Creek, approximately 450m by flow path upstream of its confluence. The location of the irrigation system easily satisfies the guideline buffer setback distances.</p> <p>Surface irrigation is chosen because it is a suitable method of wastewater disposal for the Site of its high evaporation potential.</p> <p>Predevelopment baseline and scheduled sampling and testing of surface water in the subject tributary (if the stream is flowing) would adequately monitor water chemistry.</p>
7.2.2	The DA does not have any redundancy built into the wastewater or stormwater systems that will guarantee that no contaminated water will enter the ground water system and the creek	<p>Dual water pipes from the creek will be provided, to draw water from different creek locations for redundancy. Critical water treatment equipment (such as pumps) will operate in Duty/standby arrangement, providing equipment redundancy in case of failure. Also, critical spares (such as UV</p>

NO.	ISSUE	RESPONSE
		<p>lamps, filters) will be kept onsite for fast servicing.</p> <p>Typical redundancy arrangements can include dual submersible pumps in the wastewater treatment system that both operate on scheduled duty cycles and backup power arrangements such as a diesel-powered backup generator. In the event of bushfire and potential damage to the irrigation system, the treatment, transfer and irrigation system would be disabled.</p>
7.2.3	The proposal states that the property has an irrigation licence to be used to extract water from the creek, but it is the writer's belief that the licence cannot be used for such a facility.	The owner of the land is permitted to use the water in the water licence as per the terms and agreement of the licence.
7.2.4	The proponent must negotiate a new water extraction licence for the facility prior to any approval	A water licence is not a matter for consideration under the Act. If a new licence is required, it will be negotiated separately to this application.
7.2.5	The water supply would not be reliable enough to safely sustain such a facility	<p>Facility will draw a maximum of 33ML/yr from the creek, which is 19.3% of the allowable 170ML/yr from the water licence. With rainwater harvesting (total storage volume of 100kL) will reduce demand from the creek.</p> <p>An emergency management plan will be developed for periods of prolonged drought. The submitted Drought report with the revised SEE addresses how water will be managed on site during periods of extended drought.</p>
7.2.6	All the roof areas drain back to two underground tanks. The combined volume is 100kl which is around the requirement for a rural residence. Having the tanks underground will mean that the water has to be pumped and there will be no water in a power outage. The rainwater tanks will be empty in a week so the tanks will spend most of their lives empty which is bad practice.	<p>2 pumps running duty/standby operation will be provide for each rainwater tank to provide redundancy. Also, equipment servicing is about 2hrs drive away.</p> <p>Overall, the site is providing a sufficient number of back up water tanks to service the site in times of low rainfall.</p>
7.2.7	The type of sediment control fencing proposed will be breached repeatedly by wombats and other animals.	The erosion and sediment control fencing on site will be monitored as part of the construction process and if it is breached, it will be replaced.
7.2.8	The sediment control fence appears to cross the main creek which is not feasible unless the flow is very low.	The sediment control fence is shown in concept at the moment. This can be formally reviewed and approved prior to construction commencing.
7.2.9	On the western side of the creek, the sediment control fence appears to cross private land not owned by this facility.	See response to 7.2.8.
7.2.10	The study uses Newcastle data not local data to verify the results, and notes that Newcastle is wetter than Martindale so the system is likely to be oversized.	The consultants who have used weather data in their reports have used the closest weather stations available. This has also been addressed in the Council response table above.

NO.	ISSUE	RESPONSE
7.2.11	The stormwater report recommends possible flood management measures but does not assess measures such as risk to staff, or operation on the facility to implement these measures or how often this will need to occur.	A response in relation to flooding has been provided in Section 4 of this report.
7.2.12	There is no mention to the firefighting equipment or the roof sprinklers in the Hydraulic Systems report that are mentioned in the fire report and no indication where these systems will receive water from	There is no mention of firefighting equipment or the roof sprinklers in the Bushfire Hazard Assessment as they are not required from a bushfire design and compliance perspective.
7.2.13	The SEE indicates that there will be 100,000L of water on site with an additional 5000L at each kennel, the latter which is not mentioned in the Hydraulic Report	The documents have been revised to be consistent with each other.
7.2.14	The amount of water required for pool flushing is not reported.	Matters in relation to the pool flushing and backwash have been addressed above in the Council response table.
7.2.15	The water from the creek has a high iron content which will generate flock that will block pipes and nozzles and turn areas washed down with the water orange	Water from the creek will be treated prior to use, reducing the iron content to acceptable levels for animal consumption.
7.2.16	There is no mention of what type of water treatment will be used to purify water for drinking and no recognition that the water treatment plant will have to treat the type of water from the creek.	Refer the spatial water services site plan for the water treatment components. The utility report documents that topping up of the rainwater tank will be required in periods of low rainfall, using the treated non-drinking water source, which is future treated to drinking water quality.
7.2.17	The pool backwash water and its impact on the creek has not been taken into account.	Pool backwash should be disposed of on-site via a designed absorption trench and not directed to the wastewater treatment system. See the response above in the Council response table.
7.2.18	There would need to be constant monitoring of the groundwater and it is questioned which agency would undertake this	Water NSW runs a Water Monitoring Program which assists in the management of the state's groundwater and surface water resources, amongst other roles. It is expected that any groundwater monitoring would fall under their jurisdiction.
7.2.19	What is the plan/ strategy if any contaminants were detected in the creek or groundwater supply?	Pollution of waterways is managed under the <i>Water Management Act 2000</i> and this is managed by Water NSW.
7.2.20	There are no provisions for additional water supply should water allotments be cut off in drought conditions and there wasn't enough tank water available due to the lack of rain	An emergency management plan is to be developed for such extreme situations as part of the Section 68 application. This has been addressed in the Council submission table.

8. ODOUR

8.1. Council submission

NO.	ISSUE	RESPONSE
8.1.1	<p>Odour Impact</p> <p>Subject No. 11 in Council's 21/01/2022 letter states:</p> <p>Submissions received by Council raise concerns related to the odour impact assessment and odour management proposed. These concerns should be considered by the author of the Odour Assessment and a response prepared.</p> <p>This response should also consider/ provide additional information as listed within the letter.</p>	<p>RWDI provided the following response in relation to the points raised by Council, which Council confirmed via email on 7/4/2022 that all odour matters are considered to be resolved and no further information is required:</p> <ul style="list-style-type: none"> In terms of the meteorological data, our Odour Consultant indicates that Jerrys Plains is the closest MET data available. Other sources are at a considerably larger distance away from the site and the data would have been less comparable to the conditions of the site. As such this makes the selection of Jerrys Plains the most appropriate choice. Further to the above, the Jerry Plains data was further compared to MET data (Charlton Ridge 2012) used for the Warkworth Mine project determination. It is found that the Jerry Plains MET data is consistent with the Charlton Ridge data, with a predominantly NW-SE wind direction as shown below:  <p>Figure 4-3: Annual and seasonal windroses for Charlton Ridge weather station (2012)</p> <p>14010272_WW_2014Project_140612_HR.docx</p> <p>TODOROSKI AIR SCIENCES info@airsciences.com.au 02 9874 2123</p> <ul style="list-style-type: none"> In consideration of its location being closest to the subject site, and consistency with other approved project's MET data, we proceeded with

NO.	ISSUE	RESPONSE
		<p>the assessment using Jerry Plains MET data. We hope this clarification helps to alleviate Council's concern.</p> <ul style="list-style-type: none"> In terms of the assessment of the wastewater management system, and this system in particular, Table 5.2.2 of the report provides explanation for consideration of site as "medium" source of odour potential. It makes further reference to Appendix A Table A-1. In consideration of the subject site location, and use of the waste management system, it was determined the likely odour effect would be negligible. It is noted that this assessment considers that the waste-treatment would be from an aerated wastewater treatment system which is more likely to be more odourous than an anaerobic digestion waste to energy plant which is currently being considered for the site. As such, the approach to this assessment is conservative. <p>We consider that the above detail, along with the responses to matters raised in the submissions satisfactorily covers these concerns.</p>

8.2. Community submissions

NO.	ISSUE	RESPONSE
8.2.1	The Odour report doesn't include a detailed modelling approach	<p>The odour assessment was undertaken as a basic qualitative assessment given that the proposed development was considered to be low risk. Detailed modelling is not considered necessary with this approach.</p> <p>We note that Council's RFI indicated that the Environmental Health Officer was satisfied that the day to day operations would have minimal odour impacts, subject to clarifying some minor points about the wind direction and the proposed On-Site Waste Management system.</p> <p>These have been responded to separately.</p>
8.2.2	The wind roses quoted are inaccurate with wind blowing either up or down the valley with only a small change in angle between a Northerly and a Westerly	<p>The following response is from RWDI, the project's Odour Consultant:</p> <p>Jerry Plains is the closest source of data that we know of to the site. The Jerry Plains data was further compared to MET data (Charlton Ridge 2012) used for the Warkworth Mine project determination. It is found that the Jerry Plains MET data is consistent with the Charlton Ridge data,</p>

NO.	ISSUE	RESPONSE
		with a predominantly NW-SE wind direction. In consideration of its location being closest to the subject site, and consistency with other approved project's MET data, we proceeded with using this detail.
8.2.3	The assessment takes no account of the temperature inversion which is common in the valley	See response to 8.2.2.
8.2.4	The statement that existing residences may already be impacted by smells is not an excuse for adding to the odour impact and the impact of odour from 400 dogs is more than from other livestock spread across a paddock	See response to 8.2.1
8.2.5	The report concluded that there was 'negligible risk' but no detail on how often surrounding residences could smell the facility	See response to 8.2.1
8.2.6	There are calculated results, but they do not take into account temperature inversions which have an impact on the distribution of odour	See response to 8.2.2.
8.2.7	The use of wind data taken from Jerrys Plains is incorrect and should be a site-specific response	Jerry Plains is the closest MET data available – Other AWS are at a considerably larger distance away from the site and the data would have been less comparable to the conditions of the subject site. For this reason, Jerry Plains data was used.

9. FLORA AND FAUNA

9.1. Council submission

NO.	ISSUE	RESPONSE
9.1.1	<p>NPWS referral and Blue Mountains Advisory Committee Referral comments</p> <p>Subject 3 of Council's 21/01/2022 RFI states: These referral comments from this Committee raise concerns regarding the impact of the proposed development on the adjoining National Park. The concerns raised should be reviewed in detail and a comprehensive response prepared. The response must have regard to the Australian Government – Significant Impact Assessment Guideline 1.1 and the NSW National Parks and Wildlife Services document adjacent National Parks and Wildlife Services Lands.</p> <p>It is recommended that consultation is undertaken with a suitably qualified ecologist, animal behavioural expert and any other person with relevant qualifications or experience when considering and responding to the issues raised.</p>	<p>A response to the NPWS RFI and the Blue Mountains Advisory Committee has already been uploaded to the NSW Planning Portal.</p> <p>We consider that our response satisfactorily addresses their concerns and NPWS have provided their confirmation in their letter dated 30 March 2022.</p>
9.1.2	<p>Biodiversity Conservation Act 2016</p> <p>Subject 4 of Council's 21/01/2022 RFI states: Additional information is required to inform the assessment of the proposed development against the provisions of the <i>Biodiversity Conservation Act 2016</i>. An ecologist should be engaged to carry out a due diligence investigation in relation to the proposal and a Biodiversity Development Assessment Report prepared where required in accordance with the <i>Biodiversity Conservation Act 2016</i>.</p>	<p>The advice provided by the ecologist has been uploaded to the NSW Planning Portal which confirms that the works do not trigger requirements under the <i>Biodiversity Conservation Act 2016</i>.</p>

9.2. Community submissions

NO.	ISSUE	RESPONSE
9.2.1	Five, not four, trees require removal	<p>During site inspection by MJD Environmental, six (6) trees were detected where removal is to occur. The trees observed include two (2) non-native Conifera trees (likely <i>Cupressus lusitanica</i> – Mexican Cypress), one (1) <i>Grevillea robusta</i> – Silky Oak, one (1) <i>Fraxinus excelsior</i> – European Ash, one (1) <i>Schinus molle</i> – Peppercorn Tree as well as one <i>Casuarina cunninghamiana</i> – River She-oak. It should be noted that the only locally endemic tree that is to be removed is the <i>Casuarina</i></p>

NO.	ISSUE	RESPONSE
		<p><i>cunninghamiana</i>.</p> <p>No trees observed within the paddock are to be removed. The pasture groundcover was inspected across the entire development area including the zone beneath all paddock trees. The pasture was determined to be highly disturbed and dominated by exotic species.</p> <p>The landscape plan has been updated to reflect all six trees being removed.</p>
9.2.2	The proposal will have an impact on threatened species and ecological communities.	<p>One threatened ecological community was observed in the sole form of mature, paddock trees by MJD Environmental. The paddock trees were identified as Slaty Box (<i>Eucalyptus dawsonii</i>), Grey Box (<i>Eucalyptus moluccana</i>) and Rough-barked Apple (<i>Angophora floribunda</i>) and are likely to belong to PCT 1655 – Grey Box – Slaty Box shrub – grass woodland on sandstone slopes of the Upper Hunter and Sydney Basin which is listed under the Biodiversity Conservation Act 2016 as the “Vulnerable” Threatened Ecological Community (TEC) – <i>Hunter Valley Footslopes Slaty Gum Woodland in the Sydney Basin Bioregion</i>. The pasture groundcover was inspected across the entire development area including the zone beneath all paddock trees. The pasture was determined to be highly disturbed and dominated by exotic and perennial species.</p> <p>All paddock trees will be retained under the proposal and as such impact to a TEC was not considered to occur on the basis of pre-existing condition and that the extent onsite will not be altered.</p> <p>An assessment significant via 5-part test has not been carried out.</p>
9.2.3	We are concerned that this development could bring more wild dogs into the valley by the noise/ smell of the greyhounds which would threaten more rare fauna like the brush tailed wallaby	<p>If wild dogs were to be attracted to this development post-construction, it may create an opportunity to create a wild dog management plan in partnership with National Parks & Wildlife Services, however, rare fauna are unlikely to persist within the area of the development and are more likely to forage within the sandstone escarpment within the adjacent Wollemi National Park.</p> <p>We also note that the greyhounds will be desexed either prior to or during their time on site which will reduce the possibility of other dogs being attracted to the site.</p>

NO.	ISSUE	RESPONSE
9.2.4	There has been no survey carried out of the existing grasslands to establish the diversity and value of native grasses in the area	<p>A site inspection occurred on the 11th of February that consisted of identifying the vegetation on site, the range of vegetation that is native and exotic, the potential for native fauna habitat and the potential ecological constraints within the site.</p> <p>Due to the past land use, the land had been cleared prior to 1990 and has been used for livestock since and has led to a highly disturbed understorey consisting of weeds and pasture improving species. These species include <i>Chloris gayana</i> (Rhodes Grass), <i>Setaria parviflora</i> (Pigeon Grass), <i>Eragrostis curvula</i> (African Love Grass), <i>Melinis repens</i> (Red Natal Grass), <i>Foeniculum vulgare</i> (Wild Fennel), <i>Verbena bonariensis</i> (Tall Purpletop), <i>Sida rhombifolia</i> (Paddy's Lucerne), <i>Galenia pubescens</i> (Galenia), <i>Richardia humistrata</i>, <i>Echinochloa colona</i> (Barnyard Grass), <i>Paspalum dilatatum</i> (Common Paspalum), <i>Urochloa panicoides</i> (Liverseed Grass), <i>Cyperus aggregatus</i>, <i>Stenotaphrum secundatum</i> (Buffalo), <i>Bromus catharticus</i> (Prairie Grass), <i>Lolium perennans</i> (Perennial Ryegrass), <i>Trifolium repens</i> (White Clover), <i>Senecio madagascariensis</i> (Fireweed) and <i>Conyza spp.</i> (Fleabane). Native grasses detected were sparse, however, included <i>Digitaria didactyla</i> (Queensland Blue Couch), <i>Sporobolus creber</i> (Rat Tail Grass), <i>Chloris truncata</i> (Windmill Grass), <i>Cynodon dactylon</i> (Couch) and <i>Dichanthium sericeum</i> (Queensland Bluegrass).</p> <p>History of previous land use coupled with the introduction of exotic grasses, some being labelled as High Threat Exotics (HTE) under the <i>Biodiversity Conservation Act 2016</i> and the <i>Biosecurity Act 2015</i>, the grassland vegetation has been assessed as "Low Conservation Grassland" and would be considered as Category 1 – Exempt Land under the <i>Local Land Services Act 2013</i> and therefore, is exempt from the <i>Biodiversity Offset Scheme (BOS)</i> native vegetation clearing threshold.</p>
9.2.5	There is no mention of the value of the native vegetation along the creek	Minimal works are being undertaken along the creek line, therefore an assessment on the vegetation and any potential impacts is not warranted.
9.2.6	The reality is that mown lawns, surface water and a slashed APZ will attract mobs of kangaroos etc. and the disturbance of these animals will be virtually continuous during the night. The fighting will be noisy as will be the dog's response.	We also note that the paddocks will continue to be mowed and slashed in line with the previous use of the property as a horse stud. The 1.8m chain-mesh fence will be erected to contain the greyhounds. Visual stimuli will be reduced in the yards using mounds and vegetation as well as the position of the keen modules.

NO.	ISSUE	RESPONSE
		We also note that the paddocks will continue to be mowed and slashed in line with the previous use of the property as a horse stud.
9.2.7	There is no consideration on how a 400 dog facility will affect wildlife. The presence of dogs will attract wild dogs and dingoes but the effect on these animals is not considered.	<p>No native wildlife inhabits the development footprint however, the area is used for grazing. Grazing opportunities will still occur post-construction within the surrounding environment.</p> <p>As indicated already the greyhounds will be desexed either prior to or during their time on site which will reduce the possibility of other dogs being attracted to the site.</p>
9.2.8	The escarpments of Martindale Valley are home to the endangered Brush Tailed Rock Wallaby.	Rare, native fauna are unlikely to persist within the area of the development due to the lack of native flora diversity for foraging as well as a lack of environmental structure/shelter. Rare fauna, such as the Brush-tailed Rock Wallaby are more likely to forage within the sandstone escarpment within the adjacent Wollemi National Park where their natural habitat (Rocky Escarpments) exists.
9.2.9	The project shouldn't be approved until an assessment of the effect of the development on the wild populations adjoining the facility has been included.	Please refer to comments above coupled with the Ecological Advice issued for this development
9.2.10	The DA doesn't identify Wollemi National Park as a neighbour or mention or assess any environmental values associated with the Park	NPWS and Blue Mountains Advisory have each lodged an RFI/ submission for which this has been responded to separately.
9.2.11	The DA does not mention the value of native grasses, shrubs or trees on the property. The property has long standing native grasses which could be a biodiversity asset, as could the remnant trees in the paddocks.	<p>Please refer to comments above coupled with the Ecological Advice issued for this development.</p> <p>We also note that the paddocks will continue to be mowed and slashed in line with the previous use of the property as a horse stud.</p>
9.2.12	The noise report doesn't assess the impact of noise on native animals in the nearby national park	If there are wild dogs occurring within the area as stated above, the presence of greyhounds will not lead to further impacts. A clear opportunity may arise from this development in the form of attracting wild dogs and deterring native fauna due to the potential of noise/presence of domestic dogs. Additionally, as stated within the Landscape Plan by Aspect Studios, sound mounds could be created within the area to the east of the development to decrease the reach of noise created by the greyhounds. Furthermore, a noise assessment was undertaken by Stantec for the development and considered satisfactory. The

NO.	ISSUE	RESPONSE
		building will be constructed with appropriate materials to muffle the barking of the dogs.
9.2.13	The position of the SEE that the proposal will not have notable adverse impact on the natural environment is misconceived as the development is nearby from a riparian reserve which is home to many native and endangered species such as birds and bats.	No impacts are to be carried out within the riparian corridor. Under this proposal, the riparian corridor that is adjacent to the property will include revegetation/plantings to increase its integrity and aesthetic value.
9.2.14	While there is landscaping there is no mention of the additional trees to be planted as part of nurturing the riparian corridor nor is it specific enough to address light disturbance around the corridor.	<p>There are plans to nurture the riparian corridor in terms of the long term management of the land. However, this extensive planting is not required to ameliorate the impacts of the development.</p> <p>The short term landscaping elements that will be established are around the buildings themselves.</p>

10. OPERATIONAL ELEMENTS

10.1. Council submission

NO.	ISSUE	RESPONSE
10.1.1	<p>Solid Waste Management</p> <p>Subject No. 7 in Council's 21/01/2022 letter states:</p> <p>It is requested that further information be provided around the anticipated solid waste streams related to the proposed development and that information provided include:</p> <ul style="list-style-type: none"> - Details of the anticipated volumes of waste generated by the facility. - Proposed on-site waste storage capacity and management measures. - Information related to the anticipated frequency of waste collection and related vehicle movements. - Any additional relevant details regarding the storage, management and collection requirements for medical/ vet waste. - Any other relevant waste management information. 	<p>A revised Waste Management Plan has been provided as Appendix 19 of the revised SEE. We consider that the revised plan addresses Council's concerns.</p>
10.1.2	<p>Flying Fox Design</p> <p>Subject No. 8 in Council's 21/01/2022 letter states:</p> <p>Information accompanying the development application references an intention for a flying fox to be constructed at the site's creek crossing to allow access during flooding. The construction of a flying fox or similar apparatus is unlikely to comprise exempt development and where it is required as part of this application, design details for the flying fox and location information should be included with the application.</p> <p>There is further information but it is not relevant for the purpose of this table, particularly given the response.</p>	<p>The flying fox will not be constructed as part of this development. Any reference to the flying fox will be deleted from the plans and associated documentation.</p> <p>Council has confirmed in its email dated 25/03/2022 that this matter has been resolved.</p>
10.1.3	<p>Wild Dog Management</p> <p>Subject No. 13 in Council's 21/01/2022 letter states:</p> <p>Dogs are a predatory animal and wild dogs have significant impacts to both the environment and agricultural production in various parts of the Upper Hunter. As part of the assessment of this Development Application it is relevant for Council Officers to consider the risk of greyhounds being transported to the area</p>	<p>Sharon Andronicos, who is the Facilities Manager in the Greyhounds as Pets program at GRNSW and who is experienced in terms of managing the behavioural patterns of the dogs, provides the following detail to address this matter:</p> <ul style="list-style-type: none"> • The risk of greyhounds escaping from the site is low as there are double gates provided to the kennels as well as perimeter fencing around each compound.

NO.	ISSUE	RESPONSE
	<p>escaping the facility and establishing or contributing to a wild dog population. It is requested that further information is provided to inform the consideration of this issue such as information from an appropriately qualified animal expert related to greyhound behaviour and the likelihood of escape animals having an adverse environmental impact and/ or proposed measures to reduce the risk of any animals escaping the facility.</p>	<ul style="list-style-type: none"> All staff have radios and access to a buggy so can quickly react to a dog which has escaped from its kennel. All dogs will be microchipped and registered with the Companion Animal Register, as well as having collars and tags with phone numbers to ease return. This would assist with returning any dogs to the facility should they escape. If any dog did happen to escape then it is highly likely from a behavioural management perspective they would return for their treats, their companion, their familiarity to their home environment and to their main carers. <p>Overall, we consider that the risk of dogs escaping is suitably addressed as part of the overall management of the site.</p> <p>Council has confirmed in its email dated 25/03/2022 that this matter has been resolved.</p>
10.1.4	<p>Greyhound Turnover</p> <p>Subject No. 14 in Council's 21/01/2022 letter states:</p> <p>To inform Council Officers of the expected operating parameters of the facility it is required that information is provided in relation to anticipated turnover of greyhounds through the facility. When responding to this point it is requested that you consider and provide the best available information as listed within the letter.</p>	<p>Please see attached (Appendix E) correspondence from GRNSW has been provided in relation to this matter in the NSW Planning Portal.</p> <p>We understand that Council has reviewed this and considers the matter resolved.</p>
10.1.5	<p>Operational Management Plan changes</p> <p>Subject No. 15 in Council's 21/01/2022 letter states:</p> <p>To inform Council Officers in its assessment of the Development Application it is requested that further consideration be given to the operational management plan submitted. It is requested that information related to (but not limited to) the following areas is provided in any updated Management Plan:</p> <ul style="list-style-type: none"> - Greyhound rehoming - Greyhound transport - Greyhound rehabilitation rehoming training - Infrastructure inspection - Animal escape management - Landscape management - Complaint management - Incident management 	<p>The Operational Management Plan has been updated to address the additional requirements raised by Council. This has been provided as Appendix 7 with the revised SEE.</p> <p>We note Council raised additional points for consideration in its email dated 25 March 2022, which has been addressed in the updated Operational Management Plan.</p> <p>It is requested that any further changes of the Operational Management Plan are obtained via consent condition.</p>

NO.	ISSUE	RESPONSE
	<p>- Data recording</p> <p>This response should also consider/ provide additional information as listed within the letter</p>	
10.1.6	<p>Puppy/ Litter Management</p> <p>Subject No. 16 in Council's 21/01/2022 letter states:</p> <p>Submissions raise concerns regarding the management of puppies at the facility. It is understood that the premises is not intended to house puppies, however confirmation of this is requested along with consideration of how any puppy litters birthed or conceived at the facility are proposed to be managed and/ or measures put in place to reduce the likelihood of greyhounds conceiving and birthing litters at the facility.</p> <p>It may be necessary to update the Management Plan to include strategies to care for puppy litters and manage conception.</p>	<p>As outlined in both our SEE and the Operational Plan, the main dogs would be those who have retired from greyhound racing, therefore would be of a more mature age.</p> <p>It is not the intent of the facility to manage puppies. The dogs will be desexed prior to or during their time at the facility which will reduce the possibility of litters significantly.</p> <p>If there is an unexpected situation of a dog expecting puppies, then GRNSW are likely to transfer that greyhound to one of their other facilities which can manage this.</p> <p>This response is provided by Sharon Andronicos (BSc Dip VN) who was previously senior manager – Animal Operations RSPCA NSW, previously acting Leader – Animal Welfare – Captive animals – DPI NSW and who is now the Facilities Manager of the GAP program at GRNSW.</p> <p>Council has confirmed in its email dated 25/03/2022 that this matter has been resolved.</p>
10.1.7	<p>Veterinary liquid waste management</p> <p>Subject No. 16 in Council's 21/01/2022 letter states:</p> <p>Details should be provided related to measures proposed for the management of veterinary and other liquid waste not suitable for disposal into the on-site wastewater management system proposed.</p>	<p>As per our response dated 21/2/22, the liquid waste management for the vet clinic will be managed in accordance with the relevant standards and guidelines for Vet Clinics. It is noted that Vet Clinics have strict requirements in this fashion, similar to a medical facility.</p> <p>The management of this waste in this fashion can be included as a condition of the consent.</p> <p>While Council's email dated 25/3/22 indicated this had been completed, the EHO email of 19/4/22 raised further questions in relation to the management of medical waste.</p> <p>The revised Waste Management Plan addresses this concern. We consider this matter resolved, however if further detail is required then we request is provided within the consent conditions.</p>

10.2. Community submissions

NO	ISSUE	RESPONSE
10.2.1	The traffic report and operational report are at odds with each other in terms of shift changeover	The operational plan had 2 draft staffing patterns designed to reduce traffic pressure on the roads around school pick up and drop off times as well as attempting to foresee operational needs. The traffic plan was not written to be as specific as the draft operational plan as the Operational Plan can be subject to change.
10.2.2	Staff and volunteers are critical and the number of staff required on site is above the 25 estimated – believe it is 30-40 with a 7 day roster	The number of staff identified per day is for a seven day per week roster apart from the veterinary hospital staff which may only attend the site 3-4 times per week with minimal vet staff on site on non-clinic days to support the site. Casual staff and volunteers numbers will be adjusted regularly to meet the variable number of dogs expected. As dogs progress through their rehabilitation plans they will graduate to adoption centres and new dogs will arrive to begin their journey.
10.2.3	Staff will require special characteristics, i.e. working with the dogs, long travel and willingness to stay there in a natural disaster	GRNSW confirm that the GAP staff at our adoption centres and regional coordinators possess these characteristics and already go the extra mile for our dogs. There is not a shortage of dedicated, skilled, qualified and dedicated potential staff as many of our recruitment drives for GAP staff have more than 50-100 applicants per advertisement.
10.2.4	The DA states that staff accommodation will be available on site, presumed to be in the existing cottage. The cottage is unsuitable for 6-10 unrelated staff to be accommodated up to 10 days.	There are 2 houses on site currently with 3 bedrooms per cottage as well as lounge room areas that could be used for sleeping areas if necessary also, which are adequate to accommodate up to 6 staff in a short-term emergency situation.
10.2.5	There is no indication that staff are actually available for these specialised roles.	GRNSW confirm that they are confident that adequately qualified and experienced staff will be found. Each recruitment drive for our GAP team has multiple suitable applicants with some advertisements gaining more than 50-100 applicants including at our Wyee shelter which would be considered within the recruitment catchment area of the Bylong Park complex.
10.2.6	The DA is optimistic and gives many reasons why the dogs won't bark due to good management, and even that the manager will get out of bed and quieten the dogs if they bark which is idealistic, unsubstantiated and cannot be relied upon.	GRNSW are confident that our management strategies work as our experience with our other GAP shelters gives us this confidence, the design of the kennels in the new Bylong Park facility will also assist in the management of the dogs by reducing stress and kennel anxiety as well as managing noise.

NO	ISSUE	RESPONSE
10.2.7	Local knowledge indicates that the water can rise quickly and dangerously from storms at the top of the catchment and it is not safe to have staff leave over a rapidly rising creek.	<p>Noted.</p> <p>Additional analysis has been completed to characterise flood hazard thresholds (i.e. the streamflow conditions when vehicle access is unsafe) for the existing causeway. It is not proposed for staff to cross the creek when flow conditions exceed the flood hazard thresholds.</p> <p>A flood height marker is proposed in the causeway which will provide a formal measurement and the final operational management plan will indicate the levels where passing through the floodwater is unsafe.</p>
10.2.8	The Operational Plan has a plan to cover the creek level rising, however it is not an emergency to have the site cut off, it is a routine event	<p>Noted.</p> <p>Site access restrictions are not considered as emergency as operation procedures will be implemented to reduce risks to staff and animals. Operational procedures described in Section 6.5 and Section 7.4 cover both routine short term and longer term access restrictions.</p> <p>The Operational Management Plan has been further updated with measures to address the site being cut off, particularly in the event of an emergency.</p>
10.2.9	The operational plan does not attempt to estimate the number of times the creek crossing will be closed off or the effect on this on the operation and safety of the facility.	<p>Additional analysis has been completed to characterise streamflow within Martindale Creek including frequency and duration of site access restrictions.</p> <p>It is proposed to manage flood risk via operational procedures including thresholds for when it is unsafe to access the site via the causeway.</p>
10.2.10	The Operational Plan has no comment on the fear and panic from staff and dogs as a fire approached	<p>Regular fire drills will occur to prepare staff in the event of a fire. The dogs will be contained safely in their kennels in a fire event until the danger passes. comprehensive sprinkler systems, fire breaks and fire-resistant material will reduce the risk of harm to any staff or animals on site.</p>
10.2.11	It is very likely that a fire would come from the west and block the only exit from the property.	<p>The site has been designed in accordance with the relevant requirements of <i>Planning for Bush Fire Protection 2019</i>.</p> <p>Notwithstanding, a Bush Fire Emergency Management and Evacuation Plan should be prepared for the site. This will cover the appropriate triggers for evacuation (and other actions) based on the various fire activity and weather scenarios.</p>
10.2.12	The Operational Plan assumes there will be fair	As per the <i>Bushfire Hazard Assessment</i> (Blackash 8

NO	ISSUE	RESPONSE
	warning on an approaching fire but fires can start unexpectedly on the valley floor and it can be overrun with fire within minutes	<p>October 2021), a Bush Fire Emergency Management and Evacuation Plan should be prepared for the site. This will cover the appropriate triggers for evacuation (and other actions) based on the various fire activity and weather scenarios.</p> <p>Notwithstanding, the site has been designed in accordance with the relevant requirements of <i>Planning for Bush Fire Protection 2019</i>.</p>
10.2.13	There is no overall security fence surrounding the facility to control a dog which escapes between their kennel and the vet area, or to control other wildlife coming into the premises	<p>There will be adequate fencing to prevent escape, including double gates on each module. Dog moving outside of the modules will be on harnesses and martingale collars to prevent dogs escaping.</p> <p>The fencing in the dog areas is tall enough to prevent most wildlife such as macropods from entering the dog areas and being harmed. Screening will prevent/reduce the visual stimulation for the dogs from wildlife to reduce excitable barking or the risk of harm to the dogs fence running.</p>
10.2.14	Neighbours, including National Parks, use poison baits, traps and shooting to control pest and feral animals. Greyhounds that escape are likely to be affected by these measures.	<p>The fencing in the dog areas is tall enough to prevent the dogs escaping.</p> <p>There are also other measures such as martingale collars, harnesses as well as double containment fencing and gates.</p> <p>The Operational Management Plan now includes an appendix addressing escaping dogs.</p>
10.2.15	There is no consideration of a dog possibly escaping the facility and how this is going to be managed, i.e. how will the dog be returned?	<p>All dogs will be microchipped and registered with Companion Animal Register and will have collars and tags. Most dogs will come back for treats and generally tire quite quickly however can travel quite far in a short amount of time. Perimeter fencing and double gates will reduce the risk. All staff will have radios and access to a buggy and will assist in rounding up any escapees.</p>
10.2.16	There is no mention on how the remainder of the property is going to be managed, i.e. weed and feral animal management	<p>The site currently has stock running on some of the paddocks and another part has feed being sown on paddocks that sit outside the DA plan.</p> <p>The on- site manager currently manages weeds and feral species and has been doing so for the past 16 months. The local land management has also recently been given access to the creek fronting the property as well as some funding to undergo weed management along the creek.</p>

NO	ISSUE	RESPONSE
10.2.17	There is no mention of rodent controls and the smell of dog food will be attract rodents.	Pest management will be an integral part of the management plan. The DA did not require mention of this, and it was not included. GAPs other sites use external pest control companies to assist in managing rodents and other pests. Hygiene and cleanliness are essential to reduce rodent and other pest activity as well as rodent proof storage which we have installed at our other GAP sites. Reducing rodent activity is imperative to reduce the risk of snake activity around the dogs also.
10.2.18	It is expected that when the creek floods, the staff will stay on site to look after the dogs. The facility will be understaffed once these staff are off site as they will be on a break.	Essential care only will occur if there is minimal staff – cleaning, feeding, medicating only whereas the rehabilitation activity and extensive enrichment will be put on hold or reduced until more staff return. The facility is designed to allow spot cleaning, efficient feeding routines as well as minimal effort to let the dogs out into the larger exercise areas – (they do not need to be leashed and walked to the exercise areas as they are attached to their night runs).
10.2.19	The timetable for the project is unrealistic and having the facility open by May 2022 is unachievable.	Unfortunately, this maybe the case due to the global pandemic, extended delays and other issues such as worldwide transportation and manufacturing constraints, however, we hope to be operational with some dogs on site, beginning their rehabilitation journey to reduce the euthanasia rates and rehoming opportunities of dogs requiring this higher level of care as there is currently very few opportunities for these dogs.
10.2.20	Contradiction between the SEE and Operational Plan with the former indicating full cleaning once a week and the operational plan showing kennels having a daily clean and a twice weekly clean	Spot cleaning occurs everyday in the kennels and full cleans occur 1-2 times per week at a minimum as per the code of practice requirements. Additional cleaning will occur if kennel areas are too soiled to allow for a spot clean or there is risk of an infectious disease such as kennel cough.
10.2.21	The workload in the 0830-1000 timeslot is unrealistic. How can one person give a daily clean to 20 kennels and a full clean to others in 90 minutes?	This is possible and regularly done at other shelters especially as these kennels are designed to allow the dogs to toilet on the grass area when they choose therefore the night kennels are less likely to be soiled. The let-out yards are also attached to the night areas, therefore the dogs do not need to be taken out of their kennels on a leash and moved to a clean kennel during cleaning. Kennel cleaning machines – such as the ones in use at the GAP sites (Therian Kiovac) significantly reduce cleaning times and water use and will be used at the Bylong Park facility.

NO	ISSUE	RESPONSE
10.2.22	The flying fox would need approvals prior to installation, and unless constructed to the standards for carrying people be a gross breach of WHS for movement of staff. It would also be expensive to install with regular maintenance and inspections	The flying fox does not form part of this application.
10.2.23	There is no mention in the operational plan on how risks from human activity on site will be controlled during high fire danger periods.	Regular fire drills will occur to ensure staff are well trained and prepared for a fire emergency. Extensive sprinklers, fire breaks and other fire reduction measures will be in place to reduce the risk of fire on the site.
10.2.24	The POM is insufficient and does not cover all potential impacts and too much reliance is placed on the POM and compliance with it to maintain residential amenity for neighbours.	We note that Council has requested further information in relation the Operational Management Plan and are updating the plan to address Council's other requirements.
10.2.25	It is noted that the facility operation is not restricted to certain times of the day, rather it is proposed to operate for significant times during the day and night	Care of animals requires 24/7 monitoring. As per the operational plan the routine daily operations of the site is during normal working hours,
10.2.26	The applicant has not adequately addressed the emergency risks or management to protect the welfare of all of the dogs	This is addressed in the operational plan
10.2.27	The site being cut off in a flood event will leave the dogs without access to qualified vet care and general care which is contradictory to the NSW Animal Welfare Code of Practice No. 5 – Veterinary Care	Veterinary care would be provided at all times A well-stocked pharmacy, well trained staff under phone/ video supervision from a qualified vet would be available as a minimum.
10.2.28	Staff and contractors should not be expected to risk their lives crossing the floodwaters using a flying fox	During flood waters provisions would be made for staff and contractors to remain on site for up to a week to 10 days.
10.2.29	The impact of dust on the driveway has not been adequately considered in all assessments.	The traffic created by the facility would be similar to the previous owners and potentially less than during the horse breeding season – the previous owner had a horse breeding facility and serviced many external clients.
10.2.30	Staffing the facility will be difficult due to the long commute from Muswellbrook and there is no mobile phone coverage beyond 1090 Martindale Road.	Some current GAP staff have identified the willingness to move closer to the new facility as they are keen to work at the rehab centre. Many applicants for GAP roles are willing to travel for opportunities such as those on offer at Bylong Park. Wherever possible, staff will be sourced locally however experienced and qualified staff may need to be employed from further afield. GRNSW has already received expressions of interest from local community members about employment at the

NO	ISSUE	RESPONSE
		proposed facility.

11. DESIGN

11.1. Council submission

Council did not raise any questions in relation to design as part of their RFIs.

11.2. Community submissions

NO.	ISSUE	RESPONSE
11.2.1	AL disagrees that the proposed development will be in harmony with the landscape, given its large scale. In fact it will dominate the landscape and be the dominant feature of the locality	<p>The subject site is 135.2 hectares. The built elements are clustered and occupy a relatively small proportion of the land. The landscape design is the dominant feature, occupying the majority of the proposed works and allowing the entire development to integrate into its natural surroundings. Tall native tree species will be prominent, their canopies concealing the low kennel roof forms, rammed earth walls and unsealed roads. Similarly, retention and introduction of trees around the existing farmstead structures, new veterinary facility and car park will provide significant canopy cover to reduce visibility of built forms, making the landscape the primary focus.</p> <p>Other proposed landscape focused elements include:</p> <p>The introduction of a pond to the courtyard that provides a functional use for the operations of the facility similar to other dams located across the site.</p> <p>Earth mounds located at the entry of the site provide an aesthetic and functional feature that act as noise and visual barriers. The mounds will be formed by excavated material on site to enable the creation of water elements and the adjustment of levels for building works.</p> <p>Informally placed trees along the unsealed roads offer additional canopy, shading and break the visual impact of the kennel structure.</p> <p>The proposed development is designed to respond to the existing conditions of the subject site and the rural character of the surrounding context. The proposed single storey buildings are consistent with the height, bulk and scale of development in the area while the materials and landscaping blend the structures with the landscape.</p> <p>Existing agricultural sheds will mostly be retained, including the former horse stud facility which will be restored and adapted as an outdoor,</p>

		<p>undercover greyhound training area. The retention and repair of two existing cottages will preserve accommodation facilities.</p> <p>The new single storey farmstead building is simple in form and derived from the character of contemporary agricultural structures in the region. It's bulk and scale are complimentary to the adjacent existing buildings that complete the formation of the courtyard.</p> <p>The kennels are clustered and laid out to follow the natural topography of the site. This combined with the sculpted curved rammed earth walls that taper into the ground, nestle the kennels into the slope, allowing them to become part of the landscape and minimise their visual impact. Each kennel has been carefully integrated into the existing landscape and supplemented with new greenery and an informal arrangement of landscape elements that regenerates the environment.</p> <p>The materiality and colours of the built elements have been carefully selected to blend with both the landscape and the surrounding rural character of the area.</p>
11.2.2	Visual impact not considered from the objectors house who has a clear view of the stable block	<p>The proposed development has been designed through analysis and response to the rural context with visual impact being one of the key design considerations. Refer to point 4.1.</p> <p>The nearest three neighbouring residences are located approximately 530m, 730m and 850m to the closest kennel building. They are also located approximately 470m, 710m and 620m respectively from the main existing farmstead structures (cottages, stable, garage).</p> <p>The existing continuous vegetation along Martindale Creek which separates the subject site from the nearest neighbouring residences will contribute to providing a visual barrier.</p> <p>The extensive landscape proposed for the development will be the predominant experience when viewed from any distance.</p> <p>The new landscaping and trees around the courtyard, including the existing stable, will minimise views of built structures. The built forms will be secondary to the overall impact and experience of the extensive landscape.</p>

		<p>We are unable to respond to this specific objector because their address has not been provided.</p> <p>GRNSW has procured a number of photomontages from key locations in the vicinity of the subject site to illustrate the minimal and considered visual impact of the development within the valley. This Visual Impact Photomontage Package has been submitted with the revised SEE as Appendix 12.</p>
11.2.3	Large quantities of dog food will be brought in by the truck load but there is no storage for this shown on the plans	Large cool and dry stores for dog food are located adjacent to the food prep room within the new farmstead building. Each kennel has a prep bench that also houses storage for dog food and supplies. Refer to Appendix C Architectural Plans drawing 1001 and 1010.
11.2.4	There does not appear to be a location shown for the storage and powering of the electric karts to be used on site.	A garage is located within the new farmstead building for storage and charging purposes of electric carts. The garage would be able to house up to 6 carts at one time. Other agricultural sheds are available on site for secure storage of additional carts. Refer to Appendix C Architectural Plans drawing 1001 and 0009.
11.2.5	There are several discrepancies between the architectural drawings (Appendix C) and the drainage drawings (Appendix E) including the location of the grease arrestor and the roadway to the waste water digester. The roadway to the wastewater digester is essential for maintenance and pumping by a large truck.	<p>The 'Drainage Service Site Plan' (Appendix E) is a schematic drawing demonstrating the system design with indicative locations of plant and services. The Architectural Plans (Appendix C) illustrate similar locations of plant contained on the 'Drainage Service Site Plan'. Exact location of plant and services to be determined and coordinated in detailed design.</p> <p>Note the lint and grease arrestor are underground and do not inhibit road access to the wastewater digester.</p>
11.2.6	There is only mention of heated floors and not of cooling the kennels in warmer months	<p>Water misting has been included within each kennel for cooling during the warmer months. Water use has been accounted for within water usage quantity analysis. Refer to Appendix E DA Utility Report, Table 2, page 2</p> <p>Roofs are thermally insulated, and external rammed earth walls provide excellent thermal mass. Both building elements will positively contribute to the thermal comfort in summer and winter.</p>
11.2.7	The grassy earth mounds appear to be outside the kennel and vet areas and not available for dogs.	The earth mounds located at the entry of the site are not secured by a fence and therefore unsuitable for dog access. These mounds are an

		<p>aesthetic and functional feature that act as noise and visual barriers. The mounds will be formed by excavated material on site to enable the creation of water elements and the adjustment of levels for building works.</p> <p>Dogs have access to a number of external green spaces including the farmstead courtyard and shared social runs outside each kennel building. These will include a variety of landscaped elements including smaller earth mounds for dogs to play and explore.</p>
11.2.8	The landscape plan reference Ironbark Forest, which is not in the area. The local forest is a Hunter Valley Slat Gum Woodland and Yellow boxes should be planted to attract the regent Honey Eater.	Noted. The landscape report and ecological designation will be updated to reflect the local forest Hunter Valley Slat Gum. Inclusion of Yellow box species to attract Honey Eater bird will be including along the avenues to kennels.
11.2.9	The landscape plan palette of plantings are based off Ironbark Forest and should be amended to consist of only local species	Noted. The planting palette has been updated to include species generally consistent with the Hunter Valley Slat Gum Woodland tree and understorey species.

12. BUSHFIRE

12.1. Council submission

Council did not raise any matters regarding bushfire in their RFI.

12.2. RFS submission

NO.	ISSUE	RESPONSE
12.2.1	The original Development Application was referred to NSW RFS for comment. Suggested conditions were provided by NSW RFS on 8 November 2021.	The revised NSW RFS conditions issued on 16 May 2022 reflect the changes as proposed by Black Ash. Should development consent be issued, then we support the conditions as listed within 16 May 2022.

12.3. Community submission

NO.	ISSUE	RESPONSE
12.3.1	It is very likely that a fire would come from the west and block the only exit from the property.	<p>The site has been designed in accordance with the relevant requirements of <i>Planning for Bush Fire Protection 2019</i>.</p> <p>Notwithstanding, a Bush Fire Emergency Management and Evacuation Plan should be prepared for the site. This will cover the appropriate triggers for evacuation (and other actions) based on the various fire activity and weather scenarios.</p> <p>This can be provided as a condition on the development consent.</p>
12.3.2	The Operational Plan assumes there will be fair warning on an approaching fire but fires can start unexpectedly on the valley floor and it can be overrun with fire within minutes	<p>As per the <i>Bushfire Hazard Assessment</i> (Black ash 8 October 2021), a Bush Fire Emergency Management and Evacuation Plan should be prepared for the site. This will cover the appropriate triggers for evacuation (and other actions) based on the various fire activity and weather scenarios.</p> <p>Notwithstanding, the site has been designed in accordance with the relevant requirements of <i>Planning for Bush Fire Protection 2019</i>.</p>
12.3.3	The DA mentions fire equipment but no detail on what will be provided. There is no provision for above ground water supply and no provision for gravity feed supply to the firefighting equipment. The Operational Report mentions firefighting equipment and roof sprinklers.	There is no mention of firefighting equipment or the roof sprinklers in the bushfire report as they are not required from a bushfire design and compliance perspective.
12.3.4	The protection of the facility relies solely on the maintenance of the APZ, which is unacceptable in	The bushfire protection for the site is designed with a combination of bushfire protection measures

NO.	ISSUE	RESPONSE
	terms of risks	<p>(BPMs) to achieve an acceptable outcome.</p> <p>The BPMs work in combination to provide a suite of measures that meet the aim and objective of <i>Planning for Bush Fire Protection 2019</i>. The BPMs for the site are:</p> <ul style="list-style-type: none"> • APZ • Access • Water Supply and Utilities • Emergency Management Arrangements • Landscaping • Building Construction and Design <p>This approach is consistent with the legislated NSW approach and considered national best practice.</p>
12.3.5	The fire risk needs to be revised using Hunter Valley Slaty Gum woodland not Ironbark forest	<p>The bush fire risk has been broadly classified as 'Forest' which from an APZ design perspective creates the most conservative outcome (i.e. largest APZ). Changing the classification to Woodland would reduce bushfire risk and the APZ requirements.</p> <p>The conservative approach taken is considered appropriate.</p>
12.3.6	The report is a desktop report and should be verified locally	<p>The bushfire assessment undertaken has utilised a variety of spatial / GIS analysis techniques and been undertaken in accordance with <i>Planning for Bush Fire Protection 2019</i>. In this instance, local verification is not considered necessary.</p> <p>Corey Shackleton (Blackash Bushfire Consulting) is a Level 3 Accredited practitioner, which is the highest level in Australia.</p> <p>The NSW RFS have supported the development subject to 8 recommended conditions.</p>
12.3.7	Section 5.3 states that the driveway and the creek crossing will be constructed to a code, however it is not clear if the existing driveway and crossing meets these codes. There is no work proposed on these items in the DA.	<p>This crossing should be designed to ensure it complies with section 5.3.2 of <i>Planning for Bush Fire Protection 2019</i>.</p> <p>The compliance of the existing crossing has not been assessed by Blackash to determine compliance.</p>
12.3.8	Section 5.4 refers to 100kl water supply but does not say that this will be underground and will be used on site and only last a week.	<p>The site will be provided with extensive tanks for fire fighting along with a water treatment supply. The 100,000l water supply (whether underground</p>

NO.	ISSUE	RESPONSE
		or above) will be provided with a 65mm Storz fitting to allow access to the water for firefighting. This supply (100,000l), coupled with the pond and other water sources far exceeds the 50,000l recommended by the NSW RFS and is considered adequate for property protection purposes.
12.3.9	Recommendation 5 – providing the 100kl supply with a Storz fitting implies that the storage is above ground, but the storage will actually be below ground.	The 100,000l water supply will be provided with a 65mm Storz fitting. If the tank is underground the 65mm Storz fitting will be designed to ensure functionality allows access to the water for firefighting.
12.3.10	The access shown to the swimming pool is via a dead-end road and does not appear to come within 4m of the pool, and there is vegetation and a fence between the road and the pool that will prevent easy access from the road to the pool.	The pool, while beneficial, is not considered necessary as a water source to support the development. The proposal complies with <i>Planning for Bush Fire Protection 2019</i> .
12.3.11	There is no gravity fed water supplies on site. There must be a large gravity fed supply for firefighting	<p>The site will be provided with a 100,000 litre water supply along with a water treatment supply amongst the range of tanks proposed on site. This supply coupled with the pond and other water sources far exceeds the 50,000l recommended by the NSW RFS and is considered adequate for property protection purposes and complies with <i>Planning for Bush Fire Protection 2019</i>.</p> <p>There is no requirement for a gravity fed supply from a bushfire perspective.</p>
12.3.12	There is no easy access marked on the plans for fire tankers to access the valley perimeter trail from the driveway	<p>There is no requirement for the access roads within the site to link with the valley perimeter trail. The design of the exiting fire trails and the broader network has not been compromised by the proposed development.</p> <p>The roads within the site will all comply with the relevant requirements of <i>Planning for Bush Fire Protection 2019</i>.</p>
12.3.13	Section 5.5 refers to a bottled gas supply but this supply will be considerable if it is used for the backup generator. The risks are not considered.	The assessment of the bottle gas and the design will comply with <i>Planning for Bush Fire Protection 2019</i> . This is appropriate in the context of bushfire.
12.3.14	There is no reference to the biogas digester and any fire risk associated with the digester	The assessment of the biogas digester is not required from a bushfire design and compliance perspective.
12.3.15	The roads within the facility are narrow. If a fire	The roads within the site will all comply with the

NO.	ISSUE	RESPONSE
	truck is parked in a road, then it will block the road. If a number of trucks are on site, then many roads may be blocked and general access around the site will be compromised	relevant requirements of <i>Planning for Bush Fire Protection 2019</i> , ensuring firefighting vehicles are provided with safe, all-weather access to structures.
12.3.16	The gardens associated with the kennels will be behind fences and access for firefighting will be restricted and indirect through the kennel access. As a result, firefighting equipment for each kennel complex as mentioned in the operational plan must be accessible from both inside and outside the kennel fence.	There is no mention of firefighting equipment for the kennel complex in the <i>Bushfire Hazard Assessment</i> (Blackash 8 October 2021) as they are not required from a bushfire design and compliance perspective.

13. POWER

13.1. Council submission

Council did not raise any questions in relation to power as part of their RFIs.

13.2. Community submissions

NO.	ISSUE	RESPONSE
13.2.1	There is no indication whether the existing supply will be adequate for the facility or whether an upgrade is required	<p>The facility has been designed with an emphasis on sustainability. The intention is to minimise reliance on the existing mains grid supply using photovoltaic panels and store excess electricity in batteries. Upgrades to the existing power supply will be assessed and upgraded if required to supplement the photovoltaic cells. The design of the system will be developed for the construction phase of the project.</p> <p>A preliminary assessment by the project ESD consultant has established that a sufficient number of photovoltaic panels could be installed on the roofs of the buildings to offset the estimated total energy consumption of the site's operations. Therefore, theoretically no power would need to be drawn from the grid.</p>
13.2.2	The proposed development will require a very reliable power supply to run the proposed water and wastewater treatment systems	<p>See response to 13.1.</p> <p>The intention is to use photovoltaic panels and batteries as the primary source of power. Mains electricity and a back up generator will be available as a secondary power source should there be an interruption or downtime with the primary power source.</p>
13.2.3	The only standby generator is the bio-digester will require the backup of LPG and only have sufficient gas for 2 hours per day.	The minimum amount of LPG required to be stored is to be calculated as part of the detailed design.
13.2.4	The biogas system requires a significant level of LPG but there is no mention on how or where the LPG is going and where it is to be stored and delivered.	Inoplex have confirmed that the system will produce biogas which the dual fuel generator will convert into heat and power. But this system as designed does not consume LPG.
13.2.5	The DA plans show solar panels on the roof but no indication if these will be installed and whether the local rural feeder will be able to absorb this much power	The solar panels will be installed as part of the site's overall sustainability objectives.
13.2.6	A reliable standby generator will be essential to animal welfare, but while there is a reference to an onsite generator, no details are shown on the plan.	The matter of the existing supply will be resolved as part of the detailed design phase of the project. It is not required to specify this level of detail for the Development Application.
13.2.7	Appendix C indicates that water purification	This can be confirmed with the Emergency

	and other systems may be out of service due to a power outage, with no details of the amount of fuel kept on site to service the back up generator	Management Plan required for these types of systems. The Emergency Management Plan for the wastewater system will be prepared and reviewed as part of the future Section 68 application.
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14. COMMUNITY ENGAGEMENT

14.1. Council submission

Council did not raise any questions in relation to community engagement as part of their RFIs.

14.2. Community submissions

NO.	ISSUE	RESPONSE
14.2.1	The Community Consultation report indicates that there was little concern from the community, which is incorrect.	<p>The applicant in good faith undertook a community engagement campaign in the month prior to the lodgement of the DA. While it was restricted due to COVID, there was a sincere effort to offer the community the opportunity to engage with us and express their concerns about the proposal. Limited responses were provided. It is noted that this was not designed to replace the formal DA notification process.</p> <p>Since lodgement, GRNSW has also undertaken further consultation with the community, including an open day where invited guests could talk to GRNSW staff and project consultants in person and two days of direct community consultation in a 1:1 environment. GRNSW remain committed to engage with the local community on an ongoing basis.</p>
14.2.2	There has been no contact with the local RFS brigade about capability, response times and risks	The applicant has reached out to the local RFS brigade but they have not been willing to engage while the DA is under assessment.

15. ANIMAL WELFARE/ ANIMAL LIBERATION

15.1. Council submission

Council did not raise any questions in relation to animal welfare or animal liberation matters (beyond operational details as addressed above) as part of their RFIs.

15.2. Community submissions

NO	ISSUE	RESPONSE
15.2.1	General opposition to the greyhound racing industry and 'systematic animal cruelty and entrenched culture of poor animal welfare standards and cruel practices'	This project is aimed at improving the lives of all retired greyhounds especially those that need additional support to transition to pet life. The facilities are designed to exceed worldwide gold standards in animal/dog welfare, exceeding kennel size requirements and allowing dogs as much choice as possible in a shelter environment while keeping them safe, maintaining and improving their mental, emotional, behavioural and physical wellbeing. Operationally, enrichment and behavioural conditioning will be built into each dogs day ensuring all of their needs are met especially in the areas that will help them transition to pet life.
15.2.2	The number of dogs rehomed under the Greyhounds as Pets (GAP) program is below public expectation or the industry's own targets	<p>Greyhounds as Pets (GAP) NSW rehomes the majority of retired greyhounds in NSW through their programs and supports all rescue groups through financially supporting retired greyhounds veterinary work including vaccinations, worming, heartworm, dental surgeries, providing grants to rescue groups to support the good work they do and financially support injured greyhounds.</p> <p>The aim is to continue to support rescue groups as another rehoming pathway, however, GAP will be able to support more greyhounds by providing placement for dogs that need more time and behavioural support to transition to pet life. These dogs are often not able to be rehomed through smaller rescues and organisations as they do not have the time or resources for these dogs. This also means that rescues and GAP adoption centres can focus on the pet ready dogs only which will mean more dogs that can be rehomed quickly can be taken in.</p> <p>More than 1800 dogs are rehomed each year by greyhound rehoming programs, and most are supported by GRNSW financially in one way or another, through its GAP rehoming program and it's welfare schemes. GRNSW also focusses on improving rehoming options for retired greyhounds through GAP by marketing how great retired greyhounds are as pets "every home is a greyhound home".</p>

15.2.3	GAP NSW has a 'very high kill rate.... Euthanising just over one in 10 greyhounds they accept for rehoming'	<p>This is untrue. GRNSW's rehoming program GAP has a zero unnecessary euthanasia charter and does not have responsibility for approving euthanasia of retired greyhounds – this is managed by the government agency - Greyhound Welfare Integrity Commission (GWIC). GRNSW's GAP has a number of programs to ensure "Not Yet Pet Ready" greyhounds are given opportunities to become pet ready through programs such as Pet Prep Program, 'Pawsitive' Steps Prison Program and Regional Adoption Programs which work closely with owner trainers.</p> <p>Bylong Park is the final piece in the puzzle to ensure dogs that still need more time to rehabilitate for pet life or are not safe to be rehomed into the community without long term rehabilitation due chase behaviours etc.</p>
15.2.4	General concerns that the facility will be a 'warehouse' for discarded racing greyhounds	<p>Every retired greyhound that is accepted into the rehabilitation facility will be given a detailed rehabilitation plan to ensure they are given every opportunity to become pet ready. Some retired racers take longer than others and need the specialized rehabilitation that only a facility like the farm stay can provide. Some dogs prefer the structure and predictability that the kennel environment gives them verse the unpredictable and sometimes chaotic world that pet life can be. These dogs need a slow and gentle introduction to change. Some dogs are also not safe to rehome to the general public without extensive rehabilitation, just like many pet dogs in many shelters and pounds. These dogs can be given a great life full of choice and comfort at the farm stay, with the opportunity to rehabilitate, rather than being euthanised or remaining at their original kennels without the opportunity to have behavioural rehabilitation.</p>
15.2.5	Failed to demonstrate adequate consultation with relevant agencies such as the RSPCA	<p>The design and operational plan meet or in most cases exceeds all of the NSW standards for animal welfare.</p> <p>- <u>NSW Animal Welfare Code of Practice No 5 - Dogs and cats in animal boarding establishments</u></p> <p>- Prevention of Cruelty to Animals Act 1979 No 200</p> <p><u>View - NSW legislation</u></p> <p>The minimum housing requirements listed in the code of practice is 3.5m², the footprint of the kennels proposed exceeds this greatly.</p> <p>International standards were also used to ensure that this design meet or exceeds international gold standards</p> <p>Respected animal welfare (international and local) and veterinary professionals were consulted however</p>

		it is not required to demonstrate this consultation process in the DA application.
15.2.6	The application has not demonstrated compliance with the relevant NSW animal welfare legislation, nor have they demonstrated their awareness, knowledge or skills about modern and progressive best practice rehabilitation and rehoming practices.	The DA process does not require the level of detail that this response requests. Greyhounds as Pets prides itself on using the most up to date and progressive rehoming and rehabilitation practices. All relevant legislation and codes of practices were referred to and, in most cases, the requirements were exceeded as they set a minimum standard whereas we aim to provide gold standard facilities which is supported by our philosophy and operational practices to provide the best, current animal welfare practices. GRNSW is open to new science-based developments in animal welfare practices and endeavour to incorporate them into our ever-evolving practices as we want the best outcomes and opportunities for our retired greyhounds.
15.2.7	AL disagrees with the claim that the design of the facility reflects the care needs of the greyhounds.	More specifics would be required to respond to this as we would refute this broad statement. In a shelter-based environment GRNSW are endeavouring to exceed the needs of these dogs that require more support than most retired greyhounds. Some of these dogs would not be safe to place into foster homes or as pets until they have been rehabilitated for pet life due to their strong chase behaviour or bite risk etc. Some of these dogs prefer the more predictable nature of kennel life and need to be introduced to new experiences slowly or we often see dogs regressing behaviourally and unsafe behaviours, if forced into new situations too quickly.
15.2.8	AL refutes the following claims in the SEE: best practice greyhound welfare is a fundamental objective of the facility ‘ the facility is designed to ensure all greyhounds have quality care and homing the facility will be managed by veterinary professionals all greyhounds will be regularly monitored and actively maintained through appropriate care and enrichment	<p>This is not specific enough to respond in detail to as they are objectives of GRNSW.</p> <p>However, GRNSW contend that best practice greyhound welfare is a fundamental objective of the facility –</p> <p>The Greyhound of Practice came into effect on 1st January 2021 https://www.gwic.nsw.gov.au/welfare/code-of-practice-for-the-welfare-of-greyhounds.</p> <p>The facility and its operations will exceed these standards.</p> <p>The facility is designed to ensure all greyhounds have quality care and homing – the facility operations are solely focused on the care and rehabilitation of the greyhounds housed there.</p> <p>The facility will be managed by veterinary professionals. To give an indication on the professionalism and qualifications within the organisation, the current GRNSW General Manager</p>

		<p>in charge of the Rehoming programs is a Registered Veterinarian in NSW.</p> <p>All greyhounds will be regularly monitored and actively maintained through appropriate care and enrichment – the operational aspects which involve staff on site 24/7 and the daily greyhound husbandry routine ensures this.</p>
15.2.9	AL are concerned the facility will facilitate the 'warehousing' of discarded GRNSW greyhounds	<p>All dogs entering the facility will be given the opportunity to become pet ready through extensive rehabilitation and behavioural management which includes regular reviews of their progress. Some dogs prefer the predictability of kennel life and need to be progressed through rehabilitation slowly. The dogs will stay in the facility as long as they need to become pet ready as that is the ultimate goal for each of these dogs. We will not place an unsafe dog into the community, and we need to have the time to work with these higher needs dogs to ensure their safety as well as the community and their pets.</p>
15.2.10	The application has failed to articulate the day to day operations of the facility	<p>There is a detailed operational plan in the DA submission. There are also additional operational details listed in other appendixes such as noisy dog management, odour control, emergency response.</p>
15.2.11	<p>AL are concerned with the following matters regarding staffing:</p> <p>that the overall staffing levels are too low</p> <p>there isn't adequate staff available to accommodate all responsibilities</p> <p>the emergency management procedures in place for after hours</p> <p>the qualifications or experience required to work on site</p>	<p>The staffing ratios listed are in line with RSPCA NSW staffing levels, 1 staff member per 20 dogs is the suggested ratio however RSPCA NSW exceeds 1 per 25 dogs. Significant workflow efficiencies are also built into the facility including the centralised services area, the use of motorized buggies, as well as ease of movement and cleaning kennels with runs and large social areas attached directly to the kennel areas. If staffing ratios are not adequate, the staffing numbers will be adjusted to ensure the welfare of the dogs and their progression through their individual rehabilitation plans.</p> <p>There is a site manager living on site and staffing will be sourced locally wherever possible to support emergencies after hours. Arrangements will also be made with local vets to support the facility.</p> <p>A minimum of a Certificate 2 in Animal Care will be required for all animal staff however higher qualifications are preferred and all staff are given training opportunities throughout their employment.</p>
15.2.12	All matters relating to public reporting as required under different legislation needs to be articulated	<p>This is not necessarily a matter for consideration under the Act.</p> <p>This does not need to be addressed in the DA and</p>

		will be articulated elsewhere. Rigorous reporting currently occurs for the organisation and will continue in line with all legislative and organisational requirements.
15.2.13	GAP NSW do not have the necessary knowledge and experience to meet the needs of the dogs, unlike an institution such as the RSPCA	<p>This is not necessarily a matter for consideration under the Act.</p> <p>Having said this, however, this statement is fundamentally untrue. There is a number of former RSPCA staff working for the organisation currently. The GAP team is very experienced, generally highly educated and have had many years of experience in the animal welfare, animal care and animal rehoming industries.</p>

A APPENDIX A

RFI response from GYDE Consulting
21 February 2022

A APPENDIX B

Response for Further Information from GYDE
Consulting
21 February 2022

APPENDIX C

Floor Plans for existing cottages

APPENDIX D

Drought Report by Larry Cook Consulting

APPENDIX E

Drought Security Strategy by Warren Smith
Consulting Engineers

APPENDIX F

Greyhound turnover information by Greyhound
Racing New South Wales

21 February 2022

Hamish McTaggart
Muswellbrook Shire Council

Sent via email: hamish.mctaggart@muswellbrook.nsw.gov.au

Dear Hamish

**DA 2021/129: Response to Request for Further Information
PAN 154402 – Animal Boarding and Training Establishment
1949 Martindale Road, Denman**

I refer to your letter dated 21 January 2022 in relation to the above Development Application (DA).

We provide this response to the request for further information on behalf of our client Greyhound Racing New South Wales (GRNSW), who are the applicant for this DA.

Please note that this is a partial response to the RFI letter. At this stage, we are working through other sub-consultant reports and updated plans which will be submitted at a later date. At this stage, we expect that this will be completed by 18 March 2022. However, as the Roads, drainage and flooding comments are yet to be received from Council, we respectfully reserve the right to extend this date if need be.

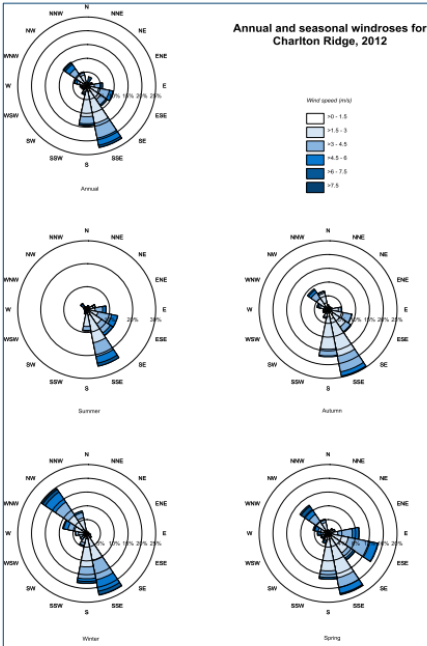
The subject numbers referred to in the below table respond back to those provided in Council's letter

Subject No.	Response	Status
1. Crown Road Reserve	<p>We are in the process of reviewing and updating the architectural plans in order to avoid any building works on the Crown Road reserves.</p> <p>Once these plans are finalised, then other plans (such as the landscaping plans and the civil engineering plans) will need to be updated.</p> <p>The updated plans will be submitted at a later date.</p>	Partially completed.
2. Review of Integrated Development criteria	<p>In terms of the Integrated Development criteria:</p> <ul style="list-style-type: none"> <i>Water Management Act 2000</i>: We are revising the plans to ensure that there are no buildings and works within 40 metres of a watercourse, therefore not triggering Integrated Development provisions under this Act. <i>Protection of the Environment Operations Act 1997</i>: Schedule 1 of the Act sets out scheduled activities which require a licence. 	Partially completed. This will be confirmed upon completion of the revised plans.

Subject No.	Response	Status
	We do not believe that the proposed development meets any of the definitions or triggers outlined in Schedule 1, particularly in relation to 'composting' where many of the triggers relate to organics being brought in from off site.	
3. NPWS Referral and Blue Mountains Advisory Committee referral comments	<p>We have engaged an ecologist to assist with the response to the NPWS and Blue Mountains Advisory Committee referral comments.</p> <p>Once completed we will upload this to the NSW Planning Portal.</p>	Outstanding
4. <i>Biodiversity Conservation Act 2016</i>	We have engaged an ecologist to undertake a due diligence investigation and on-site testing. The results of this will be submitted at a later date.	Outstanding.
5. Water Licence	A copy of the Water Licence is provided with this letter.	Completed.
6. Water Security	<p>The Consulting Hydraulic Engineer on the project has advised that water supply was evaluated from several sources including:</p> <ul style="list-style-type: none"> • Martindale Creek – As per the Utility report submitted with the DA, the development would require maximum of 33ML/yr., which is 19.3% of the allowable 170ML/yr. water licence draw. Water allocations for this river (within the Hunter Region) has been unrestricted (100%) for the last 5yrs. This includes periods of drought conditions. • Rainwater Harvesting – As per the Utility report submitted with the DA the rainwater collection calculations have been based on the minimum average rainfall over the available rainfall data period, which also includes drought conditions. • Bore Options – though not mentioned in the utilities report as the creek water was preferred, there are 2 active bores within the property. A water licence would be needed to use bore water for commercial purposes as it is only currently allowable for livestock & domestic use. <p>Based on the above data, it is their professional opinion that water security via Martindale Creek and rainwater capture is sufficient for the development. However, in extreme emergency conditions, such as prolonged periods of drought, an emergency management plan would be required to manage the site operations, which will include water management.</p> <p>This could include water restriction measures such as:</p> <ul style="list-style-type: none"> • restricting irrigation (normally 20,000L/day) • restricting kennel washdowns and misting (normally 52,000L/day), and • no ponding filling (using 2,500L/day). <p>The plan should also include karting in water to</p>	Completed.

Subject No.	Response	Status
	<p>maintain animal welfare and essential site operations.</p> <p>This could be included as a condition of consent should an approval be issued.</p>	
7. Solid waste management	This document is in the process of being updated and will be provided when ready.	Outstanding
8. Flying fox design details	The flying fox will not be constructed as part of this development. Any reference to the flying fox will be deleted from the plans and associated documentation.	Completed. The Operational Management Plan has now deleted this reference.
9. Noise Impacts	<p>In terms of the points raised by Council:</p> <ul style="list-style-type: none"> The modelling assumptions that have informed the assessment are presented in the report, but further details can be provided if Council requires them. In terms of the animal management and expected barking patterns, GRNSW provides the following response – <p><i>Greyhounds are generally quieter than most dogs in kennels. You may see some excitement/anticipatory barking at meal times, during play, external stimulus such as wildlife or other dogs in other kennel blocks or first thing in the morning if they need to toilet etc. However, the operational plan and the design of the kennels have tried to reduce the amount of anticipatory barking by ensuring the dogs have choice and reduced stress such as needing to wait to be let out to toilet in the mornings. External stimulus that may encourage barking has also been reduced through screens and positioning of the kennels. Efficiency in the kennel build allows for meals to be fed quickly in each kennel block to reduce the amount of anticipatory barking also.</i></p> <p><i>Kennel blocks only house 20-25 dogs also ensuring that dogs are also able to be managed efficiently and barking stimulus is reduced also. Calm relaxed dogs with choice and enriched lives are quieter than most back yard dogs. Greyhounds are also renowned for the 'couch potato' lifestyle, sleeping much of the day.</i></p> <p>Please note that this response is provided by Dr Elyssa Payne – behavioural manager Greyhounds as Pets (GAP) program at GRNSW who has a PhD in dog behaviour, and Sharon Andronicos (BSc Dip VN) who was previously senior manager – Animal Operations RSPCA NSW, previously acting Leader – Animal Welfare – Captive animals – DPI NSW and who is now the Facilities Manager of the GAP program at GRNSW.</p>	Completed.

Subject No.	Response	Status
10. Control of individually noisy greyhounds	<p>Please note that the Operational Management Plan includes measures to manage and relocate noisy dogs.</p> <p>In terms of further detail, the kennels are designed to block off access to the night/day run areas containing the dog inside until they settle. If this does not calm the dog, they or they are reacting to one of the dogs in that kennel block/module or if they are still disturbing other dogs too much, the dog will be moved to another kennel block and alternative kennel buddies will be trialled.</p> <p>The noisy dog management plan also lists some of the next steps including veterinary review, modified behaviour plans.</p> <p>The Acoustic Engineer on the project confirms that if the noisy dogs are isolated inside one of the kennels until the dog settles down, the construction and fabric proposed for the kennels will be sufficient to address the noise associated with the barking.</p>	Completed
11. Odour Impact	<p>The project's Odour Consultant has provided the following response in relation to the points raised by Council:</p> <ul style="list-style-type: none"> • In terms of the meteorological data, our Odour Consultant indicates that Jerrys Plains is the closest MET data available. Other sources are at a considerably larger distance away from the site and the data would have been less comparable to the conditions of the site. As such this makes the selection of Jerrys Plains the most appropriate choice. • Further to the above, the Jerry Plains data was further compared to MET data (Charlton Ridge 2012) used for the Warkworth Mine project determination. It is found that the Jerry Plains MET data is consistent with the Charlton Ridge data, with a predominantly NW-SE wind direction as shown below: 	Completed.

Subject No.	Response	Status
	<div><p>Figure 4-3: Annual and seasonal windroses for Charlton Ridge weather station (2012)</p><p>14010272_WW_2014Project_140612_HR.doc</p><p>TODOROSKI AIR SCIENCES info@airsciences.com.au O2 9874 2123</p></div> <p>In consideration of its location being closest to the subject site, and consistency with other approved project’s MET data, we proceeded with the assessment using Jerry Plains MET data. We hope this clarification helps to alleviate Council’s concern.</p> <ul style="list-style-type: none">• In terms of the assessment of the wastewater management system, and this system in particular, Table 5.2.2 of the report provides explanation for consideration of site as “medium” source of odour potential. It makes further reference to Appendix A Table A-1.• In consideration of the subject site location, and use of the waste management system, it was determined the likely odour effect would be negligible. It is noted that this assessment considers that the waste-treatment would be from an aerated wastewater treatment system which is more likely to be more odourous than an anaerobic digestion waste to energy plant which is currently being considered for the site. As such, the approach to this assessment is conservative. <p>We consider that the above detail, along with the responses to matters raised in the submissions satisfactorily covers these concerns.</p>	
12. Workers Accommodation	GRNSW has confirmed that there is a maximum of 8 people proposed for each cottage.	Completed.

Subject No.	Response	Status
13. Wild Dog management	<p>Sharon Andronicos, who is the Facilities Manager in the Greyhounds as Pets program at GRNSW and who is experienced in terms of managing the behavioural patterns of the dogs, provides the following detail to address this matter:</p> <ul style="list-style-type: none"> • The risk of greyhounds escaping from the site is low as there are double gates provided to the kennels as well as perimeter fencing around each compound. • All staff have radios and access to a buggy so can quickly react to a dog which has escaped from its kennel. • All dogs will be microchipped and registered with the Companion Animal Register, as well as having collars and tags with phone numbers to ease return. This would assist with returning any dogs to the facility should they escape. • If any dog did happen to escape then it is highly likely from a behavioural management perspective they would return for their treats, their companion, their familiarity to their home environment and to their main carers. <p>Overall, we consider that the risk of dogs escaping is suitably addressed as part of the overall management of the site.</p>	Completed.
14. Greyhound turnover	This information will be provided at a later date.	Outstanding
15. Operational Management Plan	The Operational Management Plan has been updated in order to address the additional requirements raised by Council.	Completed.
16. Puppy/ litter management	<p>As outlined in both our SEE and the Operational Plan, the main dogs would be those who have retired from greyhound racing, therefore would be of a more mature age.</p> <p>It is not the intent of the facility to manage puppies. The dogs will be desexed prior to or during their time at the facility which will reduce the possibility of litters significantly.</p> <p>If there is an unexpected situation of a dog expecting puppies, then GRNSW are likely to transfer that greyhound to one of their other facilities which can manage this.</p> <p>This response is provided by Sharon Andronicos (BSc Dip VN) who was previously senior manager – Animal Operations RSPCA NSW, previously acting Leader – Animal Welfare – Captive animals – DPI</p>	Completed.

Subject No.	Response	Status
	NSW and who is now the Facilities Manager of the GAP program at GRNSW.	
17. Wastewater Management	<p>We note that further questions were provided on 24 January 2022 in relation to this matter, which have been addressed below.</p> <p>The matters regarding wastewater management as raised by the submitters have been directly addressed in our letter responding to these matters.</p> <p>We consider that these responses are satisfactory in covering Council's concerns.</p>	Completed.
18. Veterinary liquid waste management	<p>The liquid waste management for the vet clinic will be managed in accordance with the relevant standards and guidelines for Vet Clinics. It is noted that Vet Clinics have strict requirements in this fashion, similar to a medical facility.</p> <p>The management of this waste in this fashion can be included as a condition of the consent.</p>	Completed.
19. Public submissions	GYDE has prepared a separate letter responding to the matters raised in the submissions. It is noted that some of the responses to submissions are based on further assessments being completed, i.e., the ecological assessment and the traffic survey which is being undertaken.	Partially completed.

A follow up email was sent on 24 January 2022 with additional information requested
These matters have been responded to in the following table:

Wastewater follow up request	Response	Status
Unnumbered – issues with the assessment of the soil limitation on site and confirmation of soil testing requirements.	<ul style="list-style-type: none"> Soil samples were dispatched to a NATA accredited agricultural laboratory in Adelaide in late August 2021 for measurements of pH, Electrical Conductivity (EC) and soil permeability and a suite of chemical parameters. However, due to Covid-19 courier delays the WMP was issued pending receipt of results Soil test results are in hand and will be documented in a revised WMP. Calculations of the total size of the land application area will be refined accordingly 	Completed.
A) Further justification on staff numbers and usage/ calculation requirements	<p>In terms of the DA Utility Report, the following figures were established:</p> <ul style="list-style-type: none"> 25 Day Staff allowance @ 62L/day, these staff are not living on site 	Completed.

	<ul style="list-style-type: none"> • 3 residence living allowance for each cottage @ 120L/day (x 2 cottages), these residence staff are living on site. • 30 Visitor allowance of 6L/day (for toilet and handwashing) <p>In terms of the report prepared by Larry Cook:</p> <ul style="list-style-type: none"> • The design hydraulic load calculations were based on the then latest available data and information supplied for the project at the time of preparing the WMP • Wastewater allowances were based on the latest data and information for similar projects such as pet motels/resorts/vets and compliant with data contained in ASA/NZS1547:2012, DLG (1998), NSW Health and Vic Health. • It is noted that Inoplex documented a total volume to be treated • The referenced shower, toilet & washing calculations quoted are erroneous. • We concur with the AS volumes for residents (120L/day on tank water). Note that Table 7 lists 120L/day for three persons in each of the two cottages which is in accordance with AS/NZS 1547:2012. 	
B) Achieving appropriate temperatures in the digester	<p>The following response has been provided by Inoplex, who prepared the Biogas Report for this development:</p> <p>The Anaerobic Digestion (AD) process can be operated as:</p> <ul style="list-style-type: none"> • thermophilic, or high temperature around 50 – 60 C, • Mesophilic, or body temperature around 35 – 37 C, and • Psychrophilic, or ambient temperatures, which we are expecting to be around 20 – 22 C. <p>While most industrial and municipal AD projects are operated at thermophilic temperatures, many rural or primary production projects are operated at Psychrophilic temperatures. The lower temperatures eliminate the need for heating and simplify the AD design and reduce its cost and environmental footprint.</p> <p>We expect to see the uptake of Psychrophilic AD to grow significantly over the next decade as it is simpler and more sustainable. Psychrophilic is commonly used as covered anaerobic lagoons in Australia for piggery, dairy, meat and livestock applications.</p> <p>One notable municipal example of Psychrophilic AD is Melbourne Water's Western Treatment Plant. The</p>	Completed

	<p>covered anaerobic lagoons operate at ambient temperatures and provide a significant biogas yield. A second Municipal example is the Colac, Vic, WWTP upgrade that included multiple high rate covered anaerobic lagoons to treat high strength industrial wastes.</p> <p>Lower temperature Psychrophilic AD is demonstrated on-farm and municipal applications. We have included a Psychrophilic AD to design the Bylong Park wastewater treatment as sustainable as possible. We hope that others in the area looking for a sustainable waste approach may consider the Psychrophilic AD.</p> <p>The reduced AD reaction rates do mean that cooler ADs, therefore, need to be larger. We have added microfiltration membranes to the project to filter the treated effluent water, which is economical as the flow rates are modest. Therefore, the system will operate as an "anaerobic membrane bioreactor". The 1um membranes allow purified water to pass out of the system but retain biomass and harmful pathogens within the digester. Maintaining biomass within the AD greatly enhances the AD performance, allowing the design to compact, compensating for the fact that we are running at ambient temperatures.</p> <p>The membranes provide for the effluent. The combination of ambient temperature, Psychrophilic AD with membranes provides a balanced, sustainable and safe engineering solution for the Client and Council.</p>	
C) Details on the role of medical waste in the system	Inoplex have confirmed that this is not to be included within the system.	Completed
D) Details re the pool backwash into the biogas system	Inoplex have confirmed that this is not to be included within the system.	Completed
E) Emergency Management Plan details	An Emergency Management Plan for the facility will be prepared as required but can be considered at a later date.	Completed. This can be a condition on the consent and/ or addressed with the future Section 68 application.
F) Maintenance schedules of the biogas facility	<p>A maintenance schedule for the facility will be prepared as required but can be considered at a later date.</p> <p>Inoplex have identified that the maintenance would include:</p> <ul style="list-style-type: none"> • All aspects of safety monitoring • Performance monitoring • The checking of membranes and seals • Regular changes of the UV land • Removing sludge every 3 months 	Completed. This can be a condition on the consent and/ or addressed with the future Section 68 application.

	<ul style="list-style-type: none"> Recirculation pumps being flow tested, inspected and seals replaced periodically. The cover condition being checked periodically. 	
G) Operational Performance monitoring	<p>The following response has been provided by Inoplex:</p> <p>The performance of this on-site treatment system will be regularly tested. Expected treated effluent water quality testing includes:</p> <ul style="list-style-type: none"> Suspended solids, SS. Biological Oxygen Demand 5 days, or BOD5. Total nitrogen TKN and ammonia NH3. Phosphorus, P. Volatile Solids, VS. Chemical Oxygen Demand, COD. pH. Colony Forming units, CFUs Other parameters as required. 	Completed. This can be a condition on the consent and/ or addressed with the future Section 68 application.
H) Validation proposal for QA	A Quality Assurance Plan can be prepared before the commencement of works on site.	Completed. This can be a condition on the consent and/ or addressed with the future Section 68 application.
I) Address how fur will be minimised from drains and pipes	Fur will be captured via conventional means with the installation of hair basket strainers over the drains.	Completed.
J) Food waste in the digester	Inoplex have confirmed that foods will be introduced safely and conveniently by personnel flushing it down the sink equipped with an incinerator. This approach also speeds up the AD process with food lumps broken up into a slurry before it reaches the AD.	Completed
K) How sludge will be managed	<p>Inoplex have confirmed that sludge will slowly settle and accumulate in the digester, at the bottom of the various compartments, very much like a septic tank or grease trap. Sludge will be removed every three months by a licensed sewage cartage contractor and taken to a licensed facility for safe disposal.</p> <p>While the sludge from the digester could potentially be applied to land as a soil conditioner, the amount of sludge generated by this system will be small. It would be difficult to justify the investment in safe work practice to spread this small volume of sludge. Off-site disposal is low risk and low cost.</p>	Completed
L) Cottage requirements	<p>The WMP was based on a site inspection and review of the number of bedrooms in the two cottages taking into account any home offices/studies which could be deemed potential bedrooms.</p> <p>The site inspection revealed a total of three dedicated bedrooms in each cottage at the time of</p>	Completed.

	<p>site inspection.</p> <p>Cottage on tank water thus 120L/day as per Table 7 and AS/NZS 1547:2012</p>	
M) Details on the disinfection of the system	<p>Inoplex have provided the following response to this matter:</p> <p>The proposal includes several layers of pathogen control; it is a multibarrier approach to water quality and safety.</p> <ul style="list-style-type: none"> • Firstly, the AD process reduces the level of pathogens in the effluent. This provides a modest, around 1 log, pathogen reduction. • Next, membrane filtration provides up to 4 log pathogen reduction. The 1um holes or pores in the membranes are smaller than most pathogens, so they are excluded from the effluent stream. • Lastly, UV disinfection provides an additional level of disinfection through a different mechanism. Final UV design sizing has not been completed, but a 2 log reduction of cryptosporidium is typically applied. <p>The proposed system comprehensively reduces pathogen levels.</p> <p>The treated and disinfected effluent will flow from the AD into the irrigation and be applied shortly afterwards, without storage. There will be an air break in the storage tank to protect the AD system from backflow risk.</p>	Completed
N) Details on the AWTS interim system	<p>The AD will not be functioning at optimum levels for the first month of operation. An aerated treatment system will act as a temporary support system that works in tandem with the AD while it builds to its optimum design performance. That aerated treatment system is then turned off and becomes the emergency overflow/redundancy.</p> <p>While the AD is being established in its first month, the membrane system will prevent particles larger than 1 um from leaving the AD reactor. Only fine organic materials will pass through the membranes. These dissolved organic materials are quickly broken down in the aerated wastewater treatment system, and the sludge produced in this process is returned to the AD for stabilisation.</p> <p>The extended aeration system will be switched off, drained and left in situ once the AD has reached its design performance. It would then be used as an emergency overflow if there was a failure in the wastewater system. The aeration system would be re-activated to treat emergency overflows. The treated wastewater is slowly pumped through the AD system once the regular operation is achieved.</p>	Completed
O) Justification of the nitrogen and phosphorus levels	<p>This will be responded to at a later date.</p>	Outstanding

P) Calculating disposal areas in heavy rain periods	<ul style="list-style-type: none"> • Calculations of the size of the land application areas uses both the minimum area method and nominated area method (see Appendix A). • The nominated area method is used in the WMP which takes into consideration wet weather storage in the soil (see Sheet 2 in Appendix A) • Above ground wet weather storage is an 'old' approach and not an option. 	Completed
Q) Details required on how surface irrigation will distribute wastewater evenly over the irrigation area	<ul style="list-style-type: none"> • The 9,000 m² irrigation field would be divided into panels for even distribution and hydraulic management using an indexing valve system (sequencing valve). A PC Control system would work better. • 115 sprinklers would be operated in panels not all at once • A complete hydraulic design will be completed for the irrigation system but was not commissioned at this concept stage until irrigation plumbing design is finalised and friction losses/hydraulic head parameters decided upon. • Two irrigation consultants have been contacted to carry out a hydraulic design • It is a straightforward irrigation scheme, but parameters have to be finalised. 	
Not numbered – the proposed anaerobic digester system requires additional information and adequate support from calculations and soil testing.	We consider that the information provided above is sufficient in order to address Council's concerns regarding the system.	Partially completed..

As indicated at the start of the letter, this is the first response to our RFI. However, we believe this information will allow for Council to continue assessing the application.

If there are any questions in relation to the above please do not hesitate to contact Belinda Barrie (Associate) or the undersigned on (02) 9068 7500 or via email: belindab@gyde.com.au or stephenk@gyde.com.au.

Yours sincerely



Stephen Kerr
Executive Director

21 February 2022

Ms Fiona Plesman
General Manager
Muswellbrook Shire Council
PO Box 122
Muswellbrook NSW 2333

Attention Hamish McTaggart, Development Coordinator
Sent via email: Hamish.McTaggart@muswellbrook.nsw.gov.au

Dear Ms Plesman

**RE: DA 129/2021 Animal Boarding and Training Facility
1949 Martindale Road, Martindale
Response to submissions**

GYDE Consulting acts on behalf of Greyhound Racing New South Wales (GRNSW), who are the applicant for this proposal.

This letter is to provide a response to the matters raised in the submissions regarding the above Development Application. Similarly, to the RFI, not all matters can be responded to in this letter and a further response will be provide for any outstanding requirements.

Given the number of submissions lodged and the same issues raised over multiple submissions, so to avoid repetition, we have provided tables which respond to the general themes raised.

The topics are:

1. General issues
2. Planning Matters
3. Animal welfare/ animal liberation
4. Design
5. Traffic
6. Noise
7. Wastewater management
8. Water and stormwater management
9. Odour
10. Flora and fauna
11. Flooding
12. Bushfire
13. Power
14. Operational elements
15. Community engagement

1. General

No.	Issue	Response
1.1	The application has failed to identify, respond to, and address all risks and impacts (including cumulative risks and impacts) as required under Section 4.15 of the <i>Environmental Planning and Assessment Act 1979</i> (the Act) and adequately demonstrate how they would monitor, avoid, minimise, mitigate and manage risks and impacts pursuant to the Act	The SEE is a comprehensive document which has adequately assessed all matters of consideration as required under the Act.
1.2	The application has relied upon numerous assumptions and the SEE is generally void of adequate justification or evidence to support many non-evidenced assumptions and conclusions	The submitted application has an SEE which has addressed all relevant matters of consideration under the Act, and which is accompanied by several technical reports to further demonstrate the suitability of the proposal.
1.3	The application has failed to demonstrate adequate consultation with or consideration of sensitive receptors and the community including consideration of applicable buffer zones and amenity, adequate assessment of noise, odour, biosecurity, disease management and emergency management planning considerations	The submitted application has an SEE which has addressed all relevant matters of consideration under the Act, and which is accompanied by several technical reports to further demonstrate the suitability of the proposal.
1.4	The application has failed to identify, differentiate and address the risks and impacts included in the separate 'construction' and operational' phases of the proposed development.	The submitted application has an SEE which has addressed all relevant matters of consideration under the Act, and which is accompanied by a number of technical reports to further demonstrate the suitability of the proposal.
1.5	The proposed development provides no benefit to the local community or the public at large and is not in the 'public interest'	The proposal provides an economic benefit to the local community by way of the support staff and goods needed from the nearby town, and a social benefit in terms of the animal welfare elements it is providing.
1.6	The proposed development includes significant 'development' and 'operational' risks and impacts to the greyhounds, surrounding neighbours and the environment that cannot be managed or mitigated by site design or operational practices	We disagree with this statement. This application is accompanied by a comprehensive SEE which has addressed all relevant matters of consideration under the Act and which is accompanied by several technical reports to further demonstrate the suitability of the proposal.
1.7	AL contend that the lack of detail and omission of detail in the application will restrict the ability of Council to undertake a comprehensive assessment	We disagree with this statement. This application is accompanied by a comprehensive SEE which has addressed all relevant matters of consideration under the Act and which is accompanied by a number of technical reports to further demonstrate the suitability of the proposal.
1.8	The location of the development is poorly chosen, which is well out of town, hidden from public view, has poor infrastructure and with a creek crossing which is regularly closed	We disagree with this statement. The site was selected in order to minimise the number of direct neighbours around the property. The development is designed to minimise its visual impact on the locality. The development is not 'hidden from public view' to conceal the operations

		<p>of the facility. The proposed buildings and landscaping have been carefully considered and designed to respond to the rural context with the intention to recede into the existing landscape.</p> <p>The flooding impacts and implications have been assessed by a qualified flood engineer and are considered satisfactory.</p> <p>The servicing requirements for the site have been assessed by qualified professionals and is considered to be satisfactory. These technical reports accompany the application.</p>
1.9	<p>Much of the weather data used for various studies is not referencing long term weather data from BOM for Doyles Creek or Sandy Hollow. This means that the results of these studies are inaccurate and need to be redone using local data.</p>	<p>This provision has come up under the individual themed responses and will also be responded to separately. It is noted that all different consultants have attempted to use the closest and most consistent weather data possible for the area.</p> <p>In regard to wastewater, no temperature, evaporation or rainfall data are available for the Site.</p> <p>Paterson station (89.4 km distant) was used because it is the closest official weather station with rainfall data matched against official pan evaporation data and the period of operation is considered satisfactory.</p> <p>It is understood that Scone SCS BOM site (40.7 km distant) may have evaporation data. These data not readily available, so it could not be sought.</p>
1.10	<p>It is considered that the applicant couldn't control all of the potential adviser impacts on the neighbourhood.</p>	<p>We disagree with this statement. As already indicated the application is lodged with a range of technical report demonstrating how the impacts of the development can be controlled on the neighbourhood.</p>
1.11	<p>Visual, noise, light and non-owner operated business impact of this development as being out of character with the residential area and inconsistent with the existing and future desired character of the area.</p>	<p>We disagree with this statement. This application is accompanied by a comprehensive SEE which has addressed all relevant matters of consideration under the Act and which is accompanied by several technical reports to further demonstrate the suitability of the proposal.</p>
1.12	<p>It is not clear nor has the applicant addressed as to what degree the development would service the day to day needs of residents and having regard to our neighbours there is overwhelming opposition confirms it is not in the public interest.</p>	<p>We disagree with this statement. This application is accompanied by a comprehensive SEE which has addressed all relevant matters of consideration under the Act and which is accompanied by several technical reports to further demonstrate the suitability of the proposal.</p>
1.13	<p>The proposal represents a proposed overdevelopment of the site in its present form.</p>	<p>We disagree with this statement. The development has been designed to minimise its visual impact as the building and the landscaping will assist the development receding</p>

		into the landscape.
1.14	If the application is approved, it will have an impact on property prices	Property prices are not a valid reason for objection under the Act.

2. Planning matters

No.	Issue	Response
2.1	The application has failed to consider other relevant and applicable SEPPs and other relevant planning instruments contained within the LEP and DCP	The submitted application has an SEE which has addressed all relevant matters of consideration under the Act and which is accompanied by a number of technical reports to further demonstrate the suitability of the proposal.
2.2	The application has failed to adequately consider and/ or address all matters of 'public interest' and the required relevant NSW animal welfare legislation and has paid scant attention to the daily and ongoing welfare of the 'discarded GRNSW greyhounds;'	<p>We disagree with this statement.</p> <p>The proposal provides an economic benefit to the local community by way of the support staff and goods needed from the nearby town, and a social benefit in terms of the animal welfare elements it is providing.</p> <p>The social benefit of the facility is outlined further in Section 3. In summary the development has been designed with the highest animal welfare standards in mind and quite often exceeds these requirements.</p> <p>One key part (out of many) of the proposal is the ability to keep greyhounds within the facility for as long as they need for training purposes before being considered for adoption in the GAP program. However, greyhounds which are not deemed to be sufficiently trained for adoption will live comfortably on the facility for the rest of their natural lives, as outlined in Section 3.1 of the submitted SEE.</p> <p>Overall, we consider that the proposal meets the matters of public interest as required under the Act and is worthy of approval.</p>
2.3	The proposed development doesn't meet many objectives of the RU1 zone	<p>We disagree with this statement.</p> <p>Section 4.7.1 of the LEP addresses the objectives of the zone.</p> <p>We maintain that the proposed development is consistent with the zone objectives.</p>
2.4	Within the LEP there is no definition of 'animal boarding or training establishment' therefore the words have been taken in the context of the definition of the object of the zone	<p>The <i>Muswellbrook Local Environmental Plan 2009</i> in the dictionary has the following definition for an animal boarding or training establishment:</p> <p><i>animal boarding or training establishment means a building or place used for the breeding, boarding, training, keeping or caring of animals for commercial purposes (other than for the agistment of horses), and includes any associated riding</i></p>

		<p><i>school or ancillary veterinary hospital.</i></p> <p>The proposed development clearly meets the land use definition as prescribed within the LEP dictionary.</p>
2.5	The development is not primary industry because it is neither an animal boarding or training establishment nor intensive livestock agriculture	The proposal is properly characterised as an animal boarding or training establishment which is a permissible use within the RU1 zone.
2.6	The development is not intensive livestock agriculture	As noted above, the proposal is properly characterised as an animal boarding or training establishment which is a permissible use within the RU1 zone.
2.7	The development is incompatible with adjoining properties	We disagree with this statement. As outlined in the submitted SEE, the proposed development has been carefully considered and designed to sit within the landscape and not be incompatible with adjoining properties in terms of visual impact or adverse amenity impacts.
2.8	AL contends that the proposed development should be Designated Development given its scale and character.	<p>This has been addressed in Section 4.3.3 of the SEE.</p> <p>Designated Development is categorised in accordance with Schedule 3 of the <i>Environmental Planning and Assessment Regulation 2000</i> (the Regulations).</p> <p>The proposal doesn't meet the thresholds as prescribed in the Regulations. This was addressed in Section 4.3.3 of the submitted SEE.</p>
2.9	AL contends that the proposal should be Integrated Development	<p>The proposal is not considered to be Integrated Development for the reasons outlined in the RFI.</p> <p>We note that Council referred the application to the Rural Fires Service however as outlined in the Bushfire Report, this was not Integrated Development under the <i>Rural Fires Act 1997</i>.</p> <p>A DA only deals with the requirements under the <i>Environmental Planning and Assessment Act 1979</i>.</p> <p>Should any further permit or approvals be necessary under different legislation, they will be obtained in due course.</p>
2.10	The response to SEPP 55 is inadequate	<p>We disagree with this statement.</p> <p>The risks of contamination on the property through previous uses are low. It is noted that this has not been questioned by Council in its Request for Further Information.</p>
2.11	The proposal requires referral to TFNSW under the Infrastructure SEPP.	The proposal didn't trigger the vehicle movements prescribed for referral, and Martindale Road is a local road, not a classified road.

2.12	The proposal is not consistent with the objectives and controls of Section 8.2.1 of the DCP	<p>We disagree with this statement.</p> <p>Objectives</p> <p>a) To ensure that the location of buildings do not detract from the natural or rural setting or scenic qualities of a site.</p> <p>b) To ensure that buildings do not dominate the surrounding natural landscape features.</p> <p>As per our SEE, the proposal has been carefully designed to sit within its landscape and not be a dominant feature of the landscape.</p> <p>Once established the landscaping will become the dominant feature on site and sit comfortably within this rural area.</p>
2.13	The development should be evaluated as potentially offensive development using SEPP 33 with reference to a Tweed Council case of 14 dogs	The proposal does not trigger the provisions of SEPP 33 therefore an assessment under this environmental planning instrument is not required.
2.14	The submitted documents indicate that a flying fox has been installed for staff to use in an emergency. A recent inspection indicates one is not there and they are not aware of a DA for such a device.	<p>There will be no flying fox pursued with this application. We respectfully reserve the right to install it at a later date subject to any relevant approvals.</p> <p>The flying fox is one element of evacuation that is being considered and will require further approvals before it is installed, should that be required.</p>
2.15	The SEE is not detailed enough to allow for a comprehensive and objective assessment to be carried out.	The SEE is in itself a detailed assessment against all required provisions of the Act.
2.16	The SEE relies on numerous assumptions which means it does not address all risks and impacts as required in the Act nor does it explain how these impacts will be monitored and mitigated.	The SEE has been prepared using the numerous technical reports and plans prepared for this application and addresses all necessary requirements of the Act.
2.17	Council should consult a recognised and authorised animal welfare agency (such as the RSPCA) before determining the application.	<p>While Council does have the discretion to do this, it is not mandatory and should not hold up the determination of an application.</p> <p>We note that GRNSW has already consulted with several external animal welfare formally and informally over the course of the project.</p>

3. Animal welfare/ animal liberation

No	Issue	Response
3.1	General opposition to the greyhound racing industry and 'systematic animal cruelty and entrenched culture of poor animal welfare standards and cruel practices'	<p>This project is aimed at improving the lives of all retired greyhounds especially those that need additional support to transition to pet life. The facilities are designed to exceed worldwide gold standards in animal/dog welfare, exceeding kennel size requirements and allowing dogs as much choice as possible in a shelter environment while keeping them safe, maintaining and improving their</p>

		<p>mental, emotional, behavioural and physical wellbeing. Operationally, enrichment and behavioural conditioning will be built into each dogs day ensuring all of their needs are met especially in the areas that will help them transition to pet life.</p>
3.2	<p>The number of dogs rehomed under the Greyhounds as Pets (GAP) program is below public expectation or the industry's own targets</p>	<p>Greyhounds as Pets (GAP) NSW rehomes the majority or retired greyhounds in NSW through their programs and supports all rescue groups through financially supporting retired greyhounds veterinary work including vaccinations, worming, heartworm, dental surgeries, providing grants to rescue groups to support the good work they do and financially support injured greyhounds. The aim is to continue to support rescue groups as another rehoming pathway, however, GAP will be able to support more greyhounds by providing placement for dogs that need more time and behavioural support to transition to pet life. These dogs are often not able to be rehomed through smaller rescues and organisations as they do not have the time or resources for these dogs. This also means that rescues and GAP adoption centres can focus on the pet ready dogs only which will mean more dogs that can be rehomed quickly can be taken in. More than 1800 dogs are rehomed each year by greyhound rehoming programs, and most are supported by GRNSW financially in one way or another, through its GAP rehoming program and it's welfare schemes. GRNSW also focusses on improving rehoming options for retired greyhounds through GAP by marketing how great retired greyhounds are as pets "every home is a greyhound home".</p>
3.3	<p>GAP NSW has a 'very high kill rate.... Euthanising just over one in 10 greyhounds they accept for rehoming'</p>	<p>This is untrue. GRNSW's rehoming program GAP has a zero unnecessary euthanasia charter and does not have responsibility for approving euthanasia of retired greyhounds – this is managed by the government agency - Greyhound Welfare Integrity Commission (GWIC). GRNSW's GAP has a number of programs to ensure "Not Yet Pet Ready" greyhounds are given opportunities to become pet ready through programs such as Pet Prep Program, 'Pawsitive' Steps Prison Program and Regional Adoption Programs which work closely with owner trainers. Bylong Park is the final piece in the puzzle to ensure dogs that still need more time to rehabilitate for pet life or are not safe to be rehomed into the community without long term rehabilitation due chase behaviours etc.</p>
3.4	<p>General concerns that the facility will be a 'warehouse' for discarded racing greyhounds</p>	<p>Every retired greyhound that is accepted into the rehabilitation facility will be given a detailed rehabilitation plan to ensure they are given every opportunity to become pet ready. Some retired racers take longer than others and need the</p>

		<p>specialized rehabilitation that only a facility like the farm stay can provide. Some dogs prefer the structure and predictability that the kennel environment gives them verse the unpredictable and sometimes chaotic world that pet life can be. These dogs need a slow and gentle introduction to change. Some dogs are also not safe to rehome to the general public without extensive rehabilitation, just like many pet dogs in many shelters and pounds. These dogs can be given a great life full of choice and comfort at the farm stay, with the opportunity to rehabilitate, rather than being euthanised or remaining at their original kennels without the opportunity to have behavioural rehabilitation</p>
3.5	Failed to demonstrate adequate consultation with relevant agencies such as the RSPCA	<p>The design and operational plan meet or in most cases exceeds all of the NSW standards for animal welfare.</p> <ul style="list-style-type: none"> - NSW Animal Welfare Code of Practice No 5 - Dogs and cats in animal boarding establishments - Prevention of Cruelty to Animals Act 1979 No 200 View - NSW legislation <p>The minimum housing requirements listed in the code of practice is 3.5m2, the footprint of the kennels proposed exceeds this greatly.</p> <p>International standards were also used to ensure that this design meet or exceeds international gold standards</p> <p>Respected animal welfare (international and local) and veterinary professionals were consulted however it is not required to demonstrate this consultation process in the DA application.</p>
3.6	The application has not demonstrated compliance with the relevant NSW animal welfare legislation, nor have they demonstrated their awareness, knowledge or skills about modern and progressive best practice rehabilitation and rehoming practices.	<p>The DA process does not require the level of detail that this response requests. Greyhounds as Pets prides itself on using the most up to date and progressive rehoming and rehabilitation practices. All relevant legislation and codes of practices were referred to and, in most cases, the requirements were exceeded as they set a minimum standard whereas we aim to provide gold standard facilities which is supported by our philosophy and operational practices to provide the best, current animal welfare practices. GRNSW is open to new science-based developments in animal welfare practices and endeavour to incorporate them into our ever-evolving practices as we want the best outcomes and opportunities for our retired greyhounds.</p>
3.7	AL disagrees with the claim that the design of the facility reflects the care needs of the greyhounds.	<p>More specifics would be required to respond to this as we would refute this broad statement.</p> <p>In a shelter-based environment GRNSW are endeavouring to exceed the needs of these dogs that require more support than most retired greyhounds. Some of these dogs would not be safe to place into foster homes or as pets until they have been rehabilitated for pet life due to their strong chase behaviour or bite risk etc. Some of</p>

		these dogs prefer the more predictable nature of kennel life and need to be introduced to new experiences slowly or we often see dogs regressing behaviourally and unsafe behaviours, if forced into new situations too quickly.
3.8	AL refutes the following claims in the SEE: best practice greyhound welfare is a fundamental objective of the facility ‘ the facility is designed to ensure all greyhounds have quality care and homing the facility will be managed by veterinary professionals all greyhounds will be regularly monitored and actively maintained through appropriate care and enrichment	<p>This is not specific enough to respond in detail to as they are objectives of GRNSW.</p> <p>However, GRNSW contend that best practice greyhound welfare is a fundamental objective of the facility – The Greyhound of Practice came into effect on 1st January 2021 https://www.gwic.nsw.gov.au/welfare/code-of-practice-for-the-welfare-of-greyhounds. The facility and its operations will exceed these standards. The facility is designed to ensure all greyhounds have quality care and homing – the facility operations are solely focused on the care and rehabilitation of the greyhounds housed there. The facility will be managed by veterinary professionals. To give an indication on the professionalism and qualifications within the organisation, the current GRNSW General Manager in charge of the Rehoming programs is a Registered Veterinarian in NSW.</p> <p>All greyhounds will be regularly monitored and actively maintained through appropriate care and enrichment – the operational aspects which involve staff on site 24/7 and the daily greyhound husbandry routine ensures this.</p>
3.9	AL are concerned the facility will facilitate the ‘warehousing’ of discarded GRNSW greyhounds	All dogs entering the facility will be given the opportunity to become pet ready through extensive rehabilitation and behavioural management which includes regular reviews of their progress. Some dogs prefer the predictability of kennel life and need to be progressed through rehabilitation slowly. The dogs will stay in the facility as long as they need to become pet ready as that is the ultimate goal for each of these dogs. We will not place an unsafe dog into the community, and we need to have the time to work with these higher needs dogs to ensure their safety as well as the community and their pets.
3.10	The application has failed to articulate the day to day operations of the facility	There is a detailed operational plan in the DA submission. There are also additional operational details listed in other appendixes such as noisy dog management, odour control, emergency response
3.11	AL are concerned with the following matters regarding staffing: that the overall staffing levels are too low there isn’t adequate staff available to accommodate all responsibilities	The staffing ratios listed are in line with RSPCA NSW staffing levels, 1 staff member per 20 dogs is the suggested ratio however RSPCA NSW exceeds 1 per 25 dogs. Significant workflow efficacies are also built into the facility including the

	<p>the emergency management procedures in place for after hours</p> <p>the qualifications or experience required to work on site</p>	<p>centralised services area, the use of motorized buggies, as well as ease of movement and cleaning kennels with runs and large social areas attached directly to the kennel areas. If staffing ratios are not adequate, the staffing numbers will be adjusted to ensure the welfare of the dogs and their progression through their individual rehabilitation plans.</p> <p>There is a site manager living on site and staffing will be sourced locally wherever possible to support emergencies after hours. Arrangements will also be made with local vets to support the facility.</p> <p>A minimum of a Certificate 2 in Animal Care will be required for all animal staff however higher qualifications are preferred and all staff are given training opportunities throughout their employment.</p>
3.12	<p>All matters relating to public reporting as required under different legislation needs to be articulated</p>	<p>This is not necessarily a matter for consideration under the Act.</p> <p>This does not need to be addressed in the DA and will be articulated elsewhere. Rigorous reporting currently occurs for the organisation and will continue in line with all legislative and organisational requirements.</p>
3.13	<p>GAP NSW do not have the necessary knowledge and experience to meet the needs of the dogs, unlike an institution such as the RSPCA</p>	<p>This is not necessarily a matter for consideration under the Act.</p> <p>Having said this, however, this statement is fundamentally untrue. There is a number of former RSPCA staff working for the organisation currently. The GAP team is very experienced, generally highly educated and have had many years of experience in the animal welfare, animal care and animal rehoming industries.</p>

4. Design

No.	Issue	Response
4.1	<p>AL disagrees that the proposed development will be in harmony with the landscape, given its large scale. In fact it will dominate the landscape and be the dominant feature of the locality</p>	<p>The subject site is 135.2 hectares. The built elements are clustered and occupy a relatively small proportion of the land. The landscape design is the dominant feature, occupying the majority of the proposed works and allowing the entire development to integrate into its natural surroundings. Tall native tree species will be prominent, their canopies concealing the low kennel roof forms, rammed earth walls and unsealed roads. Similarly, retention and introduction of trees around the existing farmstead structures, new veterinary facility and car park will provide significant canopy cover to reduce visibility of built forms, making the landscape the primary focus.</p> <p>Other proposed landscape focused elements include:</p>

		<p>The introduction of a pond to the courtyard that provides a functional use for the operations of the facility similar to other dams located across the site.</p> <p>Earth mounds located at the entry of the site provide an aesthetic and functional feature that act as noise and visual barriers. The mounds will be formed by excavated material on site to enable the creation of water elements and the adjustment of levels for building works.</p> <p>Informally placed trees along the unsealed roads offer additional canopy, shading and break the visual impact of the kennel structure.</p> <p>The proposed development is designed to respond to the existing conditions of the subject site and the rural character of the surrounding context. The proposed single storey buildings are consistent with the height, bulk and scale of development in the area while the materials and landscaping blend the structures with the landscape.</p> <p>Existing agricultural sheds will mostly be retained, including the former horse stud facility which will be restored and adapted as an outdoor, undercover greyhound training area. The retention and repair of two existing cottages will preserve accommodation facilities.</p> <p>The new single storey farmstead building is simple in form and derived from the character of contemporary agricultural structures in the region. It's bulk and scale are complimentary to the adjacent existing buildings that complete the formation of the courtyard.</p> <p>The kennels are clustered and laid out to follow the natural topography of the site. This combined with the sculpted curved rammed earth walls that taper into the ground, nestle the kennels into the slope, allowing them to become part of the landscape and minimise their visual impact. Each kennel has been carefully integrated into the existing landscape and supplemented with new greenery and an informal arrangement of landscape elements that regenerates the environment.</p> <p>The materiality and colours of the built elements have been carefully selected to blend with both the landscape and the surrounding rural character of the area.</p>
4.2	Visual impact not considered from the objectors house who has a clear view of the stable block	<p>The proposed development has been designed through analysis and response to the rural context with visual impact being one of the key design considerations. Refer to point 4.1.</p> <p>The nearest three neighbouring residences are</p>

		<p>located approximately 530m, 730m and 850m to the closest kennel building. They are also located approximately 470m, 710m and 620m respectively from the main existing farmstead structures (cottages, stable, garage).</p> <p>The existing continuous vegetation along Martindale Creek which separates the subject site from the nearest neighbouring residences will contribute to providing a visual barrier.</p> <p>The extensive landscape proposed for the development will be the predominant experience when viewed from any distance.</p> <p>The new landscaping and trees around the courtyard, including the existing stable, will minimise views of built structures. The built forms will be secondary to the overall impact and experience of the extensive landscape.</p> <p>We are unable to respond to this specific objector because their address has not been provided.</p> <p>GRNSW will prepare a number of photomontages from key locations in the vicinity of the subject site to illustrate the minimal and considered visual impact of the development within the valley.</p> <p>GRNSW will also seek permission to access the nearest neighbouring properties to prepare photomontages from their private residences.</p>
4.3	Large quantities of dog food will be brought in by the truck load but there is no storage for this shown on the plans	Large cool and dry stores for dog food are located adjacent to the food prep room within the new farmstead building. Each kennel has a prep bench that also houses storage for dog food and supplies. Refer to Appendix C Architectural Plans drawing 1001 and 1010.
4.4	There does not appear to be a location shown for the storage and powering of the electric karts to be used on site.	A garage is located within the new farmstead building for storage and charging purposes of electric carts. The garage would be able to house up to 6 carts at one time. Other agricultural sheds are available on site for secure storage of additional carts. Refer to Appendix C Architectural Plans drawing 1001 and 0009.
4.5	There are several discrepancies between the architectural drawings (Appendix C) and the drainage drawings (Appendix E) including the location of the grease arrestor and the roadway to the waste water digester. The roadway to the wastewater digester is essential for maintenance and pumping by a large truck.	<p>The 'Drainage Service Site Plan' (Appendix E) is a schematic drawing demonstrating the system design with indicative locations of plant and services. The Architectural Plans (Appendix C) illustrate similar locations of plant contained on the 'Drainage Service Site Plan'. Exact location of plant and services to be determined and coordinated in detailed design.</p> <p>Note the lint and grease arrestor are underground and do not inhibit road access to the wastewater digester.</p>
4.6	There is only mention of heated floors and not of	Water misting has been included within each

	cooling the kennels in warmer months	<p>kennel for cooling during the warmer months. Water use has been accounted for within water usage quantity analysis. Refer to Appendix E DA Utility Report, Table 2, page 2</p> <p>Roofs are thermally insulated, and external rammed earth walls provide excellent thermal mass. Both building elements will positively contribute to the thermal comfort in summer and winter.</p>
4.7	The grassy earth mounds appear to be outside the kennel and vet areas and not available for dogs.	<p>The earth mounds located at the entry of the site are not secured by a fence and therefore unsuitable for dog access. These mounds are an aesthetic and functional feature that act as noise and visual barriers. The mounds will be formed by excavated material on site to enable the creation of water elements and the adjustment of levels for building works.</p> <p>Dogs have access to a number of external green spaces including the farmstead courtyard and shared social runs outside each kennel building. These will include a variety of landscaped elements including smaller earth mounds for dogs to play and explore.</p>
4.8	The landscape plan reference Ironbark Forest, which is not in the area. The local forest is a Hunter Valley Slat Gum Woodland and Yellow boxes should be planted to attract the regent Honey Eater.	Noted. The landscape report and ecological designation will be updated to reflect the local forest Hunter Valley Slat Gum. Inclusion of Yellow box species to attract Honey Eater bird will be including along the avenues to kennels.
4.9	The landscape plan palette of plantings are based off Ironbark Forest and should be amended to consist of only local species	Noted. The planting palette will be updated to include species generally consistent with the Hunter Valley Slat Gum Woodland tree and understorey species.

5. Traffic

No.	Issue	Response
5.1	All extra traffic would affect the road, as would increase vehicle interactions. Trucks miss turns and go off the end of the road, and trucks have pulled out of the driveway without looking	<p>The extent of extra traffic associated with the project and trucks is low. The extra traffic associated with the project together with the existing traffic flows are well within acceptable capacity standards provided within the RTA <i>Guide to Traffic Generating Developments</i>.</p> <p>All drivers associated with the project will adhere to road rules and made aware of the sight issues around the site access.</p>
5.2	Martindale Road needs considerable amount of improvements i.e. road widening, pruning of trees	Any road widening or trimming of vegetation is the responsibility of the road authority. The volume of traffic associated with the project does not warrant the upgrade of the road to provide a wider road pavement.
5.3	Martindale Road is a school bus route. While the	Drivers associated with the project will be advised

No.	Issue	Response
	Williams Bridge was under construction, large construction vehicles were kept off the road during school bus times	of the times for the school bus activities and drive in accordance with the road rules, including passing a school bus at the appropriate speed.
5.4	Martindale Road has become a busy road in the last few years due to other properties being subdivided/ horse breeding properties and therefore more traffic	The existing traffic flows are well within the capacity of Martindale Road based on the RTA Guidelines. The additional traffic associated with the project will not increase the total traffic volumes over acceptable limits.
5.5	There are sections of Martindale Road which only have single lane bitumen but do not allow heavy vehicles to pass with two wheels on the verge There are also extensive tree branches overhanging, pot holes from wear and tear, and degraded verges. All of these factors make the current state of the road extremely unsafe with the current level of traffic and current speed limit.	Road maintenance is the responsibility of the road authority. Speed limits are controlled by TfNSW and Council.
5.6	The statement that drivers are familiar with the road is irrelevant and unsupported	It is considered that the majority of drivers are familiar with the road as they have an origin / destination there. It does not support through traffic movements. Local drivers will be able to drive to the conditions.
5.7	The road is not suitable for existing car traffic, is not suitable for heavy vehicle traffic and definitely not suitable for the increased traffic that will result from this development	The existing traffic flows are well within the capacity of Martindale Road based on the RTA Guidelines. The additional traffic associated with the project will not increase the total traffic volumes over acceptable limits.
5.8	There is no basis on how some of the assessments were made: <ul style="list-style-type: none"> - services accessing the site - transportation of dogs to and from the site - staff accessing the site 	The operational characteristics of the project have been provided by the study team based on the proposed operations for the project site.
5.9	The existing traffic flows adjacent to Bylong Park are not necessarily relevant to the safe and adequate use of the road. The traffic flows further north towards Denman are greater and the safety of the road must be assessed along the whole road	The applicant is currently obtaining data for the traffic flows on Martindale Road. This will be updated once this survey is completed.
5.10	The previous horse stud was a small operation with very few staff in addition to the on site manager so any estimates associated with this use is unreliable and irrelevant	The previous use provides some background information and is relevant with regards to horse floats / heavy vehicle access.
5.11	The assumption that all drivers will be local is incorrect as many people use the road for scenic drives	Monday to Friday it is considered that the vast majority of drivers will be local. There could be some drivers visiting the area on a weekend but it is not considered these will be high. On a weekend, there would be no requirement for heavy vehicle access to the site, with staff movements only.

No.	Issue	Response
5.12	The speed limit on the road is signposted at 100kph not 90kph	Noted
5.13	The traffic report does not mention that the driveway is a shared driveway with the neighbours and how this will be maintained and to what standard, and who will pay for and be responsible for this driveway maintenance, particularly with increased usage	An agreement with regards to maintenance of the driveway can be agreed with the applicant and the adjacent landowner.
5.14	The traffic report doesn't consider whether the dirt driveway will become unpassable during wet weather and the effect this will have on the neighbours	As above
5.15	It is proposed that the unsealed access is upgraded to a sealed at the cost of GRNSW with signage on Martindale Rd indicating it is a private road.	This is a possibility that has been considered however not necessary as the road is considered adequate and has supported previous traffic loads similar to the expected traffic for the facility.
5.16	The DA incorrectly states the bus run times. The correct bus times are between 6:50-8:45am and 3pm-4:45pm with four trips up and down Martindale Road each day .	Noted
5.17	Given the condition of the road, an upgrade of Martindale Road verges from 1050 Martindale Road onwards to be undertaken between Council and GRNSW including widening to allow 2 heavy vehicles to pass safely at the reduced speed limit .	<p>The maintenance of the road is for the road authority.</p> <p>The volume of traffic associated with the project does not warrant any road upgrade.</p> <p>Any adjustment to the speed limit is subject to review and approval by TfNSW and Council.</p>
5.18	The hours of operation require extensive staffing and generates more traffic than what Martindale Road can handle at the moment with Council and residents maintaining sections of road.	The volumes of traffic associated with the project does not warrant any road upgrade.
5.19	As the current entrance of the property doesn't meet As1428.1 at 90kmh then it certainly wouldn't meet it at 100kph	<p>Noted.</p> <p>Given the low traffic flows associated with the project and on Martindale Road, the access can continue to operate in a safe manner.</p> <p>The provision of "Trucks Turning Ahead" sign would increase driver awareness of the site access.</p>
5.20	The sight lines from the property onto Martindale Road are more like 50-60m rather than the 80-90m as stated in the report.	<p>Sight lines were assessed on site in accordance with Austroads Guidelines.</p> <p>The sight lines could potentially be improved with trimming of road side vegetation.</p>

6. Noise

	Issue	Response
6.1	The documents include conflicting information in relation to 'receptors'	Stantec can update the report to include addresses and ID's of nearby residential receivers.

6.2	Nearby residential properties will be impacted by excessive noise and loss of amenity due to the facility	It is Stantec's findings that the noise levels are predicted to comply with acoustic criteria. The criteria come from a noise policy that defines the criteria in terms of levels required to achieve amenity and limit intrusiveness for residents.
6.3	Report appears to not have been done in Martindale which is a natural amphitheatre	The acoustic modelling used accurate topographical information for the area. The model is built in 3D and accounts for the hills, valley and height differences between residents and the facility together with ground absorption and local dominant weather conditions.
6.4	The Acoustic Report is inadequate in addressing the disturbance of the development in the valley, particularly how sounds are transmitted in this location.	The reflections of surrounding environment have been included in the model. We will check what is the effect of the distant hills / mountains typically echo is happening for distance between the source and the receivers. It is important to note that the mountain is covered by vegetation which means that part of the incident sound will be absorbed before being reflected. The sound from the source (dogs) will decrease with the distance between them and the receivers which will be more than doubled the direct distance between the source and receivers which means the overall level at the receiver will not change significantly or may not change at all.
6.5	The DA is optimistic and gives many reasons why the dogs won't bark due to good management, and even that the manager will get out of bed and quieten the dogs if they bark which is idealistic, unsubstantiated and cannot be relied upon.	<p>The following response is provided from GRNSW in terms of animal behaviour management:</p> <p><i>Greyhounds are generally quieter than most dogs in kennels. You may see some excitement/anticipatory barking at mealtimes, during play, external stimulus such as wildlife or other dogs in other kennel blocks or first thing in the morning if they need to toilet etc. However, the operational plan and the design of the kennels have tried to reduce the amount of anticipatory barking by ensuring the dogs have choice and reduced stress such as needing to wait to be let out to toilet in the mornings. External stimulus that may encourage barking has also been reduced through screens and positioning of the kennels. Efficiency in the kennel build allows for meals to be fed quickly in each kennel block to reduce the amount of anticipatory barking also. Kennel blocks only house 20-25 dogs also ensuring that dogs are also able to be managed efficiently and barking stimulus is reduced also. Calm relaxed dogs with choice and enriched lives are quieter than most back yard dogs. Greyhounds are also renowned for the 'couch potato' lifestyle, sleeping much of the day.</i></p>
6.6	Appendix M in part gives a lie to the claims by documenting the number of dogs barking during feeding time at an equivalent but smaller facility at Wyee. The actual sound level is not mentioned.	<p>Stantec can update the report to include more details of the measurements taken including the sound level measured.</p> <p>These measurements were used to scale accordingly, the percentage of dogs barking at the smaller facility was applied to predictions at the</p>

		future (larger) facility.
6.7	The reality is that mown lawns, surface water and a slashed APZ will attract mobs of kangaroos etc. and the disturbance of these animals will be virtually continuous during the night. The fighting will be noisy as will be the dog's response.	Dog barking has been assessed in terms of night-time maximum levels.
6.8	The acoustic report calculated the sound reaching three closest houses only in reference to an industrial standard and with no reference to the way sound is actually transmitted in the valley	See response for comment 6.4.
6.9	The dogs will be heard barking throughout the valley, and the DA only compares the noise to the industrial standard, not the effect of the noise on adjoining residents or the impact on the rural amenity in the area.	See response for comment 6.2.
6.10	The project should not be approved until evidence is presented that dog barking is avoided and evidence on how sound will actually be transmitted through the valley.	Dog barking and animal management is addressed in comment 6.5 above. See response for comment 6.4 to address sound through the valley.
6.11	The noise report doesn't assess the impact of noise on native animals in the nearby national park	This is correct. The research conducted on the site and surrounding fauna didn't indicate that sensitive species to noise were present such as specific frogs or others.
6.12	The source of the wind rose is not stated but the rose is different to the use for the Odour assessment	Stantec's wind rose can be updated if a verified version is provided.
6.13	The wind rose is incorrect due to the direction of winds in the valley	Stantec's wind rose can be updated if a verified version is provided.
6.14	The documents have optimistic statements that the barking will be almost eliminated by the design of the kennels	Stantec confirmed that the assessment in Scenario 1 assumed 8000 barks during a 15-minute period. We believe this to be a conservative amount of barking.
6.15	The analysis is purely related to neighbouring residences and doesn't take into account likely widespread disturbances by other stimulations i.e. wandering wildlife or effects on neighbours dogs or wildlife	The NSW noise policy deals with noise from a source to human receivers. It is acknowledged that wildlife wandering around the dog's shelter has the potential to trigger the dogs to bark. However, it is also expected that the fence around the site will prevent wildlife from getting too close to dogs shelter and wander around for an extended period of time.
6.16	The analysis is only against legal limits and doesn't take into account the destruction of rural ambience	See response for comment 6.2.
6.17	The sounds within the valley are easily heard from the top of the escarpment	See response for comment 6.4.
6.18	The report takes no account of the affect of temperature inversions and other atmospheric conditions which will expand how far the dogs can be heard through the valley	Temperature inversions can affect the transmission of sound over the valley. See comment 6.3 and 6.4 for further detail.
6.19	Concerns on how noise is to be managed even with a Plan of Management as the Acoustic report	Refer to 6.4 regarding transmission in the valley.

	does not sufficiently address how noise is transmitted in the valley and doesn't address sleep disturbances to residents with the extended hours or address how the design of the kennels will mitigate howling.	Sleep disturbance is assessed during the night-time hours as this is when the natural background noise levels are the lowest and barking events will be most noticeable in comparison
6.20	The report estimated 1 in 5 dogs would bark at feed time twice a day with 8000 barks, which seems overly conservative and could be over the tens of thousands	The 8000 barks were assessed over a 15-minute period as worst-case scenario. It is expected that barking could occur at any time, but no more than 8000 per 15-minute period.
6.21	The open kennels face towards the northeast which is a natural amphitheatre which will echo the noise	The 3D acoustic model incorporates the local topography including reflections from the terrain.
6.22	The assumptions of not hearing animals at such a distance as prescribed are not correct as people can hear animals and neighbours 1-2km away	The assessment was completed for the closest residents with the understanding that they will be the most affected. As noise levels at the closest residents are expected to comply, the residents further away are also expected to comply. It may be possible for noise to travel 1km or further, but the noise levels diminish with distance and would be low in level.

7. Wastewater management

No.	Issue	Response
7.1	The Case study provided was for cow manure not dog manure which has more microbial activity than cow manure therefore its relevance is questioned	<p>Inoplex (who prepared the Biogas Report) provide the following response:</p> <p>Anaerobic digestion (AD) is a natural process that occurs under a broad range of conditions. While dog faeces are quite different from cow manure, it is the same volatile solids in the material that microbes break down and convert to biogas. AD is successfully used to treat a variety of wastes without significant microbial content. Classic examples are sugary wastes such as wine and beer and chocolate wastewaters. The startup for these projects will be slower with dog manure than a cow manure project; however, the membrane filtration that retains biomass enhances the biological activity in the AD to compensate.</p>
7.2	The DA does not have any redundancy built into the wastewater or stormwater systems that will guarantee that no contaminated water will enter the ground water system and the creek	<p>To prevent contaminated stormwater from infiltrating into the ground water system, it is proposed that an impermeable liner (with a hydraulic conductivity of $<1 \times 10^{-9}$ m/s) is provided at the base of the bio-retention basin. Ongoing maintenance of the bio-retention basins will be required to ensure peak performance of the system is maintained.</p> <p>The nearest receptor to the proposed location of the irrigation system is approximately 130 m distant. This receptor is an intermittent tributary of Martindale Creek, approximately 450m by flow path upstream of its confluence. The location of the irrigation system easily satisfies the guideline</p>

No.	Issue	Response
		<p>buffer setback distances. Surface irrigation is chosen because it is a suitable method of wastewater disposal for the Site of its high evaporation potential. Predevelopment baseline and scheduled sampling and testing of surface water in the subject tributary (if the stream is flowing) would adequately monitor water chemistry.</p> <p>The indicative permeability value (K_{sat}) of the silty sandy loam is predicted to be between approximately 0.5 and 1.5 m/d. The colluvium overlies strongly weathered sedimentary rock. Typical values of hydraulic conductivity for sandstone in the Sydney Basin are between approximately 0.005 and 0.01 m/day (Cook, 2016 and Coffey, 2014). The sandstone observed on the Site is lithic in nature and 'less clean' (lower effective permeability) than the Hawkesbury Sandstone in the Sydney Basin.</p> <p>These data suggest that the migration (travel) time for groundwater infiltration is 'long'. Viral die-off models indicate that die-off of pathogens typically takes up to approximately 30 days. The distance travelled over the 30 days depends on effective permeability of the rock sequence, groundwater temperature and groundwater gradient.</p> <p>The implication is that any recharge of the groundwater system will be slow ('glacial pace') and insignificant, and almost certainly 'pathogen free'.</p> <p>The most appropriate method of testing this thesis is to construct a small number of properly designed and strategically located monitoring bores (piezometers) peripheral to the down gradient side of the irrigation field. The success, of course, relies on intersecting water bearing zones (aquifers) in the sedimentary sequence, not always an easy task in the Wollombi Coal Measures.</p> <p>In terms of the biogas system, Redundancy is included within the AD system with duty/standby pumps and membrane capacity.</p> <p>Retaining the aeration system as a detention tank with emergency aeration capability also provides a redundant treatment system.</p> <p>This gives the facility a number of layers of redundancy.</p>
7.3	There is no redundancy on when the facility is not available particularly when the area is affected by fire, flood or requires maintenance. This may prompt the need for a second facility as a constant water treatment facility would be required	Dual water pipes from the creek will be provided, to draw water from different creek locations for redundancy. Critical water treatment equipment (such as pumps) will operate in Duty/standby arrangement, providing equipment redundancy in case of failure. Also, critical spares (such as UV lamps, filters) will be kept onsite for fast servicing.

No.	Issue	Response
		<p>Typical redundancy arrangements can include dual submersible pumps in the wastewater treatment system that both operate on scheduled duty cycles and backup power arrangements such as a diesel-powered backup generator.</p> <p>In the event of bushfire and potential damage to the irrigation system, the treatment, transfer and irrigation system would be disabled.</p>
7.4	<p>There is no reference on how the grass is to be irrigated by the wastewater management system. Similarly, there is a possibility for the sludge from the system be spread as a fertiliser. But there is no indication or detail if this will occur and where so on the property.</p>	<p>We have documented that grass irrigation will be by treated non-potable water pumped from the creek.</p> <p>The preferred method of disposal of treated wastewater is surface spray irrigation. A design for surface spray irrigation was documented and prescribed in the Wastewater Management Plan in accordance with DLG (1998) and ASA/NZS 1547:2012.</p>
7.5	<p>It is assumed that hot water for the admin building and kennels will come from the treatment plant, however given the large distance between the treatment plant and the kennels, this will not be feasible. Therefore, independent hot water systems will be required at the kennels.</p>	<p>Yes, that is correct. An independent hot water system will be designed for the kennels.</p>
7.6	<p>There are several discrepancies between the architectural drawings (Appendix C) and the drainage drawings (appendix E) including the location of the grease arrestor and the roadway to the waste water digester. The roadway to the wastewater digester is essential for maintenance and pumping by a large truck.</p>	<p>The 'Drainage Service Site Plan' (Appendix E) is a schematic drawing demonstrating the system design with indicative locations of plant and services. The Architectural Plans (Appendix C) illustrate similar locations of plant contained on the 'Drainage Service Site Plan'. The exact location of plant and services are to be determined and coordinated in the detailed design phase.</p> <p>We note that the lint and grease arrestor are underground and do not inhibit road access to the wastewater digester.</p>
7.7	<p>There is no mention of what type of water treatment will be used to purify water for drinking and no recognition that the water treatment plant will have to treat the type of water from the creek.</p>	<p>Refer to the spatial water services site plan for the water treatment components. The utility report documents that topping up of the rainwater tank will be required in periods of low rainfall, using the treated non-drinking water source, which is future treated to drinking water quality.</p>
7.8	<p>The report is not final. At the time of writing, no access to the site has been possible so the list of testing has not yet been reported.</p>	<p>Detailed soil sampling and field soil investigations were carried out in the Site in August 2021.</p> <p>A suite of four representative soil samples were submitted to the Australian Precision Agricultural Laboratory (APAL) in South Australia in September 2021.</p> <p>Soil samples were dispatched to a NATA accredited agricultural laboratory in Adelaide in late August 2021 for measurements of pH, Electrical Conductivity (EC) and soil permeability and a suite</p>

No.	Issue	Response
		<p>of chemical parameters.</p> <p>However, due to Covid-19 courier delays the WMP was issued pending receipt of results.</p> <p>Soil test results are in hand and will be documented in a revised WMP.</p> <p>Calculations of the total size of the land application area will be refined accordingly.</p>
7.9	The wastewater report used weather data from Paterson, which is different to the site (i.e. less rainfall at the site than at Paterson).	<p>Regarding wastewater, no temperature, evaporation or rainfall data are available for the Site.</p> <p>Paterson station (89.4 km distant) was used because it is the closest official weather station with rainfall data matched against official pan evaporation data and the period of operation is considered satisfactory.</p> <p>It is understood that Scone SCS BOM site (40.7 km distant) may have evaporation data. These data not readily available.</p> <p>If the annual rainfall amount in the Site is less than Paterson, the size of the land application area is therefore conservative.</p>
7.10	The documents indicate that cleaning and odour control disinfectant will be used regularly for cleaning, which will drain into the bio digester. There is no confirmation that the biology of the bio digester will be killed by the disinfectant.	Council has asked a range of similar questions in relation to how the system works, and other technical requirements in the RFI. We rely on the response in the RFI to these matters.
7.11	More research is required into the anaerobic wastewater management system given the levels of pathogens in dog faeces which can affect humans	We consider that the proposed reports adequately demonstrate how the dog faeces will be managed on site.

8. Water and Stormwater Management

No.	Issue	Response
8.1	We are irrigators of the Martindale Creek and concerned about effluent/ cleaning chemicals running off the property into the water source.	<p>In regard to application of treated wastewater on the Site, the nearest receptor to the proposed location of the irrigation system is approximately 130m distant. This receptor is an intermittent tributary of Martindale Creek, approximately 450m by flow path upstream of its confluence. The location of the irrigation system easily satisfies the guideline buffer setback distances.</p> <p>Surface irrigation is chosen because it is a suitable method of wastewater disposal for the Site of its high evaporation potential.</p> <p>Predevelopment baseline and scheduled sampling and testing of surface water in the subject tributary</p>

No.	Issue	Response
		(if the stream is flowing) would adequately monitor water chemistry.
8.2	The DA does not have any redundancy built into the waste water or stormwater systems that will guarantee that no contaminated water will enter the ground water system and the creek	<p>Dual water pipes from the creek will be provided, to draw water from different creek locations for redundancy. Critical water treatment equipment (such as pumps) will operate in Duty/standby arrangement, providing equipment redundancy in case of failure. Also, critical spares (such as UV lamps, filters) will be kept onsite for fast servicing.</p> <p>Typical redundancy arrangements can include dual submersible pumps in the wastewater treatment system that both operate on scheduled duty cycles and backup power arrangements such as a diesel-powered backup generator. In the event of bushfire and potential damage to the irrigation system, the treatment, transfer and irrigation system would be disabled.</p>
8.3	The proposal states that the property has an irrigation licence to be used to extract water from the creek, but it is the writer's belief that the licence cannot be used for such a facility.	The owner of the land is permitted to use the water in the water licence as per the terms and agreement of the licence.
8.4	The proponent must negotiate a new water extraction licence for the facility prior to any approval	A water licence is not a matter for consideration under the Act. If a new licence is required, it will be negotiated separately to this application.
8.5	The water supply would not be reliable enough to safely sustain such a facility	<p>Facility will draw a maximum of 33ML/yr from the creek, which is 19.3% of the allowable 170ML/yr from the water licence. With rainwater harvesting (total storage volume of 100kL) will reduce demand from the creek.</p> <p>An emergency management plan will be developed for periods of prolonged drought.</p>
8.6	All the roof areas drain back to two underground tanks. The combined volume is 100kl which is around the requirement for a rural residence. Having the tanks underground will mean that the water has to be pumped and there will be no water in a power outage. The rainwater tanks will be empty in a week so the tanks will spend most of their lives empty which is bad practice.	2 pumps running duty/standby operation will be provide for each rainwater tank to provide redundancy. Also, equipment servicing is about 2hrs drive away.
8.7	The type of sediment control fencing proposed will be breached repeatedly by wombats and other animals.	The erosion and sediment control fencing on site will be monitored as part of the construction process and if it is breached, it will be replaced.
8.8	The sediment control fence appears to cross the main creek which is not feasible unless the flow is very low.	The sediment control fence is shown in concept at the moment. This can be formally reviewed and approved prior to construction commencing.
8.9	On the western side of the creek, the sediment control fence appears to cross private land not owned by this facility.	See response to 8.8.
8.10	The study uses Newcastle data not local data to verify the results, and notes that Newcastle is	The consultants who have used weather data in their reports have used the closest weather

No.	Issue	Response
	wetter than Martindale so the system is likely to be oversized.	stations available. This has also been addressed in the RFI.
8.11	The stormwater report recommends possible flood management measures but does not assess measures such as risk to staff, or operation on the facility to implement these measures or how often this will need to occur.	A response in relation to flooding matters will be provided at a later date.
8.12	There is no mention to the firefighting equipment or the roof sprinklers in the Hydraulic Systems report that are mentioned in the fire report and no indication where these systems will receive water from	There is no mention of firefighting equipment or the roof sprinklers in the Bushfire Hazard Assessment (Blackash 8 October 2021) as they are not required from a bushfire design and compliance perspective.
8.13	The SEE indicates that there will be 100,000L of water on site with an additional 5000L at each kennel, the latter which is not mentioned in the Hydraulic Report	The documents will be revised to be consistent with each other.
8.14	The amount of water required for pool flushing is not reported.	This information will be confirmed at a later date.
8.15	The water from the creek has a high iron content which will generate flock that will block pipes and nozzles and turn areas washed down with the water orange	Water from the creek will be treated prior to use, reducing the iron content to acceptable levels for animal consumption.
8.16	There is no mention of what type of water treatment will be used to purify water for drinking and no recognition that the water treatment plant will have to treat the type of water from the creek.	Refer the spatial water services site plan for the water treatment components. The utility report documents that topping up of the rainwater tank will be required in periods of low rainfall, using the treated non-drinking water source, which is future treated to drinking water quality.
8.17	The pool backwash water and its impact on the creek has not been taken into account.	Pool backwash should be disposed of on-site via a designed absorption trench and not directed to the wastewater treatment system.
8.18	There would need to be constant monitoring of the groundwater and it is questioned which agency would undertake this	This information will be confirmed at a later date.
8.19	What is the plan/ strategy if any contaminants were detected in the creek or groundwater supply?	Pollution of waterways is managed under the legislation, and this will be investigated by the relevant authorities.
8.20	There are no provisions for additional water supply should water allotments be cut off in drought conditions and there wasn't enough tank water available due to the lack of rain	An emergency management plan to be developed for such extreme situations. This has been addressed in the RFI response.

9. Odour

No.	Issue	Response
9.1	The Odour report doesn't include a detailed modelling approach	The odour assessment was undertaken as a basic qualitative assessment given that the proposed development was considered to be low risk. Detailed modelling is not considered necessary

		<p>with this approach.</p> <p>We note that Council's RFI indicated that the Environmental Health Officer was satisfied that the day to day operations would have minimal odour impacts, subject to clarifying some minor points about the wind direction and the proposed On-Site Waste Management system.</p> <p>These have been responded to separately in the RFI letter.</p>
9.2	The wind roses quoted are inaccurate with wind blowing either up or down the valley with only a small change in angle between a Northerly and a Westerly	<p>The following response is from RWDI, the project's Odour Consultant:</p> <p>Jerry Plains is the closest source of data that we know of to the site. The Jerry Plains data was further compared to MET data (Charlton Ridge 2012) used for the Warkworth Mine project determination. It is found that the Jerry Plains MET data is consistent with the Charlton Ridge data, with a predominantly NW-SE wind direction. In consideration of its location being closest to the subject site, and consistency with other approved project's MET data, we proceeded with using this detail.</p>
9.3	The assessment takes no account of the temperature inversion which is common in the valley	See response to 9.2.
9.4	The statement that existing residences may already be impacted by smells is not an excuse for adding to the odour impact and the impact of odour from 400 dogs is more than from other livestock spread across a paddock	See response to 9.1
9.5	The report concluded that there was 'negligible risk' but no detail on how often surrounding residences could smell the facility	See response to 9.1
9.6	There are calculated results, but they do not take into account temperature inversions which have an impact on the distribution of odour	See response to 9.2.
9.7	The use of wind data taken from Jerrys Plains is incorrect and should be a site-specific response	<p>Jerry Plains is the closest MET data available – Other AWS are at a considerably larger distance away from the site and the data would have been less comparable to the conditions of the subject site. For this reason, Jerry Plains data was used.</p>

10. Flora and fauna

No.	Issue	Response
10.1	Five, not four, trees require removal	The applicant has commissioned an ecological assessment of the property and will respond to this matter once this has been completed.
10.2	The proposal will have an impact on threatened species and ecological communities.	The applicant has commissioned an ecological assessment of the property and will respond to this matter once this has been completed.

No.	Issue	Response
10.3	We are concerned that this development could bring more wild dogs into the valley by the noise/smell of the greyhounds which would threaten more rare fauna like the brush tailed wallaby	<p>The applicant has commissioned an ecological assessment of the property and will respond to this matter once this has been completed.</p> <p>We also note that the greyhounds will be desexed either prior to or during their time on site which will reduce the possibility of other dogs being attracted to the site.</p>
10.4	There has been no survey carried out of the existing grasslands to establish the diversity and value of native grasses in the area	The applicant has commissioned an ecological assessment of the property and will respond to this matter once this has been completed.
10.5	There is no mention of the value of the native vegetation along the creek	Minimal works are being undertaken along the creek line, therefore an assessment on the vegetation and any potential impacts is not warranted.
10.6	The reality is that mown lawns, surface water and a slashed APZ will attract mobs of kangaroos etc. and the disturbance of these animals will be virtually continuous during the night. The fighting will be noisy as will be the dog's response.	<p>The applicant has commissioned an ecological assessment of the property and will respond to this matter once this has been completed.</p> <p>We also note that the paddocks will continue to be mowed and slashed in line with the previous use of the property as a horse stud.</p>
10.7	There is no consideration on how a 400 dog facility will affect wildlife. The presence of dogs will attract wild dogs and dingoes but the effect on these animals is not considered.	<p>The applicant has commissioned an ecological assessment of the property and will respond to this matter once this has been completed.</p> <p>As indicated already the greyhounds will be desexed either prior to or during their time on site which will reduce the possibility of other dogs being attracted to the site.</p>
10.8	The escarpments of Martindale Valley are home to the endangered Brush Tailed Rock Wallaby.	The applicant has commissioned an ecological assessment of the property and will respond to this matter once this has been completed.
10.9	The project shouldn't be approved until an assessment of the effect of the development on the wild populations adjoining the facility has been included.	The applicant has commissioned an ecological assessment of the property and will respond to this matter once this has been completed.
10.10	The DA doesn't identify Wollemi National Park as a neighbour or mention or assess any environmental values associated with the Park	NPWS and Blue Mountains Advisory have each lodged an RFI/ submission for which this has been responded to separately.
10.11	The DA does not mention the value of native grasses, shrubs or trees on the property. The property has long standing native grasses which could be a biodiversity asset, as could the remnant trees in the paddocks.	<p>The applicant has commissioned an ecological assessment of the property and will respond to this matter once this has been completed.</p> <p>We also note that the paddocks will continue to be mowed and slashed in line with the previous use of the property as a horse stud.</p>

No.	Issue	Response
10.12	The noise report doesn't assess the impact of noise on native animals in the nearby national park	The applicant has commissioned an ecological assessment of the property and will respond to this matter once this has been completed.
10.13	The position of the SEE that the proposal will not have notable adverse impact on the natural environment is misconceived as the development is nearby from a riparian reserve which is home to many native and endangered species such as birds and bats.	The applicant has commissioned an ecological assessment of the property and will respond to this matter once this has been completed.
10.14	While there is landscaping there is no mention of the additional trees to be planted as part of nurturing the riparian corridor nor is it specific enough to address light disturbance around the corridor.	<p>There are plans to nurture the riparian corridor in terms of the long term management of the land. However, this extensive planting is not required in order to ameliorate the impacts of the development.</p> <p>The short term landscaping elements that will be established are around the buildings themselves.</p>

11. Flooding

No.	Issue	Response
11.1	Access to the property can be cut off due to the low crossing in the creek – how will the site manage in an emergency	<p>This will be responded to once following receipt of advice from Council regarding the flooding.</p> <p>The Operational Management Plan now includes an appendix with the Emergency Management Plan listed.</p>
11.2	Local resident records indicate that the crossing has been blocked from vehicle movements at least 45 times in the last 30 years	This will be responded to once following receipt of advice from Council regarding the flooding.
11.3	Local knowledge indicates that the water can rise quickly and dangerously from storms at the top of the catchment and it is not safe to have staff leave over a rapidly rising creek.	This will be responded to once following receipt of advice from Council regarding the flooding.
11.4	The recommendation for a winch to be fitted to a vehicle is not understood. If the water is deep enough for a vehicle to have to be winched then it is too deep to get the winch rope across. The vehicle will need to be towed out after the water has receded sufficiently to walk a rope across the creek	This will be responded to once following receipt of advice from Council regarding the flooding.
11.5	The flooding impacts have been underestimated and the property can remain cut off regularly for a number of weeks	This will be responded to once following receipt of advice from Council regarding the flooding.

12. Bushfire

	Issue	Response
12.1	It is very likely that a fire would come from the	The site has been designed in accordance with the

	Issue	Response
	west and block the only exit from the property.	<p>relevant requirements of <i>Planning for Bush Fire Protection 2019</i>.</p> <p>Notwithstanding, a Bush Fire Emergency Management and Evacuation Plan should be prepared for the site. This will cover the appropriate triggers for evacuation (and other actions) based on the various fire activity and weather scenarios.</p> <p>This can be provided as a condition on the development consent.</p>
12.2	The Operational Plan assumes there will be fair warning on an approaching fire but fires can start unexpectedly on the valley floor and it can be overrun with fire within minutes	<p>As per the <i>Bushfire Hazard Assessment</i> (Blackash 8 October 2021), a Bush Fire Emergency Management and Evacuation Plan should be prepared for the site. This will cover the appropriate triggers for evacuation (and other actions) based on the various fire activity and weather scenarios.</p> <p>Notwithstanding, the site has been designed in accordance with the relevant requirements of <i>Planning for Bush Fire Protection 2019</i>.</p>
12.3	The DA mentions fire equipment but no detail on what will be provided. There is no provision for above ground water supply and no provision for gravity feed supply to the firefighting equipment. The Operational Report mentions firefighting equipment and roof sprinklers.	<p>There is no mention of firefighting equipment or the roof sprinklers in the bushfire report as they are not required from a bushfire design and compliance perspective.</p>
12.4	The protection of the facility relies solely on the maintenance of the APZ, which is unacceptable in terms of risks	<p>The bushfire protection for the site is designed with a combination of bushfire protection measures (BPMs) to achieve an acceptable outcome.</p> <p>The BPMs work in combination to provide a suite of measures that meet the aim and objective of <i>Planning for Bush Fire Protection 2019</i>. The BPMs for the site are:</p> <ul style="list-style-type: none"> • APZ • Access • Water Supply and Utilities • Emergency Management Arrangements • Landscaping • Building Construction and Design <p>This approach is consistent with the legislated NSW approach and considered national best practice</p>
12.5	The fire risk needs to be revised using Hunter Valley Slaty Gum woodland not Ironbark forest	<p>The bush fire risk has been broadly classified as 'Forest' which from an APZ design perspective creates the most conservative outcome (i.e. largest APZ). Changing the classification to Woodland would reduce bushfire risk and the APZ requirements.</p> <p>The conservative approach taken is considered</p>

	Issue	Response
		appropriate.
12.6	The report is a desktop report and should be verified locally	<p>The bushfire assessment undertaken has utilised a variety of spatial / GIS analysis techniques and been undertaken in accordance with <i>Planning for Bush Fire Protection 2019</i>. In this instance, local verification is not considered necessary.</p> <p>Corey Shackleton (Blackash Bushfire Consulting) is a Level 3 Accredited practitioner, which is the highest level in Australia.</p> <p>The NSW RFS have supported the development subject to 8 recommended conditions.</p>
12.7	Section 5.3 states that the driveway and the creek crossing will be constructed to a code, however it is not clear if the existing driveway and crossing meets these codes. There is no work proposed on these items in the DA.	<p>This crossing should be designed to ensure it complies with section 5.3.2 of <i>Planning for Bush Fire Protection 2019</i>.</p> <p>The compliance of the existing crossing has not been assessed by Blackash to determine compliance.</p>
12.8	Section 5.4 refers to 100kl water supply but does not say that this will be underground and will be used on site and only last a week.	The site will be provided with a 100,000 litre water supply along with a water treatment supply. The 100,000l water supply (whether underground or above) will be provided with a 65mm Storz fitting to allow access to the water for firefighting. This supply (100,000l), coupled with the pond and other water sources far exceeds the 50,000l recommended by the NSW RFS and is considered adequate for property protection purposes.
12.9	Recommendation 5 – providing the 100kl supply with a storz fitting implies that the storage is above ground, but the storage will actually be below ground.	The 100,000l water supply will be provided with a 65mm Storz fitting. If the tank is underground the 65mm Storz fitting will be designed to ensure functionality allows access to the water for firefighting.
12.10	The access shown to the swimming pool is via a dead-end road and does not appear to come within 4m of the pool, and there is vegetation and a fence between the road and the pool that will prevent easy access from the road to the pool.	The pool, while beneficial, is not considered necessary as a water source to support the development. The proposal complies with <i>Planning for Bush Fire Protection 2019</i> .
12.11	There is no gravity fed water supplies on site. There must be a large gravity fed supply for firefighting	<p>The site will be provided with a 100,000 litre water supply along with a water treatment supply. This supply coupled with the pond and other water sources far exceeds the 50,000l recommended by the NSW RFS and is considered adequate for property protection purposes and complies with <i>Planning for Bush Fire Protection 2019</i>.</p> <p>There is no requirement for a gravity fed supply from a bushfire perspective.</p>
12.12	There is no easy access marked on the plans for fire tankers to access the valley perimeter trail from the driveway	There is no requirement for the access roads within the site to link with the valley perimeter trail. The design of the exiting fire trails and the broader network has not been compromised by the proposed development.

	Issue	Response
		The roads within the site will all comply with the relevant requirements of <i>Planning for Bush Fire Protection 2019</i>
12.13	Section 5.5 refers to a bottled gas supply but this supply will be considerable if it is used for the backup generator. The risks are not considered.	The assessment of the bottle gas and the design will comply with <i>Planning for Bush Fire Protection 2019</i> . This is appropriate in the context of bushfire.
12.14	There is no reference to the biogas digester and any fire risk associated with the digester	The assessment of the biogas digester is not required from a bushfire design and compliance perspective.
12.15	The roads within the facility are narrow. If a fire truck is parked in a road, then it will block the road. If a number of trucks are on site, then many roads may be blocked and general access around the site will be compromised	The roads within the site will all comply with the relevant requirements of <i>Planning for Bush Fire Protection 2019</i> , ensuring firefighting vehicles are provided with safe, all-weather access to structures.
12.16	The gardens associated with the kennels will be behind fences and access for firefighting will be restricted and indirect through the kennel access. As a result, firefighting equipment for each kennel complex as mentioned in the operational plan must be accessible from both inside and outside the kennel fence.	There is no mention of firefighting equipment for the kennel complex in the <i>Bushfire Hazard Assessment</i> (Blackash 8 October 2021) as they are not required from a bushfire design and compliance perspective.

13. Power

No.	Issue	Response
13.1	There is no indication whether the existing supply will be adequate for the facility or whether an upgrade is required	This information will be confirmed at a later date.
13.2	The proposed development will require a very reliable power supply to run the proposed water and wastewater treatment systems	This information will be confirmed at a later date
13.3	The only standby generator is the bio-digester will require the backup of LPG and only have sufficient gas for 2 hours per day.	The minimum amount of LPG required to be stored is to be calculated.
13.4	The biogas system requires a significant level of LPG but there is no mention on how or where the LPG is going and where it is to be stored and delivered.	Inoplex have confirmed that the system will produce biogas which the dual fuel generator will convert into heat and power. But this system as designed does not consume LPG.
13.5	The DA plans show solar panels on the roof but no indication if these will be installed and whether the local rural feeder will be able to absorb this much power	The solar panels will be installed as part of the site's overall sustainability objectives.
13.6	A reliable standby generator will be essential to animal welfare, but while there is a reference to an onsite generator, no details are shown on the plan.	This information will be confirmed at a later date.
13.7	Appendix C indicates that water purification and other systems may be out of service due to a power outage, with no details of the amount of fuel kept on site to service the back up generator	This can be confirmed with the Emergency Management Plan required for these types of systems.

14. Operational Elements

No	Issue	Response
14.1	The traffic report and operational report are at odds with each other in terms of shift changeover	The operational plan had 2 draft staffing patterns designed to reduce traffic pressure on the roads around school pick up and drop off times as well as attempting to foresee operational needs. The traffic plan was not written to be as specific as the draft operational plan as the Operational Plan can be subject to change.
14.2	Staff and volunteers are critical and the number of staff required on site is above the 25 estimated – believe it is 30-40 with a 7 day roster	The number of staff identified per day is for a seven day per week roster apart from the veterinary hospital staff which may only attend the site 3-4 times per week with minimal vet staff on site on non-clinic days to support the site. Casual staff and volunteers numbers will be adjusted regularly to meet the variable number of dogs expected. As dogs progress through their rehabilitation plans they will graduate to adoption centres and new dogs will arrive to begin their journey.
14.3	Staff will require special characteristics, i.e. working with the dogs, long travel and willingness to stay there in a natural disaster	GRNSW confirm that the GAP staff at our adoption centres and regional coordinators possess these characteristics and already go the extra mile for our dogs. There is not a shortage of dedicated, skilled, qualified and dedicated potential staff as many of our recruitment drives for GAP staff have more than 50-100 applicants per advertisement.
14.4	The DA states that staff accommodation will be available on site, presumed to be in the existing cottage. The cottage is unsuitable for 6-10 unrelated staff to be accommodated up to 10 days.	There are 2 houses on site currently with 3-4 bedrooms each as well as loungeroom areas that could be used for sleeping areas if necessary also, which are adequate to accommodate 2 staff members per room in a short-term emergency situation.
14.5	There is no indication that staff are actually available for these specialised roles.	GRNSW confirm that they are confident that adequately qualified and experience staff will be found. Each recruitment drive for our GAP team has multiple suitable applicants with some advertisements gaining more than 50-100 applicants including at our Wyee shelter which would be considered within the recruitment catchment area of the Bylong park complex.
14.6	The DA is optimistic and gives many reasons why the dogs won't bark due to good management, and even that the manager will get out of bed and quieten the dogs if they bark which is idealistic, unsubstantiated and cannot be relied upon.	GRNSW are confident that our management strategies work as our experience with our other GAP shelters gives us this confidence, the design of the kennels in the new bylong park facility will also assist in the management of the dogs by reducing stress and kennel anxiety as well as managing noise.
14.7	Local knowledge indicates that the water can rise quickly and dangerously from storms at the top of the catchment and it is not safe to have staff leave over a rapidly rising creek.	GRNSW's on site manager has been living on site for more than 16 months to date and has forded the creek at various water heights and has the confidence to identify when it is and isn't safe to cross.

No	Issue	Response
14.8	The Operational Plan has a plan to cover the creek level rising, however it is not an emergency to have the site cut off, it is a routine event	The on site manager has been living on site for more than 16 months and is aware of the frequency of flooding. The manager has a large 4x4 and is able to cross the creek during the majority of the year and however has been flooded in on occasions however not routinely.
14.9	The operational plan does not attempt to estimate the number of times the creek crossing will be closed off or the effect on this on the operation and safety of the facility.	This will be responded to with the other matters relating to flooding.
14.10	The Operational Plan has no comment on the fear and panic from staff and dogs as a fire approached	Regular fire drills will occur to prepare staff in the event of a fire. The dogs will be contained safely in their kennels in a fire event until the danger passes. comprehensive sprinkler systems, fire breaks and fire resistant material will reduce the risk of harm to any staff or animals on site.
14.11	It is very likely that a fire would come from the west and block the only exit from the property.	The site has been designed in accordance with the relevant requirements of <i>Planning for Bush Fire Protection 2019</i> . Notwithstanding, a Bush Fire Emergency Management and Evacuation Plan should be prepared for the site. This will cover the appropriate triggers for evacuation (and other actions) based on the various fire activity and weather scenarios.
14.12	The Operational Plan assumes there will be fair warning on an approaching fire but fires can start unexpectedly on the valley floor and it can be overrun with fire within minutes	As per the <i>Bushfire Hazard Assessment</i> (Blackash 8 October 2021), a Bush Fire Emergency Management and Evacuation Plan should be prepared for the site. This will cover the appropriate triggers for evacuation (and other actions) based on the various fire activity and weather scenarios. Notwithstanding, the site has been designed in accordance with the relevant requirements of <i>Planning for Bush Fire Protection 2019</i> .
14.13	There is no overall security fence surrounding the facility to control a dog which escapes between their kennel and the vet area, or to control other wildlife coming into the premises	There will be adequate fencing to prevent escape, including double gates on each module. Dog moving outside of the modules will be on harnesses and martingale collars to prevent dogs escaping. The fencing in the dog areas is tall enough to prevent most wildlife such as macropods from entering the dog areas and being harmed. Screening will prevent/reduce the visual stimulation for the dogs from wildlife to reduce excitable barking or the risk of harm to the dogs fence running.
14.14	Neighbours, including National Parks, use poison baits, traps and shooting to control pest and feral	The fencing in the dog areas is tall enough to prevent the dogs escaping.

No	Issue	Response
	animals. Greyhounds that escape are likely to be affected by these measures.	<p>There are also other measures such as martingale collars, harnesses as well as double containment fencing and gates.</p> <p>The Operational Management Plan now includes an appendix addressing escaping dogs.</p>
14.15	There is no consideration of a dog possibly escaping the facility and how this is going to be managed, i.e. how will the dog be returned?	All dogs will be microchipped and registered with Companion Animal Register and will have collars and tags. Most dogs will come back for treats and generally tire quite quickly however can travel quite far in a short amount of time. Perimeter fencing and double gates will reduce the risk. All staff will have radios and access to a buggy and will assist in rounding up any escapees.
14.16	There is no mention on how the remainder of the property is going to be managed, i.e. weed and feral animal management	The site currently has stock running on some of the paddocks and another part has feed being sown on paddocks that sit outside the DA plan. The on- site manager currently manages weeds and feral species and has been doing so for the past 16 months. The local land management has also recently been given access to the creek fronting the property as well as some funding to undergo weed management along the creek
14.17	There is no mention of rodent controls and the smell of dog food will be attract rodents.	Pest management will be an integral part of the management plan. The DA did not require mention of this, and it was not included. GAPs other sites use external pest control companies to assist in managing rodents and other pests. Hygiene and cleanliness are essential to reduce rodent and other pest activity as well as rodent proof storage which we have installed at our other GAP sites. Reducing rodent activity is imperative to reduce the risk of snake activity around the dogs also.
14.18	It is expected that when the creek floods, the staff will stay on site to look after the dogs. The facility will be understaffed once these staff are off site as they will be on a break.	Essential care only will occur if there is minimal staff – cleaning, feeding, medicating only whereas the rehabilitation activity and extensive enrichment will be put on hold or reduced until more staff return. The facility is designed to allow spot cleaning, efficient feeding routines as well as minimal effort to let the dogs out into the larger exercise areas – (they do not need to be leashed and walked to the exercise areas as they are attached to their night runs).
14.19	The timetable for the project is unrealistic and having the facility open by May 2022 is unachievable.	Unfortunately, this maybe the case due to the global pandemic, extended delays and other issues such as worldwide transportation and manufacturing constraints, however, we hope to be operational with some dogs on site, beginning their rehabilitation journey to reduce the euthanasia rates and rehoming opportunities of dogs requiring this higher level of care as there is currently very few opportunities for these dogs.
14.20	Contradiction between the SEE and Operational	Spot cleaning occurs everyday in the kennels and

No	Issue	Response
	Plan with the former indicating full cleaning once a week and the operational plan showing kennels having a daily clean and a twice weekly clean	full cleans occur 1-2 times per week at a minimum as per the code of practice requirements. Additional cleaning will occur if kennel areas are too soiled to allow for a spot clean or there is risk of an infectious disease such as kennel cough.
14.21	The workload in the 0830-1000 timeslot is unrealistic. How can one person give a daily clean to 20 kennels and a full clean to others in 90 minutes?	This is possible and regularly done at other shelters especially as these kennels are designed to allow the dogs to toilet on the grass area when they choose therefore the night kennels are less likely to be soiled. The let-out yards are also attached to the night areas, therefore the dogs do not need to be taken out of their kennels on a leash and moved to a clean kennel during cleaning. Kennel cleaning machines – such as the ones in use at the GAP sites (Therian Kiovac) significantly reduce cleaning times and water use and will be used at the Bylong Park facility
14.22	The flying fox would need approvals prior to installation, and unless constructed to the standards for carrying people be a gross breach of WHS for movement of staff. It would also be expensive to install with regular maintenance and inspections	The flying fox does not form part of this application.
14.23	There is no mention in the operational plan on how risks from human activity on site will be controlled during high fire danger periods.	Regular fire drills will occur to ensure staff are well trained and prepared for a fire emergency. Extensive sprinklers, fire breaks and other fire reduction measures will be in place to reduce the risk of fire on the site.
14.24	The POM is insufficient and does not cover all potential impacts and too much reliance is placed on the POM and compliance with it to maintain residential amenity for neighbours.	We note that Council has requested further information in relation the Operational Management Plan and are updating the plan to address Council's other requirements.
14.25	It is noted that the facility operation is not restricted to certain times of the day, rather it is proposed to operate for significant times during the day and night	Care of animals requires 24/7 monitoring. As per the operational plan the routine daily operations of the site is during normal working hours,
14.26	The applicant has not adequately addressed the emergency risks or management to protect the welfare of all of the dogs	This is addressed in the operational plan
14.27	The site being cut off in a flood event will leave the dogs without access to qualified vet care and general care which is contradictory to the NSW Animal Welfare Code of Practice No. 5 – Veterinary Care	Veterinary care would be provided at all times A well stocked pharmacy, well trained staff under phone/ video supervision from a qualified vet would be available as a minimum.
14.28	Staff and contractors should not be expected to risk their lives crossing the floodwaters using a flying fox	During flood waters provisions would be made for staff and contractors to remain on site for up to a week to 10 days
14.29	The impact of dust on the driveway has not been adequately considered in all assessments.	The traffic created by the facility would be similar to the previous owners and potentially less than during the horse breeding season – the previous owner had a horse breeding facility and serviced

No	Issue	Response
		many external clients
14.30	Staffing the facility will be difficult due to the long commute from Muswellbrook and there is no mobile phone coverage beyond 1090 Martindale Road.	Some current GAP staff have identified the willingness to move closer to the new facility as they are keen to work at the rehab centre. Many applicants for GAP roles are willing to travel for opportunities such as those on offer at Bylong Park. Wherever possible, staff will be sourced locally however experienced and qualified staff may need to be employed from further afield. GRNSW has already received expressions of interest from local community members about employment at the proposed facility.

15. Community Engagement

No.	Issue	Response
15.1	The Community Consultation report indicates that there was little concern from the community, which is incorrect.	The applicant in good faith undertook a community engagement campaign in the month prior to the lodgement of the DA. While it was restricted due to COVID, there was a sincere effort to offer the community the opportunity to engage with us and express their concerns about the proposal. Limited responses were provided. It is noted that this was not designed to replace the formal DA notification process.
15.2	There has been no contact with the local RFS brigade about capability, response times and risks	The applicant has reached out to the local RFS brigade but they have not been willing to engage while the DA is under assessment.

Conclusion

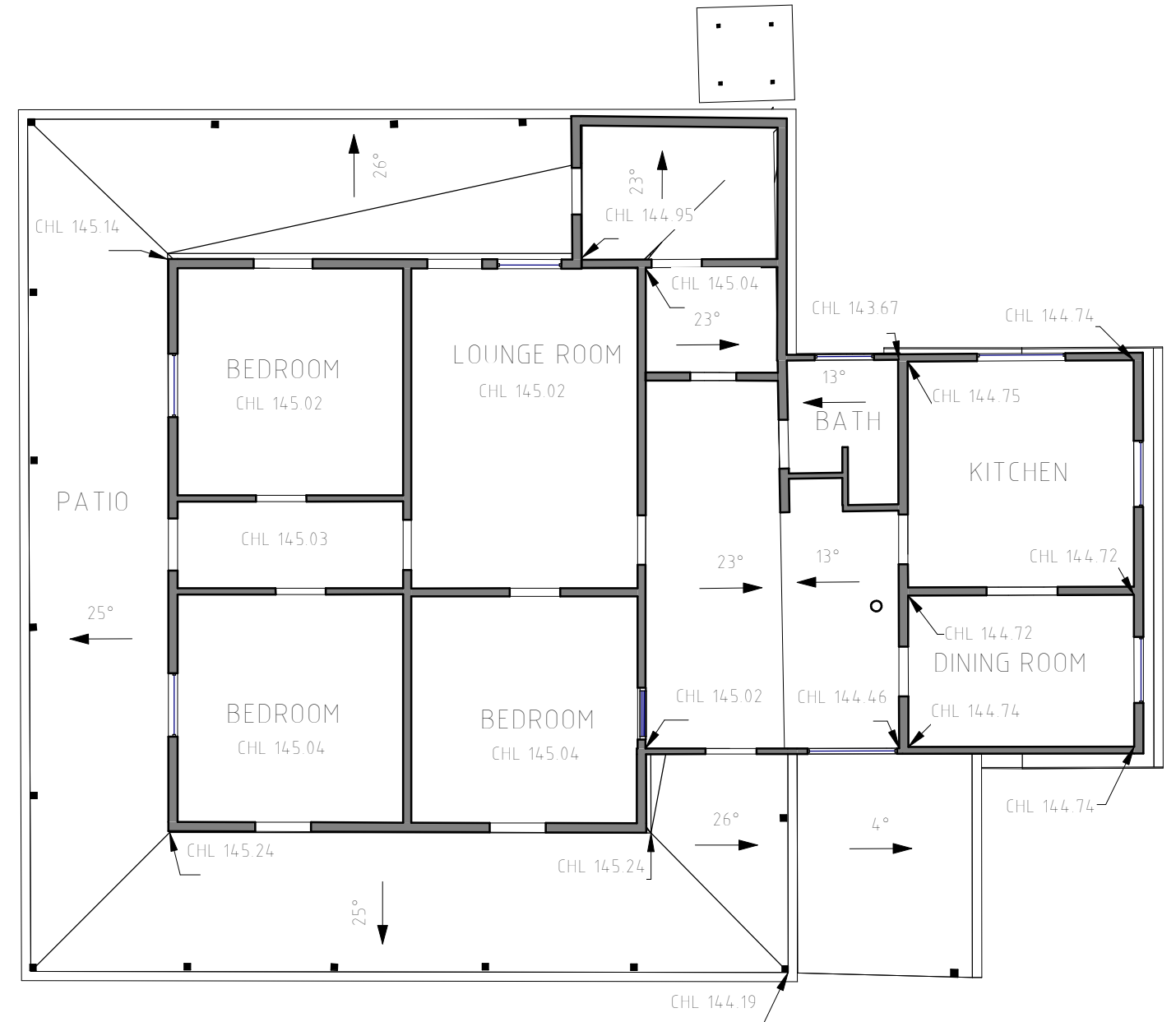
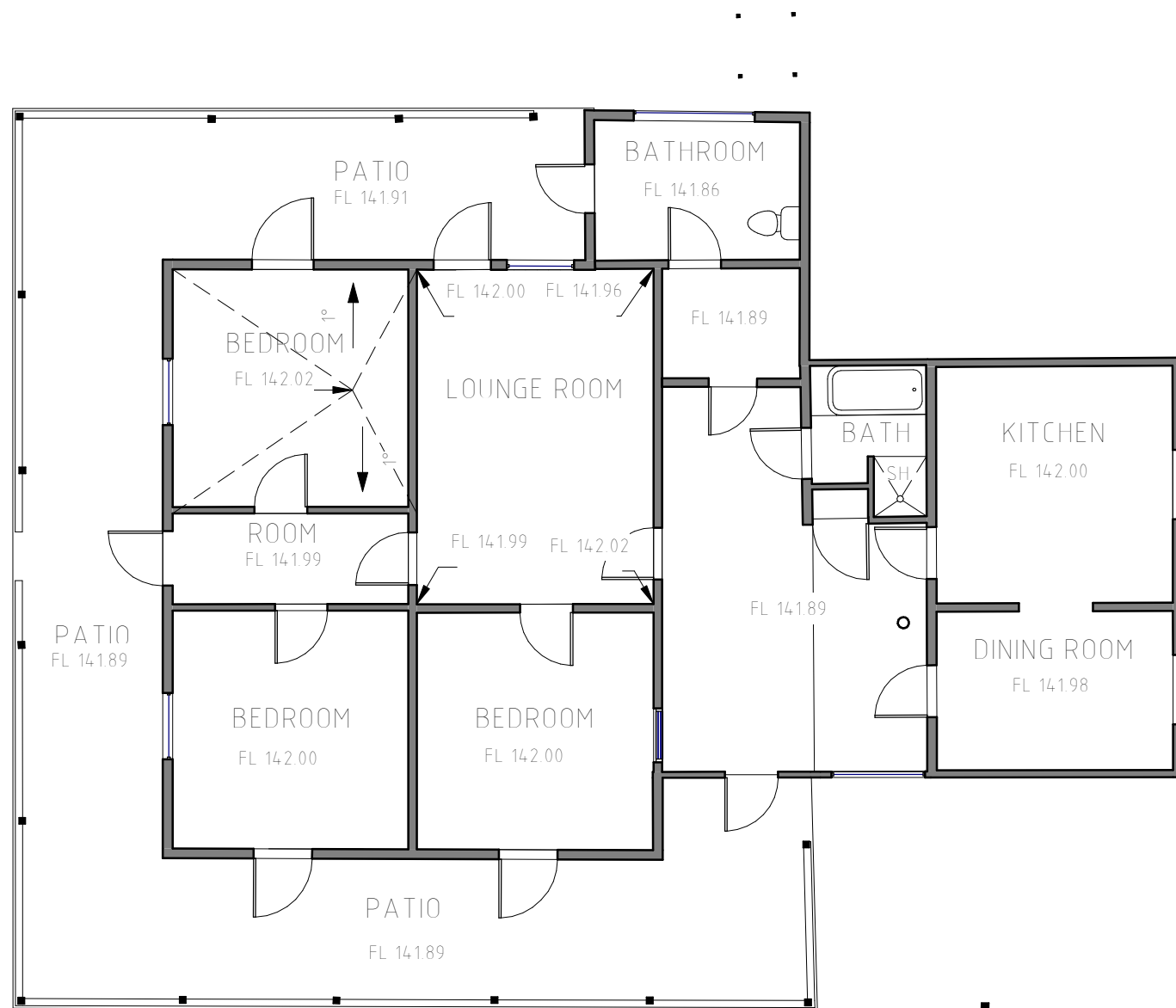
We appreciate the opportunity to review the public submissions and respond to them as appropriate. As indicated at the start of the letter, we will prepare a further response which addresses outstanding matters in this table when the information is available.

If there are any questions in relation to this matter, please contact Belinda Barrie or the undersigned on (02) 9068 7500 or by email: belindab@gyde.com.au

Yours sincerely



Stephen Kerr
Executive Director



1

BUILDING 1 FLOOR PLAN

1 : 100

2

BUILDING 1 - RCP

1 : 100

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PROJECT:

Detail & Level and Revit Model

CLIENT:

Greyhound Racing NSW Pty Ltd

TITLE:

Building 1 Floor & RCP Plan

DRAWN: LM

SCALE: 1 : 100

PROJECT No.

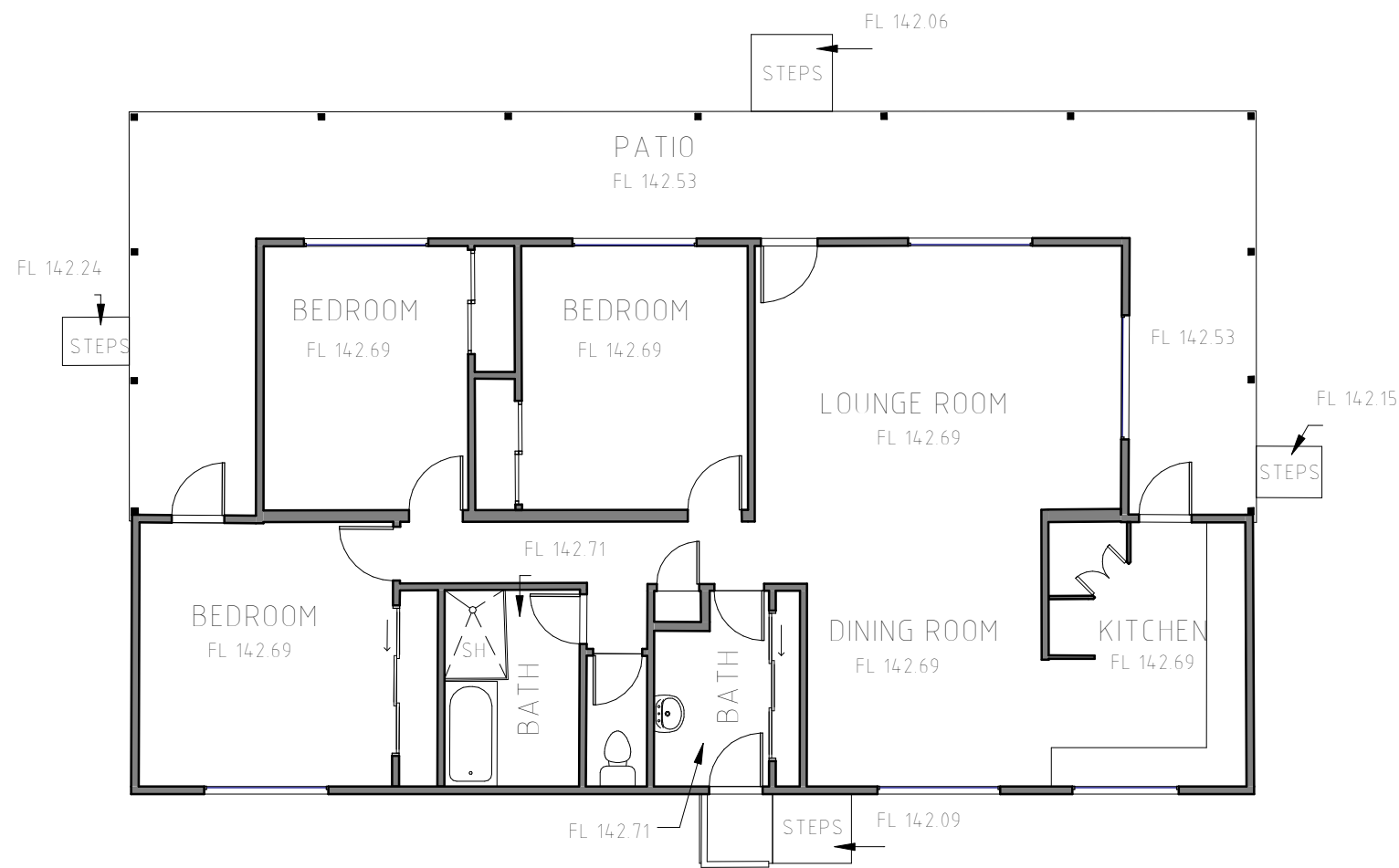
DRAWING No.

CHECKED: TC

DATE: 01/15/21

ISSUE:

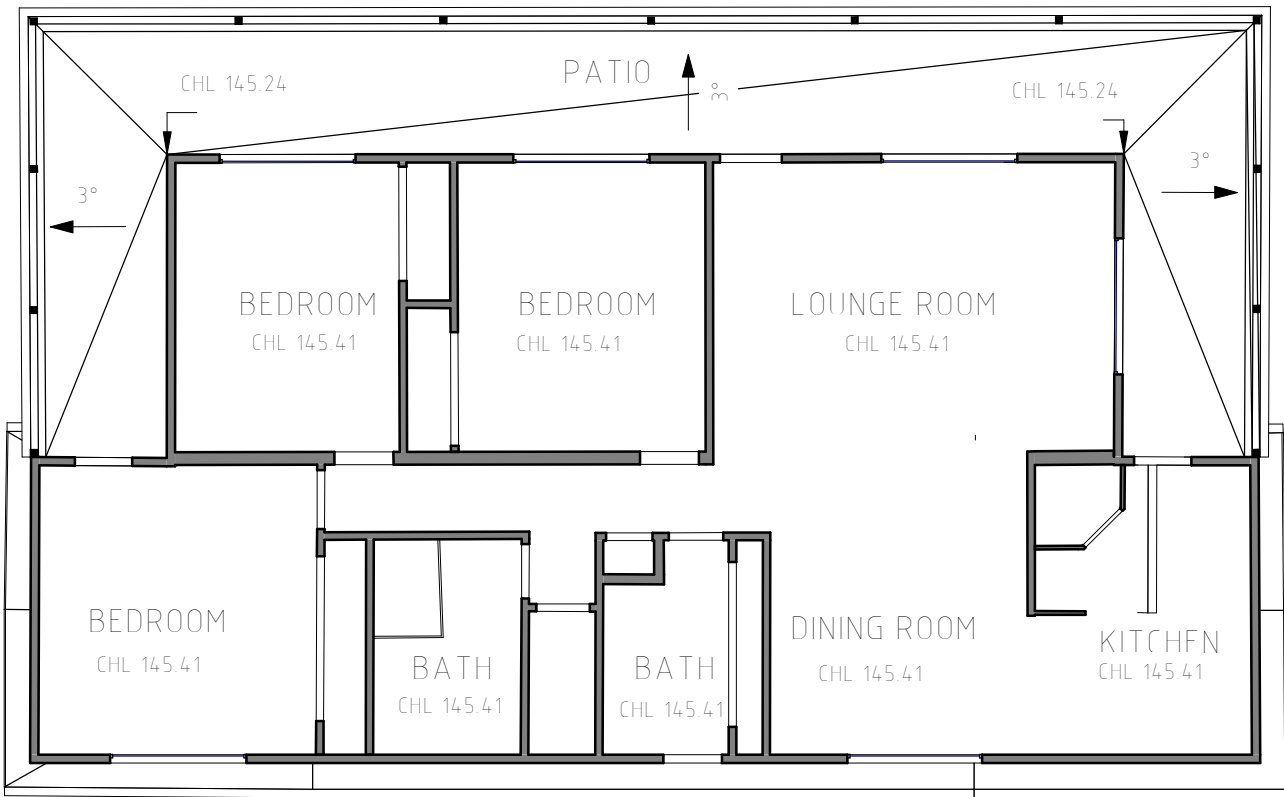
1



BUILDING 2 FLOOR PLAN

1

1 : 100



BUILDING 2 - RCP

2

1 : 100

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PROJECT:	Detail & Level and Revit Model	DRAWN: LM	CHECKED: TC
CLIENT:	Greyhound Racing NSW Pty Ltd	SCALE: 1 : 100	DATE: 01/15/21
TITLE:	Building 2 Floor & RCP Plan	PROJECT No. 19719	ISSUE: 1
		DRAWING No. SV03	

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DROUGHT SECURITY STRATEGY PROPOSED GREYHOUND FACILITY 'BYLONG PARK' LOT 2 in DP1088704 MARTINDALE ROAD MARTINDALE for GREYHOUND RACING NSW



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DATE: **26th May 2022**

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Author and Document Control

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Record of Distribution

Copies	Reference and Title	Status	Date	Prepared for:	Initials
1 x PDF	22045-A Draft Drought Security Strategy – Proposed Greyhound Facility ‘Bylong Park’ Lot 2 in DP1088704 Martindale Road Martindale	V1 - Draft	19 th May 2022	Warren Smith & Partners	LLC
1 x PDF	22045-B Drought Security Strategy – Proposed Greyhound Facility ‘Bylong Park’ Lot 2 in DP1088704 Martindale Road Martindale	V2	26 th May 2022	Warren Smith & Partners	LLC

Executive summary

The **total annual water requirement** for the proposed greyhound facility in ‘normal’ operating years is **32.9 ML**. The drought proofing strategy for the operations incorporates a significantly reduced water requirement of **5.9 ML/year**.

In south-eastern Australia there have been 10 severe droughts since the late 1800s, mostly encompassed within the major Australian droughts. The droughts of 1967-68, 1982-83, 1997-2009 (Millennium Drought) and 2017-19 were notably extreme, the latter two events of which are believed to be exacerbated by climate change.

Although extensive climate research suggests that some droughts can be predicted up to a month in advance, the planet’s climate is very complex which makes drought forecasting extremely difficult. Whether or not a drought will occur (and its duration) depends on a large number of factors including atmospheric and ocean circulation, soil moisture, topography, land surface processes, and interactions between the air, land, and ocean. Climate drivers include the El Nino Southern Oscillation (ENSO), Indian Ocean dipole (IOD), Southern Annular Mode (SAM) Index and the Madden–Julian Oscillation (MJO).

The BOM has a proactive and accessible on-line Drought Service which issues regular climate outlooks and drought outlooks with monthly reports and mapping on the extent and severity of dry conditions including rainfall deficiencies. The BOM also assesses soil moisture and provides contextual rainfall, water and climate information.

The worst-case scenario for the proposed greyhound facility development is an extended dry spell during which there is a severe deficiency in rainfall, low soil moisture and Martindale Creek ceases to flow.

Climate scientists predict more frequent and extreme climate events including droughts and floods.

A strategy to drought proof the proposed greyhound facility should consider all available options. An ideal solution should incorporate a combination of more than one of the options including:

- River water supply available from Martindale Creek
- Groundwater supply
- Above ground water capture and storage in the Site comprising roof water catchments, storage tanks and dams
- Road cartage of water from elsewhere in the district

River Water Supply

There is an active Work Approval 20CA211524 for irrigation purposes attached to ‘Bylong Park’ and a Water Access License (WAL) with a share component of 170 units.

The implication is that during extended ‘dry’ periods and droughts, the DPIE may reduce the volume amount of each unit share in the WAL.

Based on the total water requirement for the project of 32.9 ML/annum and taking into account the calculated total water volume of 3.2 ML/annum sourced from roof catchments and wastewater, the total ‘water take’ from Martindale Creek is potentially 29.7 ML/annum which equates to approximately 17.4% of the annual water entitlement. This modest annual ‘water take’ is considered feasible and workable except in times of severe long-term dryness.

Groundwater Supply

Groundwater exploration should be considered in any drought security strategy. Depending on the results of exploration including amount, flow and water quality, groundwater is potentially useful as a primary or supplementary water source for the proposed development.

Water Bearing zones (aquifers) can be hosted by relatively porous units within the Triassic sedimentary rock sequence underlying ‘Bylong Park’ and ‘secondary aquifers’ associated with tectonically imposed structural discontinuities such as ‘fractures’ that have dissected the rock mass and act as groundwater conduits.

Preliminary structural analysis over the Site and surrounding district has identified a network of sub-vertical fractures that are considered prospective for a groundwater supply. Several prospective groundwater targets have been delineated in Bylong Park.

A total of twelve registered bores are located within a three-kilometer radius of ‘Bylong Park’ of which four occur within the property. All bores are shallow wells licensed for Basic Rights use (stock & domestic) with the exception of one relatively deep ‘hardrock’ bore on an adjacent property south of ‘Bylong Park’. The 54 m-deep bore (GW078515) recorded a yield of 4.5 L/s (3,555 gal/hr) likely hosted by rock fractures. This bore demonstrates the potential for a useful supplementary water supply on ‘Bylong Park’.

A bore yield of 1 L/s and 65% duty equates to an annual production of approximately 20 ML which is 61% of the annual water requirement, a useful supplementary supply particularly during periods of rainfall deficiencies.

The cost of sinking a fully cased bore is approximately \$150 per metre. Any bore work requires an application to WaterNSW for a Water Supply Work Approval to construct a water bore for the purpose to take water for the purpose (greyhounds).

An alternative, and useful approach is to apply for a Test Bore which does not require advertising, assessment of any community responses, is less expensive and has a quicker turnaround. If successful, the Test Bore license can be cancelled and, simultaneously, an application submitted for a work approval for the purpose.

In order to assess the safe long-term yield of the aquifer system, a formal aquifer test must be carried out. This would comprise a minimum 48-hour pumping test with a complimentary 24-hour recovery phase.

If aquifer testing is successful, the purchase of a water allocation from an existing license holder in the district will be required, the amount of which would be assigned to a new Water Access License (WAL).

The NSW state government occasionally offers water to the public under a Controlled Allocation process for purchase at a discounted rate per megalitre in selected groundwater management areas.

Surface Water Storage

Two sources of surface water supply are considered:

- On-Site Tank Storage
- Dam Storage

Rainwater can be effectively and easily intercepted and harvested from the relatively large roof catchment in the kennel roof elements and directed to storage. It is understood that a total of 6 ML of above-ground storage is planned. In summary, these

tanks can store water pumped from Martindale Creek, transferred from roof catchment plumbing and pumped from a possible water bore.

There is a Maximum Harvestable Right (MHRDC) for the Site which is the total dam capacity allowed under the harvestable right for the Site without the need for a permit and takes into account the size of the land holding, location, rainfall and variations in rainfall pattern. The MHRDC for ‘Bylong Park’ is calculated as 29.4 ML which is approximately 89 % of the annual water requirement during ‘normal’ operational conditions and approximately 500 % of the significantly reduced annual water requirement implemented during drought.

If a dam is larger than the MHRDC, the owners must apply for a license for the volume of water that exceeds the MHRDC.

Water Carting

During extended ‘dry’ periods, a possible source of water for the proposed development is carting water from a district water source such as the Hunter River or Goulburn River.

The following comments are provided:

- Depending on the truck tank capacity and road weight restrictions, water cartage may be required every two to three days.
- Minimum 15 km by road between ‘Bylong Park’ and the considered nearest possible bulk water supply – the Martindale Road bridge over the Goulburn River approximately five km by road south of Denman and 1.3 km west of its confluence with the Hunter River.
- Permission to pump from the Goulburn River subject to state government approval
- If permission is granted, volume restriction may apply during extended dry periods.
- A traffic management plan would be required which would incorporate an assessment of the integrity of the asphalt-sealed Martindale Road to accept regular truck movements and a road safety assessment.
- Permission to cart water on a regular basis would be subject to Muswellbrook Shire Council.

The conclusion, based on the uncertainties, potential complexities and potential community resistance listed above, is that carting water over the medium to potentially long-term is not considered feasible or tenable.

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Appendix A	Summary details of Major Droughts
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1. PREAMBLE

Larry Cook Consulting Pty Ltd is pleased to provide preliminary advice on a drought security strategy for the proposed Greyhound Facility in ‘Bylong Park’ located at Lot 2 in DP1088704 Martindale Road Martindale (the Site). The location of ‘Bylong Park’ is shown in a lot plan presented in **Figure 1** and in an enlarged topographic plan in **Figure 2**.

It is understood that Muswellbrook Shire Council has requested further information regarding options to secure water supply for the proposed development during extended dry periods and droughts.

The concept of drought security (drought proofing) has been in the public eye since the late 1990s although local and state regulatory authorities have addressed water security issues for decades.

A large part of Southern Australia experienced the Millennium drought, a prolonged dry period recorded between 1997 and 2009. The extended dryness was particularly severe in the southeast and southwest of the continent. The Bureau of Meteorology (BOM) noted that the drought was characterised by long periods without major wet episodes which effectively prevented water storages across the country from recovering. The BOM noted that early stages of the drought were largely confined to Victoria and Tasmania, but from 2001 onwards it extended to most remaining areas of eastern Australia.

Following a particularly wet winter and spring in 2016 over much of Australia, dry conditions returned in 2017. The BOM further noted that over the Murray–Darling Basin and New South Wales, the three years from early 2017 to late 2019 were the driest on record.

New South Wales received around 170 mm less rainfall than the next driest period which was recorded during the three-year Federation drought recorded from early 1900 to late 1902.

As an example of a severe water supply impact, Mangrove Creek Dam, the main district surface water storage on the NSW central coast was severely impacted by the Millennium drought with dam storage levels falling to historic low storage levels of between 10 and 12% in February 2007. Following drought breaking rain in June 2007, the storage rebounded to approximately 30% by 2009.

2. DROUGHT

2.1 WHAT CONSTITUTES A DROUGHT?

Drought literally means acute water shortage, a prolonged, abnormally dry period when the amount of available water is insufficient to meet normal use.

2.2 HISTORICAL RESEARCH

A review of the available literature on drought statistics in Australia included a paper posted by the Bureau of Statistics which revealed that since the 1860s there have been

11 major droughts. In south-eastern Australia the droughts of 1967-68, 1982-83, 1997-2009 (Millennium Drought) and 2017-19 were notably extreme.

In south-eastern Australia there have been 10 severe droughts, mostly encompassed within the major Australian droughts.

A regional officer for the Bureau of Meteorology J.C Foley published Bulletin No. 43 for the Bureau of Meteorology (Foley J.C, 1957). Foley analysed rainfall and classified major droughts in Australia from the early period of European settlement to 1955. He categorised droughts as major, severe and widespread and noted that each drought affected several States covering about one quarter of Australia or more, for varying periods of one or more years. Foley further noted that some of these droughts could be described as drought periods consisting of a series of dry spells of various lengths, overlapping in time and space, and totaling up to about a decade, as in the case of the 1895-1903 drought (Federation Drought). The results of Foleys descriptive work should now include the Millennium drought experienced over 12 years between 1997 to 2009.

The literature documents that subsequent to Foley's work, major droughts in Australia have been assessed from time to time using rainfall decile analyses. Typically, major droughts have been described as areas of at least serious rainfall deficiency (below the first decile), collectively encompassing at least one quarter of Australia for periods in excess of 10 months.

Severe droughts in south-eastern Australia are usually caused by a failure of the winter-spring rains and may extend through summer to the following autumn.

The BOM suggests that there is strong evidence that, at least, the most recent major droughts, for example the 1997-2009 (Millennium) and 2017-19 droughts have been driven by climate change.

Drought prediction is clearly very difficult and a function of several climate drivers including the El Nino Southern Oscillation (ENSO), Indian Ocean dipole (IOD), Southern Annular Mode (SAM) Index and the Madden–Julian Oscillation (MJO).

The variability of the activity, strength, timing and antecedent conditions is considered to support Foley's conclusions of dry spells of various lengths, overlapping in time and space.

Climate scientists predict more frequent and extreme climate events including droughts and floods.

The Bureau of Meteorology (BOM) recently compiled a list of major droughts in Australia since the late 1880s. A summary of their descriptions and relevant rainfall decile maps for each drought are provided in **Appendix A**. The descriptions of each major drought including timing, antecedent conditions, climate drivers, severity, periods and regional impacts indicates the variability of each event and how they affect different regions in different ways. For example, The BOM notes that a feature of the 2017 to 2019 drought was the occurrence of widespread dry conditions with no clear historical precedent.

Australian rainfall maps collated by the BOM for a continuous period of 122 years commencing in 1900 are reproduced in **Figure 3**. The maps demonstrate the variability and cyclical nature of these climatic events.

2.3 CAN WE PREDICT THE NEXT DROUGHT AND ITS DURATION?

Extensive climate research suggests that some droughts can be predicted up to a month in advance and possibly a year in advance. However, as discussed in Section 2.2, the planet’s climate is extremely complex which makes drought forecasting very difficult. Whether or not a drought will occur (and its duration) depends on a large number of factors including atmospheric and ocean circulation, soil moisture, topography, land surface processes, and interactions between the air, land, and ocean. As documented in Section 2.2, climate drivers include the El Nino Southern Oscillation (ENSO), Indian Ocean dipole (IOD), Southern Annular Mode (SAM) Index and the Madden–Julian Oscillation (MJO).

Predicting the occurrence, severity, and duration of droughts depends on the climate models simulation and predictive algorithms.

The BOM has a proactive and accessible on-line **Drought Service** which issues regular climate outlooks and Drought Outlooks. The BOM reports monthly on the extent and severity of dry conditions with supporting drought maps that highlight areas with serious or severe rainfall deficiencies. The BOM also assesses soil moisture and provides contextual rainfall, water and climate information.

Although a drought does not necessarily mean that there is no rainfall, the **worst-case scenario** is an extended dry spell during which there is a severe deficiency in rainfall, low soil moisture and Martindale Creek ceases to flow. This has likely been the case several times in the past with recorded evidence of the Hunter River ceasing flow in the World War II drought between 1937 and 1945 drought and almost certainly during the Millennium Drought between 1997 and 2009.

3. PROJECT WATER REQUIREMENT

It is understood that the total annual water requirement for the proposed greyhound facility in ‘normal’ operating years is 32.9 ML.

Total Design Water Requirement – Normal Years: 32.9 ML/annum

The drought proofing strategy for the operations incorporates a significantly reduced water requirement of **5.9 ML/year**.

Total Design Water Requirement – Drought: 5.9 ML/annum

4. WATER SECURITY STRATEGY

A strategy to drought proof the proposed greyhound treatment/recovery/retraining facility should consider all available options. An ideal solution should incorporate a combination of more than one of the options.

The options considered in this strategy are listed as follows:

- River water supply available from Martindale Creek
- Groundwater supply
- Above ground water capture and storage in the Site comprising roof water catchments, storage tanks and dams
- Road cartage of water from elsewhere in the district

These options are discussed in the following sections.

5. RIVER WATER SUPPLY – UNREGULATED RIVER LICENSE

5.1 WORK APPROVAL

The owner holds **Work Approval 20CA211524** which consists of the following approval and work type:

- Water Supply Works and Water Use
- 65mm Centrifugal Pump

5.2 RELEVANT INFORMATION

- The **Work Approval** is current and for irrigation.
- The Work Approval was issued under the Water management Act 2000 on 26th February 2021 for a period of 15 years
- Expiry date 25th February 2025.
- The **Water Access License** (WAL) attached to the Work Approval issued under the Water management Act 2000 is WAL23952. The share component is 170 units.

5.3 WATER SHARING PLAN

- The Site is located within the Water Sharing Plan (WSP) for the **Hunter Unregulated and Alluvial Water Sources 2009 and within the Martindale Creek Water Source**. The WSP includes rules for protecting the environment, extractions, managing license holders' water accounts, and water trading in the plan area.
- The WSP is made under the Water Management Act 2000 which provides the mechanism for control and management of groundwater within NSW and applies to areas of NSW that have WSPs in place. The WSP commenced on 1st July 2016 and applies to 30th June 2021.
- The water sharing rules of the WSP allocates water for the environmental needs of the surface water sources, directs how water is shared among different water users and provides rules for protecting the environment, extractions, managing license holder's water accounts and water trading (water dealing).

The Water Sharing Plan for The Hunter Unregulated and Alluvial Water Sources 2009 is the current version. However, NSW Department of Planning and Environment have recently gazetted a Draft Water Sharing Plan for the Hunter Unregulated and Alluvial

Water Sources 2022 dated January 2022. An initial reading of the Draft Water Sharing Plan indicates that there does not appear to be any significant changes for the management of the Martindale Creek Water Source.

It is understood that in ‘normal’ years a 1-unit share equates to a water volume of 1 ML. However, Part 10 Clause 48 Part 3 of the Water Sharing Plan states that the available water determination should be made at the commencement of each water year, as transcribed below:

Part 10 Limits to the availability of water

Division 2 Available water determinations

48 Available water determinations

(3) An available water determination for each category of access license in these water sources should be made at the commencement of each water year.

Clause 26 in Part 7 notes that:

The amount of water specified in this Part represents the total volumes or unit shares specified in the share components on access licenses in these water sources. The actual volumes of water available at any time will depend on climate, access license priority and the rules in this Plan

The implication is that during extended ‘dry’ periods and droughts, the Department of Planning and Environment may reduce the volume amount of each unit share in the Water Access License.

The trace of Martindale Creek extends to the south-southwest by at least 30 km. Significant tributaries upstream of ‘Bylong Park’ include the Back Creek and Cowpalor Creek sub-catchments. Although baseflow calculations have not been undertaken or recession curves constructed, the baseflow in Martindale Creek at ‘Bylong Park’ is predicted to be relatively high. This is believed to be reflected in the available number of unit shares in the Martindale Creek Water Source (3,241 unit shares) as gazetted in **Part 7 Clause 30 (w)** and transcribed below:

30 Share component of unregulated river access licences

It is estimated that the share components of unregulated river access licenses authorised to extract water from these water sources total 88,706.5 unit shares, distributed as follows—

(w) 3,241 unit shares in the Martindale Creek Water Source,

A review of historic rainfall data including Decile 1 statistics highlights the significant paucity of rainfall during extended dry periods and droughts. The implication for the proposed development is that even if the volumetric share component of the WAL is not reduced (170 ML/pa available) during any one account year, the available river water in Martindale Creek may be insufficient to satisfy the needs of the development.

However, the calculation of the **total water requirement for the project** is **32.9 ML/annum**. Taking into account the calculated total water volume of 3.2 ML/annum sourced from roof catchments and wastewater, the **total requirement from the Martindale Creek is 29.7 ML/annum** which equates to approximately **17.4% of the annual surface water entitlement**. A relatively modest annual ‘water take’ of 29.7 ML from Martindale Creek is considered feasible and workable except in times of severe long-term dryness.

The **‘fall back’ position** is that if the water is not physically available in the creek system and/or DPIE reduces the volumetric amount of the license’s unit share, other sources of water must be sought.

6. GROUNDWATER SUPPLY

6.1 INTRODUCTION

Groundwater exploration should be considered in any drought security strategy. Depending on the results of exploration including amount, flow and water quality, groundwater could be useful as a primary or supplementary source of water for the proposed development.

6.2 GEOLOGY

The reader is referred to the results of geological mapping in the region carried out in the 1980s and early 1990s by the NSW state government (Glen R.A. and Beckett J., 1993). The district geology is shown in **Figure 4**. The Site is underlain by a thick sequence of Permian sedimentary rocks which belong to the Wollombi Coal Measures. The sequence consists of stacked and interbedded coal seams, claystone, siltstone, sandstone and conglomerate.

Triassic age Narrabeen Group sedimentary rocks overlie the Permian sedimentary sequence and are observed to form the uplands and valley sides (and escarpments) in the district. The Triassic sequence comprises interbedded sandstone, siltstone and claystone. Quaternary alluvial deposits are associated with the former and present Martindale Creek system.

6.3 DISTRICT HYDROGEOLOGY

Two types of aquifers are identified in the Site:

- Dual porosity ‘hardrock’ aquifers; ‘primary aquifers’ hosted by relatively porous units within the Triassic sedimentary rock sequence and ‘secondary aquifers’ associated with tectonically imposed structural discontinuities that have dissected the rock mass and with other features such as bedding partings and stress relief structures.
- Alluvial aquifers hosted by interbedded, interlensed and stacked sequences of alluvium associated with Martindale Creek.

These alluvial aquifers are predicted to be relatively small-scale and discontinuous aquifers and are not considered further for the potential supply of industrial water for the proposed development.

6.4 WATER SHARING PLAN

- The Site is located within the Water Sharing Plan (WSP) for the Water Sharing Plan for the **North Coast Fractured and Porous Rock Groundwater Sources 2016** and within the **Sydney Basin – north coast groundwater source**. The WSP includes rules for protecting the environment, extractions, managing license holders' water accounts, and water trading in the plan area.
- The WSP is made under the Water Management Act 2000 which provides the mechanism for control and management of groundwater within NSW and applies to areas of NSW that have WSPs in place. The WSP commenced on 1st July 2016 and applies to 30th June 2026.
- The water sharing rules of the WSP allocates water for the environmental needs of the groundwater sources, directs how water is shared among different water users and provides rules for protecting the environment, extractions, managing license holder's water accounts and water trading (water dealing).

6.5 REGISTERED BORES IN SITE AND SURROUNDING AREA

A district search for data and information for registered boreholes held by WaterNSW in their computerised database revealed the existence of four registered bores in the Site and eight registered bores within a 3 km² search area centered in the Site. Summary details for the four bores in the Site are summarised in **Table 1** and their work summaries provided in **Appendix B**. The locations of the registered bores in the Site are shown in **Figure 5**. The registered bores in the Site are, licensed for stock use. They are all shallow bores, all less than 9.0 m deep, three of which were constructed as ‘wells’ with one spear point (GW 048526).

Table 1 Summary Details of Registered Bores in Lot 2									
Bore ID	Authorised Purpose	Coordinates		Depth (m)	Date Drilled	Aquifers/ Yield	Water Level (m)	Water Quality	Bore Geology
		E	N						
GW019356 20WA208863	Stock	286639	6395479	2.40	Jan 1961	1.2-2.4 ? L/s	1.20	nil	nil
GW019357 20WA214878	Stock	286987	6396288	3.00	Jan 1962	1.2-2.1 ? L/s	0.20	nil	nil
GW019358	?	286655	6395942	3.70	nil	1.5-3.6 1.26 L/s	1.20	Sweet	nil
GW048526	Stock	286772	6395359	9.00	Oct 1978	nil	nil	nil	0.-6.5 Sand 6.5-9.0 Gravel

Notes: nil: denotes no data available

Summary details for the eight neighbouring bores in the Site are summarised in **Table 2** and their work summaries provided in **Appendix C**. The locations of the neighbouring registered bores are shown in **Figure 6**.

Table 2 Summary Details of Neighbouring Registered Bores									
Bore ID	Authorised Purpose	Coordinates		Depth (m)	Date Drilled	Aquifers/ Yield	Water Level (m)	Water Quality	Bore Geology
		E	N						
GW013644	? speers	286592	6392797	6.10	May 1958	0.3-6.1 12.6 L/s	nil	nil	0.0-6.1 Soil/sand
GW013768 20WA208902	Stock, domestic speers	286390	6392485	5.50	Dec 1657	5.5-5.5 ?	nil	Fresh	0.0-5.5 nil 5.5-5.5 Sand
GW014284 20WA214805	Stock, domestic Bore	286278	6396519	11.3	Jan 1956	nil	nil	nil	nil
GW0014448	? ?	286311	6394948	5.50	Jan 1958	1.5-5.5 15.2 L/s	1.5	nil	0.0-5.5 Sand 5.5-5.5 Clay
GW014449	? ?	287108	6394318	5.5	Jan 1958	0.9-5.5 16.4 L/s	0.3	nil	0.-0.9 Soil 0.9-5.5 Sand
GW018523 20CA208900	Stock, Irrigation ?	286218	6396857	7.3	Sep 1960	1.8-7.3 12.6 L/s	1.5	Good	0.0-1.5 Sand 1.5-7.3 Sand coarse
GW078515 20WA216029	Stock, domestic Bore	287834	6394518	54.0	nil	Nil 4.5 L/s	nil	nil	nil
GW201171	? Well	285452	6398151	10.0	Jul 1918	nil	nil	nil	nil

Notes: nil: denotes no data available

The eight neighboring licensed bores are, where recorded, licensed for Basic Rights use (stock & domestic) with one bore also registered for irrigation purposes (GW018523). Seven of the eight licensed neighbouring bores are mostly shallow wells with two speer points (GW 013644 and GW 013768) and one bore drilled to 54m depth. The 54 m-deep bore (GW078515) recorded a yield of 4.5 L/s (3,555 gal/hr) but the position and nature of the aquifer is not recorded. Although there is a paucity of data and information for this bore, **the results are encouraging**. This yield is likely to be from a fracture-controlled aquifer hosted by the sedimentary sequence. If this bore was pumped at say 1 L/s, the annual production using a 65% duty is approximately 20 ML. This demonstrates the potential for a primary or supplementary groundwater supply.

6.6 GROUNDWATER EXPLORATION AND TARGET SELECTION

6.6.1 Introduction

Although the Triassic sedimentary sequence in this part of the Hunter Valley is relatively flat lying it has nevertheless been subjected to varying degrees of structural deformation resulting in the formation of gentle north-northeast trending regional flexures and the imposition of sub-vertical structural discontinuities such as joint sets, fractures and fracture networks that have dissected the rock mass providing potential fluid pathways and conduits.

These are often reflected as surface linear features on remotely sensed data such as the lineaments. Complimentary sets of subsidiary sub-parallel linear features also occur in the district and region.

Preliminary structural analysis over the Site and surrounding district has identified a network of fractures that are considered prospective for a groundwater supply (**Figure 7**). Prospective groundwater targets are located in relatively close proximity to the homestead. A target for a water bore is shown in **Figure 7**.

6.6.2 Sinking a Bore and Cost Estimate

The bore would be drilled using a licensed water well driller and the work compliant with the state government requirements and guidelines relevant to the construction of bores are documented in the *Minimum Construction Requirements for Water Bores in Australia* (3rd edition 2012) developed by the National Uniform Drillers Licensing Committee.

The Minimum Construction Requirements outline the minimum requirements for constructing, maintaining, rehabilitating, and decommissioning water bores in Australia. When a bore is to be constructed, both the driller and the client are responsible for various aspects of the work.

The construction of the bore should be designed by a qualified hydrogeologist to comply with the Minimum Construction Requirements and DPIE requirements.

The **cost of sinking a bore** is approximately **\$150 per metre**. The bore would be approximately 150 to 160 mm in diameter and **fully cased with Class 12 PVC**.

The **final depth of the bore** would depend on progressive results during drilling. **The anticipated minimum depth is 80 m**.

6.6.3 Assessment of the Safe and Long-Term Yield.

A common **question** is ‘can the bore ‘dry up’?’. In order to address this, an assessment of the safe and long-term yield of the aquifer/s is undertaken.

In summary:

- Measure and record water levels in the pumped bore prior to the pumping test.
- Carry out a medium-term constant-rate pumping test of the proposed production bore in accordance with the Australian Standard Test Pumping of Water Wells (AS 2368-1990). A minimum 48-hour pumping test with a complimentary 24-hour recovery phase is recommended. The actual duration can be determined once the results of the test drilling are known.
- The objectives of the pumping test are to:
 - determine aquifer parameters
 - establish the position of any hydraulic boundaries
 - quantify any distance interference effects
 - estimate the long-term safe and sustainable yield, and
 - provide options for cyclic pumping scenarios

The rationale for a pumping test is provided in **Appendix D**.

- Measurements of water level will be collected at regular pre-scheduled intervals from both the pumped bore and any observation bores (other site bores if accessible?) during the test.
- Field measurements of Temperature, pH (acidity), Electrical Conductivity (EC), Dissolved Oxygen (DO) and Oxidation-Reduction Potential (ORP) would be regularly collected during the pumping tests.
- Submit sample/s of groundwater to a NATA registered laboratory for baseline water quality testing. Analytes should include pH, electrical conductivity, total dissolved solids (TDS), hardness, major cations and anions, total dissolved solids (TDS), nitrate, nitrite, total phosphorus, phosphate, total iron, dissolved iron, bicarbonate, CaCO₃ saturation index (corrosion/scaling potential), Sodium Hazard (SAR), Total Iron, Dissolved Iron. Advise suitability for the proposed purpose (irrigation).

6.7 BORE LICENSING

Any bore work requires an application to WaterNSW for a **Water Supply Work Approval** to construct a water bore for the purpose to take water for the proposed purpose (greyhounds).

An alternative, and useful approach is to apply for a **Test Bore** which does not require advertising, assessment of any community responses, is less expensive and has a quicker turnaround. If successful, the Test Bore license can be cancelled and, simultaneously, an application submitted for a work approval for the purpose.

The purchase of a Water Access License (WAL) from an existing license holder in the district will then be required to obtain a water entitlement, the amount of which would be assigned to the new WAL.

The NSW state government occasionally offers water to the public for purchase at a discounted rate per megalitre in selected groundwater management areas. The process is called a **Controlled Allocation**. However, such releases of water through this process are not regularly scheduled. There have been two Controlled Allocations over the past several years.

7. SURFACE WATER SUPPLY

7.1 INTRODUCTION

Two sources of surface water supply are considered:

1. On-Site Tank Storage
2. Dam Storage

Dams have been used for decades as drought proofing devices. Regional examples are high profile dams in the Murray Darling and the Ord schemes. Local examples include the Mangrove Creek Dam on the NSW Central Coast which was constructed as a drought proofing dam in the early 1980s.

7.2 ON-SITE TANK STORAGE

The roof catchment incorporated in the kennel roof elements and other buildings is significant. Rainwater can be effectively and easily intercepted and harvested from the roof catchment and directed to storage. It is understood that six 1 ML (megalitre) capacity above-ground storage tanks are proposed for the Site. In summary, these tanks can store water pumped from Martindale Creek, transferred from roof catchment plumbing and pumped from a water bore.

7.3 MAXIMUM HARVESTABLE RIGHT

There is a maximum harvestable right that can apply to the Site.

Rural landholders in NSW can build dams on minor streams and capture 10 per cent of the average regional rainfall run-off on land in the Central and Eastern Divisions.

The **Maximum Harvestable Right Dam Capacity** (MHRDC) is the total dam capacity allowed under the harvestable right for the Site and takes into account rainfall and variations in rainfall pattern.

Dams that do not require a license include dams that capture water under a harvestable right. If the owners wish to construct a dam that is larger than the MHRDC, they need to license the volume of water that exceeds the MHRDC. An approval from the state government will be required for a dam which exceeds the MHRDC.

The MHRDC (combined maximum dam capacity of all harvestable rights dams on your landholding) with reference to 30% of rainfall runoff is **29.4 ML** (megalitres). This calculation is based on the location of the property in a coastal-draining catchment in this part of NSW and a property size of **140 ha**.

It may be feasible to pump treated wastewater discharged from the Inoplex-designed sewage treatment system into a dam then recycled, as needed, for washdown of kennel aprons with any excess pumped to the irrigation system, as required. This strategy would be subject to water quality testing and assessment of the suitability for the purpose and subject to Council approval.

7.4 DAM CONSTRUCTION

When constructing a dam, it is important that the appropriate approval or license has been obtained, if required. The dam should be carefully located so it is effective, safe and has minimal impacts on neighbours and the environment. The owner will also need to ensure construction of the dam meets any other legal requirements, such as local council regulations, or any consents from state government agencies.

8. CARTING WATER

During extended ‘dry’ periods, a possible source of water for the proposed development is carting water from a district water source such as the Hunter River or Goulburn River. The following comments are provided:

- Depending on the truck tank capacity and road weight restrictions, water cartage may be required every two to three days.
- Minimum 15 km by road between ‘Bylong Park’ and the considered nearest possible bulk water supply – the Martindale Road bridge over the Goulburn River approximately five km by road south of Denman and 1.3 km west of its confluence with the Hunter River.
- Permission to pump from the Goulburn River subject to state government approval
- If permission is granted, volume restriction may apply during extended dry periods.
- A traffic management plan would be required which would incorporate an assessment of the integrity of the asphalt-sealed Martindale Road to accept regular truck movements and a road safety assessment.
- Permission to cart water on a regular basis would be subject to Muswellbrook Shire Council.

The conclusion, based on the uncertainties, potential complexities and community impacts listed above, is that carting water over the medium to potentially long-term is not considered feasible.

9. CONCLUSIONS AND RECOMMENDATIONS

- The total annual water requirement for the proposed greyhound facility is 32.9 ML.
- Although extensive climate research suggests that some droughts can be predicted up to a month in advance, the planet’s climate is very complex which makes drought forecasting extremely difficult.
- The worst-case scenario for the proposed greyhound facility development is an extended dry spell during which there is a severe deficiency in rainfall, low soil moisture and Martindale Creek ceases to flow.
- The BOM has a proactive and accessible on-line Drought Service which issues regular climate outlooks and drought outlooks with monthly reports and mapping on the extent and severity of dry conditions including rainfall deficiencies.
- A strategy to drought proof the proposed greyhound facility should consider all available options. An ideal solution should incorporate a combination of more than one of the options including:
 - River water supply available from Martindale Creek
 - Groundwater supply
 - Above ground water capture and storage in the Site comprising roof water catchments, storage tanks and dams
 - Road cartage of water from elsewhere in the district

River Water Supply

- The total ‘water take’ from Martindale Creek is potentially 29.7 ML/annum which equates to approximately 17.4% of the annual water entitlement. This modest annual ‘water take’ is considered feasible and workable except in times of severe long-term dryness.

Groundwater Supply

- Groundwater exploration should be considered as part of the drought security strategy for the proposed development. Depending on the results of exploration including amount, flow and water quality, groundwater is potentially useful as a primary or supplementary water source for the development.
- The only registered bore in the local area that intersected the underlying sedimentary rock sequence encountered a fracture-controlled aquifer with a promising yield of 4.5 L/s (3,555 gal/hr). This bore demonstrates the potential for a useful supplementary water supply on ‘Bylong Park’.
- A bore yield of 1 L/s and 65% duty equates to an annual production of approximately 20 ML which is 61% of the annual water requirement, a useful supplementary supply particularly during periods of rainfall deficiencies.
- The bore work requires an application to WaterNSW for a Water Supply Work Approval to construct a water bore for the purpose to take water for the purpose (greyhounds).
- In order to assess the safe long-term yield of the aquifer system, a formal aquifer test must be carried out. This would comprise a minimum 48-hour pumping test with a complimentary 24-hour recovery phase.
- If aquifer testing is successful, the purchase of a water allocation from an existing license holder in the district will be required, the amount of which would be assigned to a new Water Access License (WAL).

Surface Water Storage

- Two sources of surface water supply are considered:
 - On-Site Tank Storage
 - Dam Storage
- Rainwater should be intercepted and harvested from the relatively large roof catchment in the kennel roof elements and directed to storage.
- Bore water can be pumped to storage
- The Maximum Harvestable Right (MHRDC) for the Site is 29.4 ML which is approximately 89 % of the annual water requirement during ‘normal’ operational conditions and approximately 500 % of the significantly reduced annual water requirement implemented during drought

Water Carting

- During extended ‘dry’ periods, a possible source of water for the proposed development is carting water from a district water source such as the Hunter River or Goulburn River.
- The conclusion, based on the uncertainties surrounding truck tank capacity and road weight restrictions, suitability of the road, permission to pump from the Hunter or Goulburn rivers, possible pumping restrictions during ‘dry’ times and potential community resistance, is that carting water over the medium to potentially long-term is not considered feasible or tenable.

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For and on Behalf of
Larry Cook Consulting



Larry Cook
Principal Hydrogeologist

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APPENDIX A

Summary Details for Major Droughts

HISTORICAL DROUGHTS

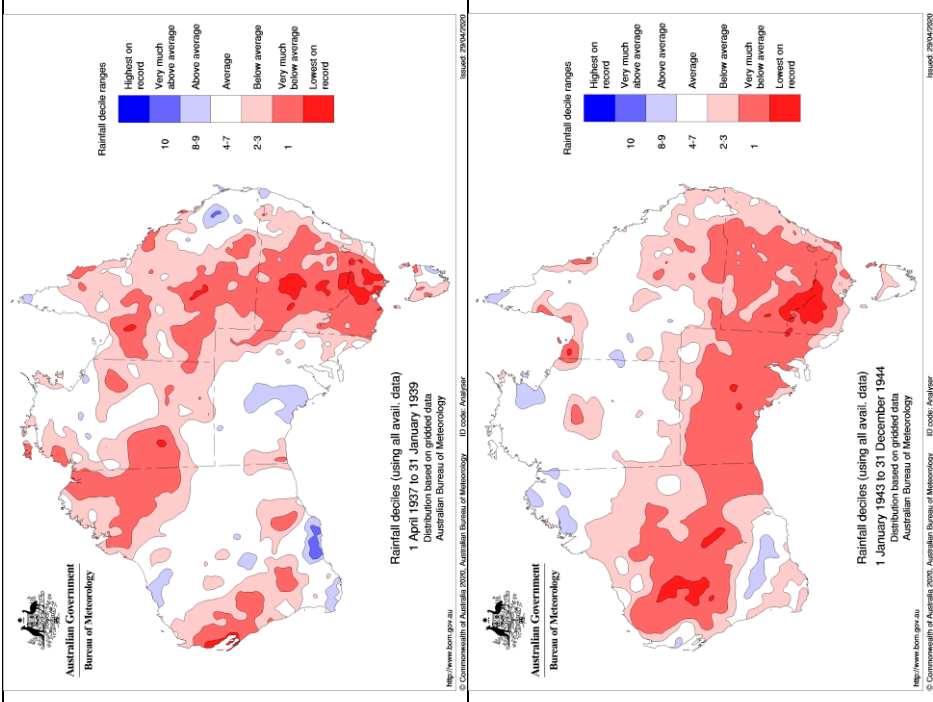
means acute water shortage

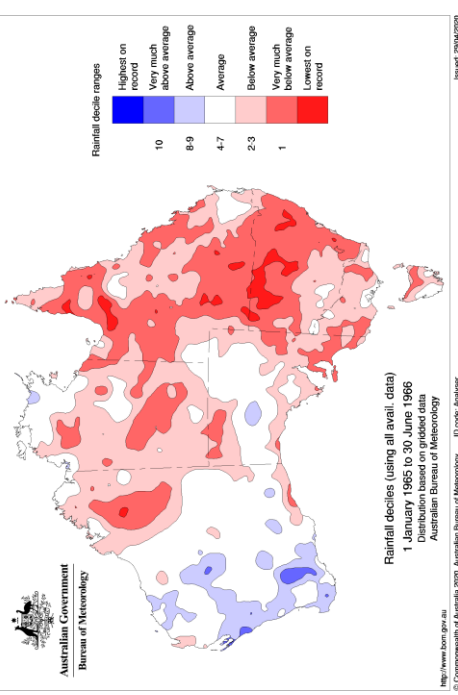
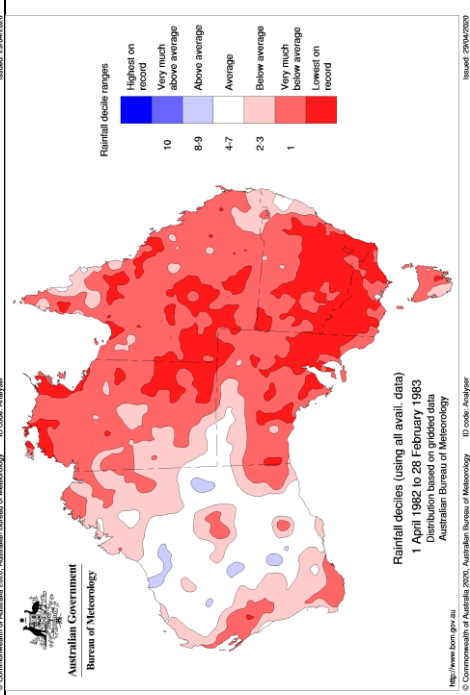
Drought	Duration	Commentary	BOM Maps
The Federation drought: 1895 to 1902	7 yrs	<ul style="list-style-type: none">• One of Australia's worst droughts.• Extreme conditions in last 1.5 - 2 yrs• Peak: Nov 1901 – Oct 1902 with below-average to record-low rainfall across much of central to eastern Australia	<p>Rainfall deciles (using all avail. data) 1 November 1901 to 31 October 1902 Australian Bureau of Meteorology</p> <p><small>http://www.bom.gov.au © Commonwealth of Australia 2009, Australian Bureau of Meteorology ID code: Ausdgr1</small></p>
The 1914 to 1915 drought	1 yr	<ul style="list-style-type: none">• Relatively short and intense• Strong El Nino conditions• Rivers throughout southeastern Australia fell to extremely low levels. Murray River stops flowing• In 1914 New South Wales saw its warmest year of the 20th century.• Drought-breaking rains in autumn 1915	<p>Rainfall deciles (using all avail. data) 1 May 1914 to 31 March 1915 Australian Bureau of Meteorology</p> <p><small>http://www.bom.gov.au © Commonwealth of Australia 2009, Australian Bureau of Meteorology ID code: Ausdgr2</small></p>

<p>The World War II drought: 1937 to 1945</p>	8 yrs	<ul style="list-style-type: none">• More periods intense dryness than Federation Drought.• Despite 1938 being a La Nina year• Brief respite in 1939 with good rains• 1940 strong El Nino year (one of the driest in the century)• Early 1941 respite from heavy rains• Mid to late 1941 very dry• 1942 good rain• Lead up to 1944 very dry• As the drought extended into 1945, large rivers virtually dried up. By December 1944 the Hunter River had stopped flowing along most of its course, and by	

January, the Hawkesbury River was dry at North Richmond.

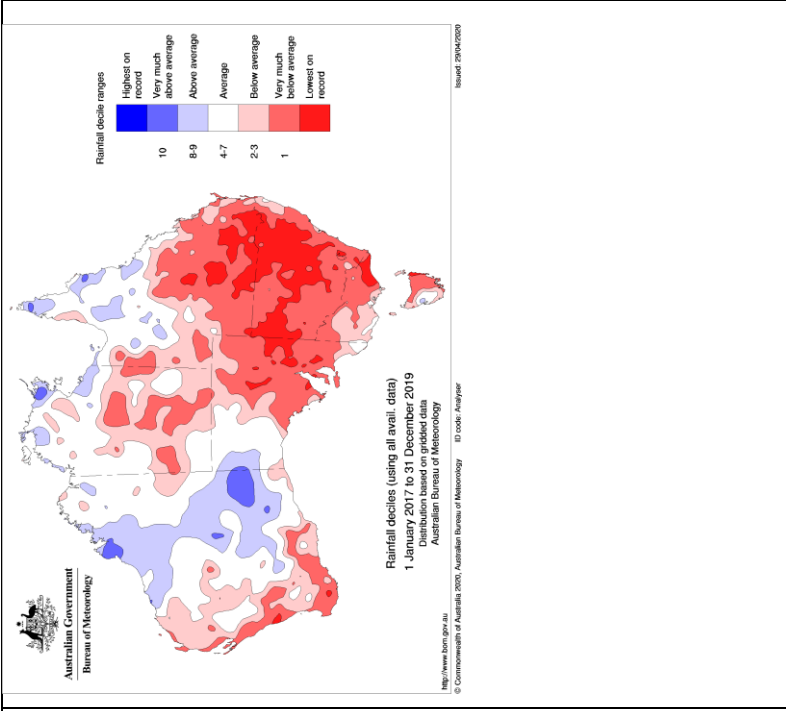
- Drought ends in winter 1945

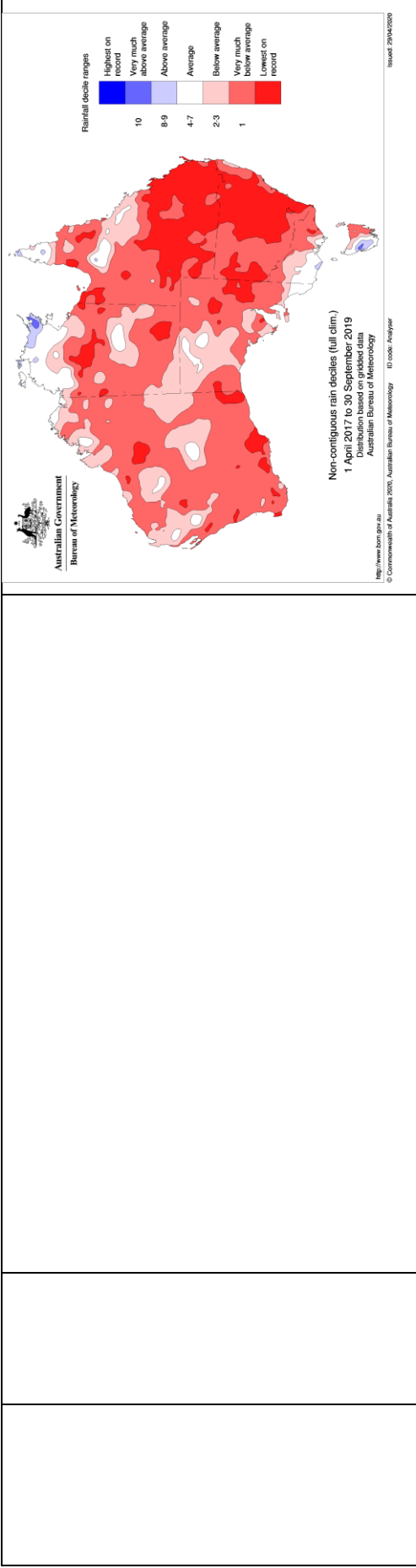


<p>The 1965 to 1968 drought</p>	<p>3 yrs</p>	<ul style="list-style-type: none">• Eastern Australia was greatly affected from 1965 to 1968• Oscillating wet and intense dry periods• Above-average rains in the second half of 1966 over most of eastern Australia• The drought began to break early in 1968• Most of Australia had useful rainfall in 1968, except the New South Wales coast from Newcastle southwards.	
<p>The 1982 to 1983 drought</p>	<p>1 yr</p>	<ul style="list-style-type: none">• The rainfall deficiencies and impacts for this 1yr-period was one of Australia's most severe droughts in 20th century• Very strong El Nino event• Extensive areas experienced record or near-record low rainfall from April to December	

<p>The Millennium drought: 1997 to 2009</p>	<p>12 yrs</p>	<ul style="list-style-type: none">• Climate change driven• Between 1997 and 2009 much of southern Australia experienced a prolonged period of dryness• A feature of the drought was a long period without major wet episodes.• 2002 and 2006 were the only years which were severely dry over large areas• Very few periods of sustained above-average rainfall prevented water storages from recovering• The drought took hold through increasing impacts over a series of years
--	---------------	--

The 2017 to 2019 drought	3 yrs	<ul style="list-style-type: none">• Widespread dry conditions with no clear historical precedent• A notable feature of the rainfall deficiencies of these three years is that they were especially concentrated in the cooler seasons• The three years from January 2017 to December 2019 were the driest on record for any 36-month period starting in January• One of the strongest positive Indian Ocean Dipoles (IOD) on record was a substantial contributor to the dry conditions in the second half of 2019.• The Southern Annular Mode (SAM) was also in a persistent negative phase for much of the period from September to December. . In spring and early summer, a negative phase of the SAM is typically associated with warm and dry conditions in New South Wales and Queensland.
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APPENDIX B

Work Summaries Registered Bores in Lot 2

WaterNSW

Work Summary

GW019356

Licence: 20WA208863

Licence Status: CURRENT

Authorised Purpose(s): STOCK

Intended Purpose(s): NOT KNOWN

Work Type: Well

Work Status: Supply Obtained

Construct.Method:

Owner Type: Private

Commenced Date:

Completion Date: 01/01/1961

Final Depth: 2.40 m

Drilled Depth:

Contractor Name: (None)

Driller:

Assistant Driller:

Property: KOOINDA FARM 1949 Martindale Rd
MARTINDALE 2328 NSW

Standing Water Level (m):

GWMA: 603 - SYDNEY BASIN

Salinity Description:

GW Zone: -

Yield (L/s):

Site Details

Site Chosen By:

County

Form A: HUNTER

Licensed: HUNTER

Parish

MARTINDALE

MARTINDALE

Cadastre

15

Whole Lot 2//1088704

Region: 20 - Hunter

CMA Map: 9032-4N

River Basin: 210 - HUNTER RIVER

Grid Zone:

Scale:

Area/District:

Northing: 6395479.000

Latitude: 32°33'27.3"S

Elevation: 0.00 m (A.H.D.)

Elevation Source: (Unknown)

Easting: 286639.000

Longitude: 150°43'39.1"E

GS Map: -

MGA Zone: 56

Coordinate Source: PR.,ACC.MAP

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Casing	Timber	-0.20	-0.20	1219			

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
1.20	2.40	1.20	(Unknown)	1.20					

***** End of GW019356 *****

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WaterNSW

Work Summary

GW019357

Licence: 20WA214878	Licence Status: CURRENT
Authorised Purpose(s): STOCK Intended Purpose(s): NOT KNOWN	
Work Type: Well	
Work Status: Supply Obtained	
Construct.Method:	
Owner Type: Private	
Commenced Date:	Final Depth: 3.00 m
Completion Date: 01/01/1962	Drilled Depth:
Contractor Name: (None)	
Driller:	
Assistant Driller:	
Property: K00INDA FARM 1949 Martindale Rd MARTINDALE 2328 NSW	Standing Water Level (m):
GWMA: 603 - SYDNEY BASIN	Salinity Description:
GW Zone: -	Yield (L/s):

Site Details

Site Chosen By:	County Form A: HUNTER Licensed: HUNTER	Parish MARTINDALE MARTINDALE	Cadastre 10 Whole Lot 2//1088704
Region: 20 - Hunter	CMA Map: 9032-4N		
River Basin: 210 - HUNTER RIVER	Grid Zone:	Scale:	
Area/District:			
Elevation: 0.00 m (A.H.D.)	Northing: 6396288.000	Latitude: 32°33'01.3"S	
Elevation Source: (Unknown)	Easting: 286987.000	Longitude: 150°43'53.1"E	
GS Map: -	MGA Zone: 56	Coordinate Source: PR.,ACC.MAP	

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Casing	Timber	-0.20	-0.20	1219			

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
1.20	2.10	0.90	(Unknown)	0.20					

***** End of GW019357 *****

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WaterNSW

Work Summary

GW019358

Licence:

Licence Status:

Authorised Purpose(s):

Intended Purpose(s): NOT KNOWN

Work Type: Well

Work Status:

Construct.Method:

Owner Type: Private

Commenced Date:

Completion Date:

Final Depth: 3.70 m

Drilled Depth:

Contractor Name: (None)

Driller:

Assistant Driller:

Property:

Standing Water Level (m):

Salinity Description: Sweet

Yield (L/s):

GWMA:

GW Zone:

Site Details

Site Chosen By:

County

Parish

Cadastre

Form A: HUNTER

MARTINDALE

11

Licensed:

Region: 20 - Hunter

CMA Map: 9032-4N

River Basin: 210 - HUNTER RIVER

Grid Zone:

Scale:

Area/District:

Elevation: 0.00 m (A.H.D.)

Northing: 6395942.000

Latitude: 32°33'12.3"S

Elevation Source: (Unknown)

Easting: 286655.000

Longitude: 150°43'40.1"E

GS Map: -

MGA Zone: 56

Coordinate Source: PR.,ACC.MAP

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Casing	Concrete Cylinder	-0.20	-0.20	1524			

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
1.50	3.60	2.10	(Unknown)	1.20		1.26			

***** End of GW019358 *****

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WaterNSW

Work Summary

GW048526

Licence:	Licence Status:
	Authorised Purpose(s): Intended Purpose(s): STOCK
Work Type: Spear	
Work Status: Needs Reconditioning	
Construct.Method: Jetted	
Owner Type: Private	
Commenced Date:	Final Depth: 9.00 m
Completion Date: 01/10/1978	Drilled Depth: 9.00 m
Contractor Name: (None)	
Driller:	
Assistant Driller:	
Property:	Standing Water Level (m):
GWMA:	Salinity Description:
GW Zone:	Yield (L/s):

Site Details

Site Chosen By:	County Form A: HUNTER Licensed:	Parish MARTINDALE	Cadastre 15
Region: 20 - Hunter	CMA Map: 9032-4N		
River Basin: 210 - HUNTER RIVER	Grid Zone:	Scale:	
Area/District:			
Elevation: 0.00 m (A.H.D.)	Northing: 6395359.000	Latitude: 32°33'31.3"S	
Elevation Source: (Unknown)	Easting: 286772.000	Longitude: 150°43'44.1"E	
GS Map: -	MGA Zone: 56	Coordinate Source: GD.,ACC.MAP	

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Opening	Slots - Vertical	-100.00	0.00	100		1	Mechanically Slotted
1	1	Casing	P.V.C.	0.00	9.00	100			

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	6.50	6.50	Sand	Sand	
6.50	9.00	2.50	Gravel Coarse	Gravel	

Remarks

09/05/1979: R/C-NEW SPEARPOINT OVER EXISTINGONES

***** End of GW048526 *****

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APPENDIX C

Work Summaries Neighbouring Registered Bores

WaterNSW

Work Summary

GW013644

Licence:

Licence Status:

Authorised Purpose(s):

Intended Purpose(s): IRRIGATION

Work Type: Battery Spears

Work Status: Needs Reconditioning

Construct.Method:

Owner Type: Private

Commenced Date:

Completion Date: 01/05/1958

Final Depth: 6.10 m

Drilled Depth: 6.10 m

Contractor Name: (None)

Driller:

Assistant Driller:

Property:

Standing Water Level (m):

GWMA:

Salinity Description:

GW Zone:

Yield (L/s):

Site Details

Site Chosen By:

County

Parish

Cadastre

Form A: HUNTER

MARTINDALE

24

Licensed:

Region: 20 - Hunter

CMA Map: 9032-4N

River Basin: 210 - HUNTER RIVER

Grid Zone:

Scale:

Area/District:

Elevation: 0.00 m (A.H.D.)

Northing: 6392797.000

Latitude: 32°34'54.3"S

Elevation Source: (Unknown)

Easting: 286592.000

Longitude: 150°43'35.1"E

GS Map: -

MGA Zone: 56

Coordinate Source: PR.,ACC.MAP

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Casing	Threaded Steel	0.00	4.30	102			
1	1	Opening	Perforations & Gauze	4.30	6.10	76		1	Copper Alloy

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
0.30	6.10	5.80	Unconsolidated			12.63			

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments

0.00	6.10	6.10	Soil Black Nominal	Soil	
0.00	6.10	6.10	Sand Nominal Water Supply	Sand	

Remarks

12/06/1981: BATTERY OF 4 SPEARS CONNECTED -YIELD FELL TO 6.3L/S:
12/06/1981: R/C - 2 EXTRA SPEARS SUNK NOV '63 TO RESTORE SUPPLY

*** End of GW013644 ***

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW

Work Summary

GW013768

Licence: 20WA208902

Licence Status: EXPIRED

Authorised Purpose(s): DOMESTIC,STOCK

Intended Purpose(s): NOT KNOWN

Work Type: Battery Spears

Work Status: Supply Obtained

Construct.Method:

Owner Type: Private

Commenced Date:

Completion Date: 01/12/1957

Final Depth: 5.50 m

Drilled Depth: 5.50 m

Contractor Name: (None)

Driller:

Assistant Driller:

Property: BACK CREEK Martindale Rd Via
DENMAN 2328 NSW

GWMA: 603 - SYDNEY BASIN

GW Zone: -

Standing Water Level (m):

Salinity Description: Fresh

Yield (L/s):

Site Details

Site Chosen By:

County

Form A: HUNTER

Licensed: HUNTER

Parish

MARTINDALE

MARTINDALE

Cadastre

25

Whole Lot 25//753794

Region: 20 - Hunter

CMA Map: 9032-4N

River Basin: 210 - HUNTER RIVER

Grid Zone:

Scale:

Elevation: 0.00 m (A.H.D.)

Elevation Source: (Unknown)

Northing: 6392485.000

Easting: 286390.000

Latitude: 32°35'04.3"S

Longitude: 150°43'27.1"E

GS Map: -

MGA Zone: 56

Coordinate Source: GD.,ACC.MAP

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Casing		0.00	3.70				
1	1	Opening	Perforations & Gauze	3.70	5.50	76		1	

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
5.50	5.50	0.00	Unconsolidated						

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments

0.00	5.49	5.49	Driller	(Unknown)	
5.49	5.50	0.01	Sand Water Supply	Sand	

Remarks

12/06/1981: BATTERY OF 4 SPEARS

*** End of GW013768 ***

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW

Work Summary

GW014284

Licence: 20WA214805	Licence Status: CURRENT
	Authorised Purpose(s): STOCK,DOMESTIC
	Intended Purpose(s): STOCK
Work Type: Bore	
Work Status: Supply Obtained	
Construct.Method: Cable Tool	
Owner Type: Private	
Commenced Date:	Final Depth: 11.30 m
Completion Date: 01/01/1956	Drilled Depth:
Contractor Name: (None)	
Driller:	
Assistant Driller:	
Property: ROSEDALE 1949 Martindale Rd	Standing Water Level
MARTINDALE 2328 NSW	(m):
GWMA: 017 - HUNTER	Salinity Description:
GW Zone: -	Yield (L/s):

Site Details

Site Chosen By:			
		County	Parish
		Form A: HUNTER	MARTINDALE
		Licensed: HUNTER	MARTINDALE
			Cadastre
			9
			Whole Lot 1//1088704
Region: 20 - Hunter		CMA Map: 9032-4N	
River Basin: 210 - HUNTER RIVER		Grid Zone:	
Area/District:		Scale:	
Elevation: 0.00 m (A.H.D.)		Northing: 6396519.000	
Elevation Source: (Unknown)		Easting: 286278.000	
		Latitude: 32°32'53.3"S	
		Longitude: 150°43'26.1"E	
GS Map: -		MGA Zone: 56	
		Coordinate Source: PR.,ACC.MAP	

*** End of GW014284 ***

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW

Work Summary

GW014448

Licence:

Licence Status:

Authorised Purpose(s):
Intended Purpose(s): IRRIGATION

Work Type: Battery Spears

Work Status:

Construct.Method:

Owner Type: Private

Commenced Date:
Completion Date: 01/01/1958

Final Depth: 5.50 m
Drilled Depth: 5.50 m

Contractor Name: (None)

Driller:

Assistant Driller:

Property:

Standing Water Level (m):
Salinity Description:
Yield (L/s):

GWMA:
GW Zone:

Site Details

Site Chosen By:

County
Form A: HUNTER
Licensed:

Parish
MARTINDALE

Cadastre
18

Region: 20 - Hunter

CMA Map: 9032-4N

River Basin: 210 - HUNTER RIVER
Area/District:

Grid Zone:

Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: (Unknown)

Northing: 6394948.000
Easting: 286311.000

Latitude: 32°33'44.3"S
Longitude: 150°43'26.1"E

GS Map: -

MGA Zone: 56

Coordinate Source: GD.,ACC.MAP

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Casing	Corrugated Galvan	-0.30	3.70	76			Driven into Hole
1	1	Opening	Perforations & Gauze	3.70	5.50	76		1	Copper Alloy, A: 0.30mm

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
1.50	5.50	4.00	Unconsolidated	1.50		15.16			

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments

0.00	5.49	5.49	Sand Fine Gravel Water Supply	Sand	
5.49	5.50	0.01	Clay	Clay	

Remarks

10/03/1981: BATTERY OF FIVE SPEARS

*** End of GW014448 ***

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WaterNSW

Work Summary

GW014449

Licence:

Licence Status:

Authorised Purpose(s):

Intended Purpose(s): IRRIGATION

Work Type: Battery Spears

Work Status:

Construct.Method:

Owner Type: Private

Commenced Date:

Completion Date: 01/01/1958

Final Depth: 5.50 m

Drilled Depth: 5.50 m

Contractor Name: (None)

Driller:

Assistant Driller:

Property:

Standing Water Level (m):

GWMA:

Salinity Description:

GW Zone:

Yield (L/s):

Site Details

Site Chosen By:

County

Parish

Cadastre

Form A: HUNTER

MARTINDALE

37

Licensed:

Region: 20 - Hunter

CMA Map: 9032-4N

River Basin: 210 - HUNTER RIVER

Grid Zone:

Scale:

Area/District:

Elevation: 0.00 m (A.H.D.)

Northing: 6394318.000

Latitude: 32°34'05.3"S

Elevation Source: (Unknown)

Easting: 287108.000

Longitude: 150°43'56.1"E

GS Map: -

MGA Zone: 56

Coordinate Source: GD.,ACC.MAP

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Casing	Corrugated Galvan	-0.30	3.70	76			
1	1	Opening	Perforations & Gauze	3.70	5.50	76		1	Copper Alloy

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
0.90	5.50	4.60	Unconsolidated	0.30		16.42			

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments

0.00	0.91	0.91	Soil Black	Soil	
0.91	5.49	4.58	Sand Water Supply	Sand	

Remarks

10/03/1981: BATTERY OF 4 SPEARS 6.4M APART

*** End of GW014449 ***

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW

Work Summary

GW018523

Licence: 20CA208900

Licence Status: CURRENT

Authorised Purpose(s): STOCK,IRRIGATION

Intended Purpose(s): IRRIGATION

Work Type: Battery Spears

Work Status:

Construct.Method:

Owner Type: Private

Commenced Date:

Completion Date: 01/09/1960

Final Depth: 7.30 m

Drilled Depth: 7.30 m

Contractor Name: (None)

Driller:

Assistant Driller:

Property: ROSEDALE 1875 Martindale Rd
MARTINDALE 2328 NSW

Standing Water Level (m):

GWMA: 017 - HUNTER

Salinity Description: Good

GW Zone: -

Yield (L/s):

Site Details

Site Chosen By:

County

Form A: HUNTER

Licensed: HUNTER

Parish

MARTINDALE

MARTINDALE

Cadastre

8

Whole Lot 1//1088704

Region: 20 - Hunter

CMA Map: 9032-4N

River Basin: 210 - HUNTER RIVER

Grid Zone:

Scale:

Area/District:

Northing: 6396857.000

Latitude: 32°32'42.3"S

Elevation: 0.00 m (A.H.D.)

Elevation Source: (Unknown)

Easting: 286218.000

Longitude: 150°43'24.1"E

GS Map: -

MGA Zone: 56

Coordinate Source: GD.,ACC.MAP

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Opening	Screen - Gauze/Mesh	-100.00	1.80	76		1	A: 0.30mm
1	1	Casing	Threaded Steel	0.00	0.00	76			

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
1.80	7.30	5.50	Unconsolidated	1.50		12.63			

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments

0.00	1.52	1.52	Loam Sandy	Loam	
1.52	7.32	5.80	Sand Coarse Water Supply	Sand	

Remarks

10/03/1981: BATTERY OF 4 SPEARS

*** End of GW018523 ***

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW

Work Summary

GW078515

Licence: 20WA216029		Licence Status: CURRENT	
		Authorised Purpose(s): STOCK,DOMESTIC	
		Intended Purpose(s): STOCK, DOMESTIC	
Work Type: Bore			
Work Status:			
Construct.Method:			
Owner Type:			
Commenced Date:		Final Depth: 54.00 m	
Completion Date:		Drilled Depth:	
Contractor Name: Drillwell Construction			
Driller:			
Assistant Driller:			
Property: WHY WORRY Martindale Via		Standing Water Level	
DENMAN 2328 NSW		(m):	
GWMA: -		Salinity Description:	
GW Zone: -		Yield (L/s): 4.500	

Site Details

Site Chosen By:			
		County	Parish
		Form A: HUNTER	MARTINDALE
		Licensed: HUNTER	MARTINDALE
		Cadastre	
		LOT 40 DP 753794	
		Whole Lot 40//753794	
Region: 20 - Hunter		CMA Map:	
River Basin: - Unknown		Grid Zone:	
Area/District:		Scale:	
Elevation: 0.00 m (A.H.D.)		Northing: 6394518.000	
Elevation Source: Unknown		Easting: 287834.000	
		Latitude: 32°33'59.3"S	
		Longitude: 150°44'24.1"E	
GS Map: -		MGA Zone: 56	
		Coordinate Source: Unknown	

*** End of GW078515 ***

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW

Work Summary

GW201171

Licence:	Licence Status:
	Authorised Purpose(s): Intended Purpose(s): STOCK, DOMESTIC
Work Type: Well	
Work Status: Supply Obtained	
Construct.Method:	
Owner Type: Private	
Commenced Date:	Final Depth: 10.00 m
Completion Date: 01/07/1918	Drilled Depth: 10.00 m
Contractor Name: (None)	
Driller: Unkown Unknown	
Assistant Driller:	
Property:	Standing Water Level (m):
GWMA:	Salinity Description:
GW Zone:	Yield (L/s):

Site Details

Site Chosen By:	County Form A: HUNTER Licensed:	Parish MARTINDALE	Cadastre 54//13672
Region: 20 - Hunter	CMA Map: 9032-4N		
River Basin: 210 - HUNTER RIVER	Grid Zone:	Scale:	
Area/District:			
Elevation: 0.00 m (A.H.D.)	Northing: 6398151.000	Latitude: 32°31'59.8"S	
Elevation Source: Unknown	Easting: 285452.000	Longitude: 150°42'55.8"E	
GS Map: -	MGA Zone: 56	Coordinate Source: GPS - Global	

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	10.00	1000			(Unknown)
1	1	Casing	Lining	0.00	10.00				

Remarks

28/08/1998: Form A Remarks:
Nat Carling, 6-Feb-2012; All details were provided on Form-AG. Completion date was 'pos dug 1918'. Concrete placed inside timber slab 1960. GPS provided by client.

***** End of GW201171 *****

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

APPENDIX D

Explanation of Methods

Why carry out a hydrogeological investigation?

A hydrogeological investigation is an integral part of any groundwater exploration program. The investigation collects and interprets all available data and information recorded for existing bores in the area including any information about district groundwater utilisation, the aquifers intersected during drilling, their indicative yields, indications of water quality and bore construction details. This data and information is collated and collectively interpreted with available geological and topographic data, and published aerial photography in order to provide the best possible advice on where and how deep to drill.

What does a pumping test consist of?

A pumping test or 'aquifer test' consists of pumping a bore at a predetermined constant discharge rate and recording the drop in water level in the bore (drawdown) and in nearby observation bore/s if available at specific times. In a constant rate test the bore is pumped for a significant time duration at a single discharge rate. Required measurements for such a test include pre-test static water levels, elapsed times following the commencement of pumping, pumping rate, water levels at various pre-scheduled time intervals during the pumping period and the time at which the pumping stops. Measurements of water level after the pumping is stopped (recovery) are important in verifying the aquifer coefficients calculated during the pumping test.

Why are observation bores useful?

Measurements of water level in neighbouring (observation) bores during the testing of the particular pumped bore can be very useful in assessing any potential interference within the area as a result of proposed pumping. This is one of the most important factors that are considered by DPI Water when assessing the results of the pumping tests and the application for a water entitlement. Unfortunately, observation boreholes are not always available.

Why conduct a pumping test?

The two main reasons for a pumping test are:

1. Determine the performance characteristics of a bore (well).
Yield and *drawdown* are recorded in order to calculate the *specific storage*. These data are collected under controlled conditions and provide a measure of the productive capacity of the completed bore, and provide useful information for the selection of an appropriate pump.

2. Determine the hydraulic parameters of the aquifer.
Enables the calculation of the two principle factors of aquifer performance, *transmissivity* and *storage coefficient*.

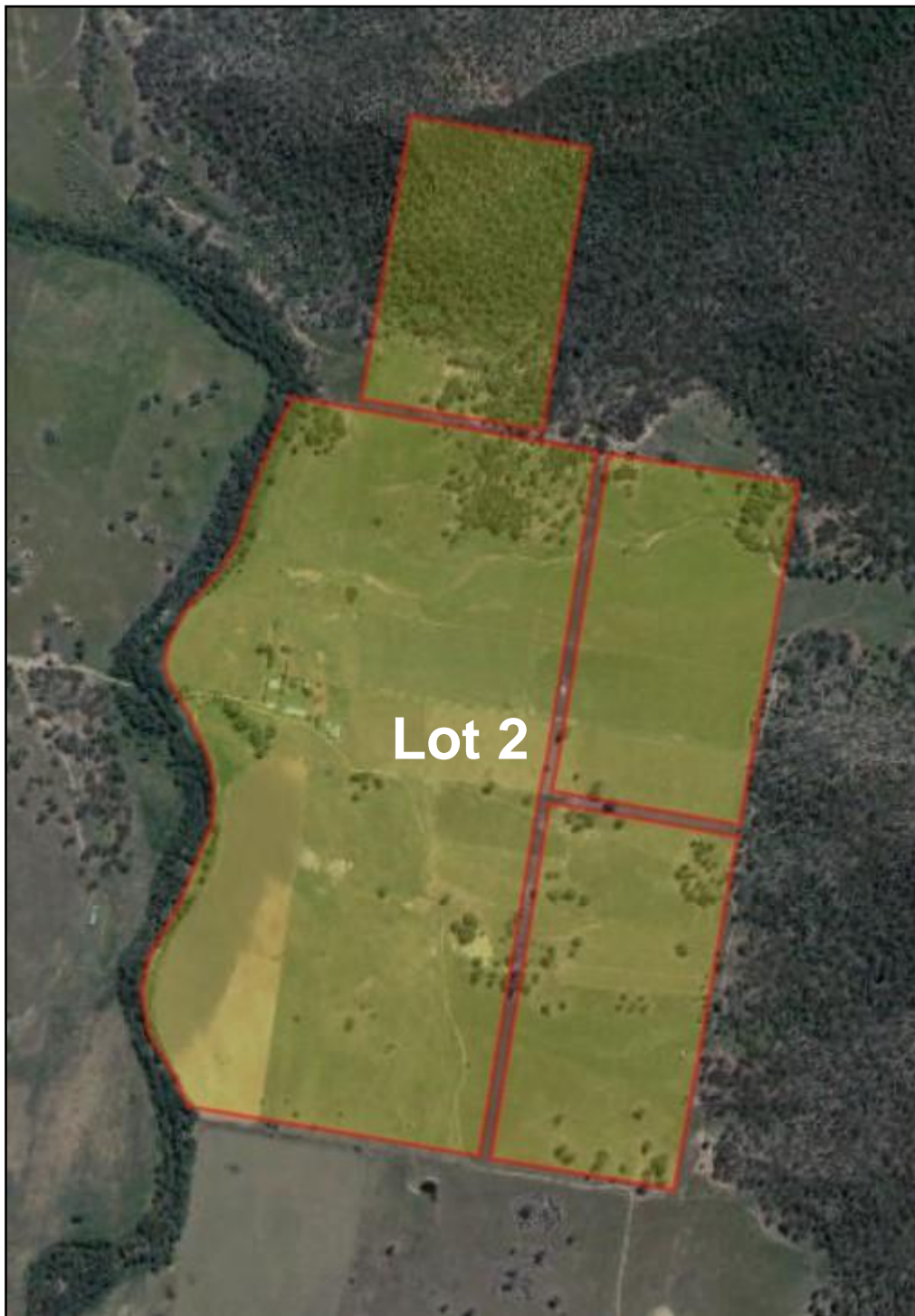
What are the results of a pumping test used for?

The results of a pumping (aquifer) test are used to predict the following:

- The long-term safe and sustainable yield.
- The effect (potential interference) of the proposed new extraction of water from the groundwater system on existing neighbouring bores, aquifer system and the environment. This is the most important factor that is considered by DPI Water when assessing the results of the pumping test and the application for an annual volume allocation.
- The drawdowns in the bore at future times and different discharges.
- The radius of the 'cone of influence' for individual or multiple wells and resultant drawdown at any distance away from the pumped bore at any given time during pumping.
- Distance drawdown effects.
- An appropriate cyclic pumping schedule that manages the aquifer and meets the needs of the user.

The likely requirement to provide supporting data and information to DPI Water is considered even more important if, depending on the results of the pumping test and drawdown analysis, an allocation greater than that likely to be approved by Water NSW is sought.

FIGURES



Lot 2

0 m 500



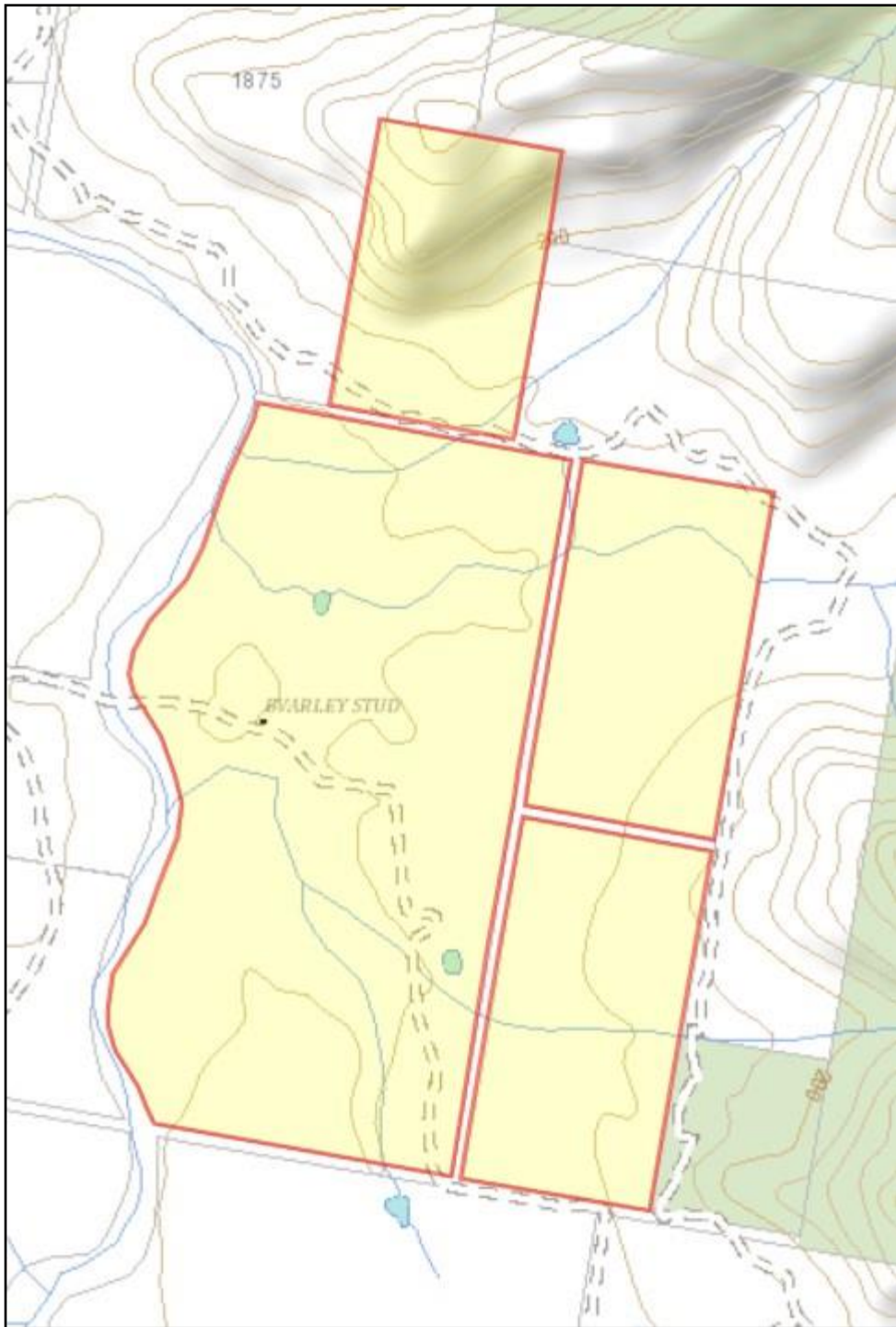
Larry Cook Consulting
PO Box 8146
Tumbi Umbi NSW 2261
Phone 02 4340 0193

Drought Security

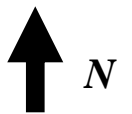
Lot 2 in DP1088704
Martindale Road Martindale
Lot Plan

Scale: As shown

FIGURE 1



0 m 500



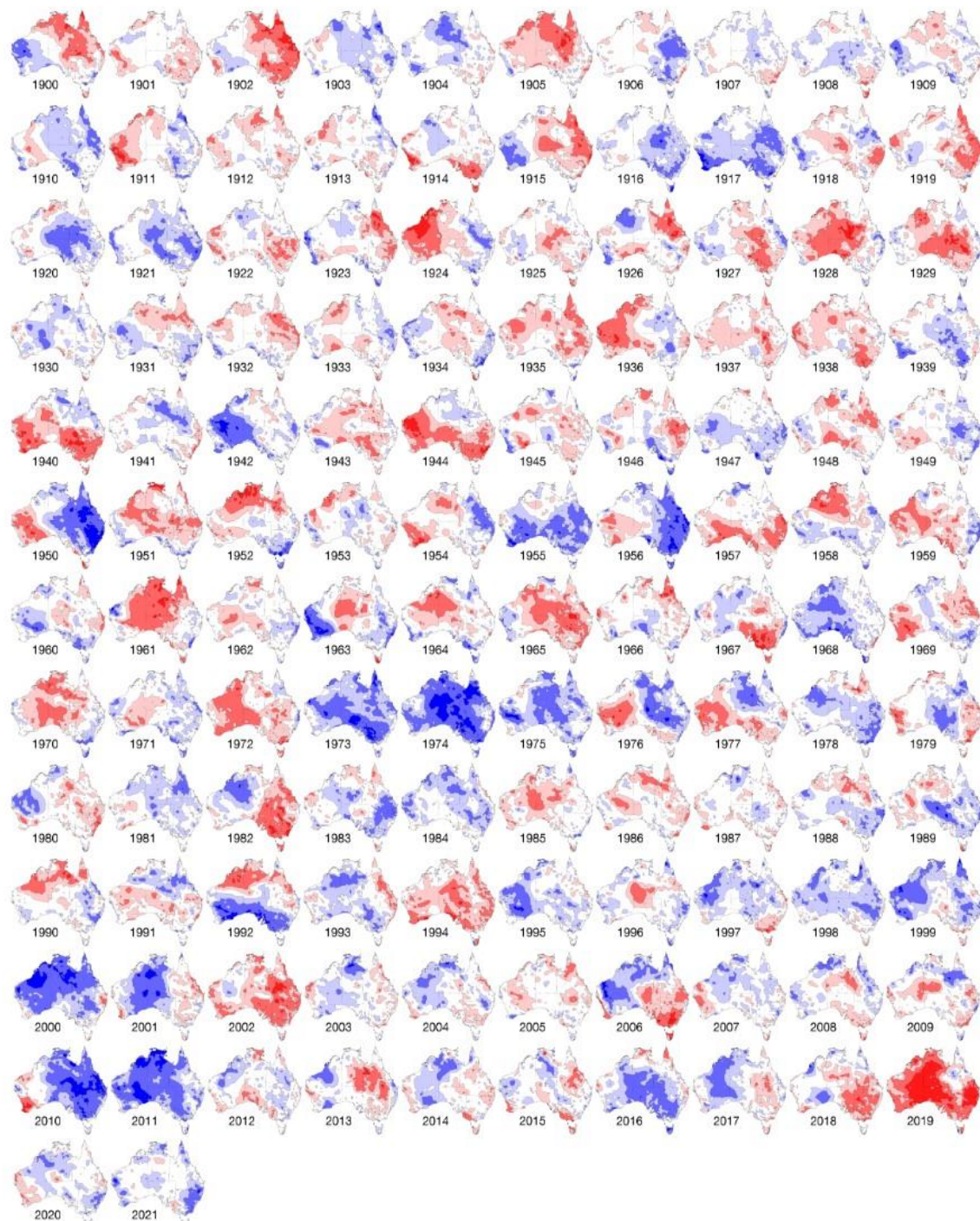
Larry Cook Consulting
PO Box 8146
Tumbi Umbi NSW 2261
Phone 02 4340 0193

Drought Security

Lot 2 in DP1088704
Martindale Road Martindale
Enlarged Topographic Plan

Scale: As shown

FIGURE 2



**Rainfall deciles
map legend**



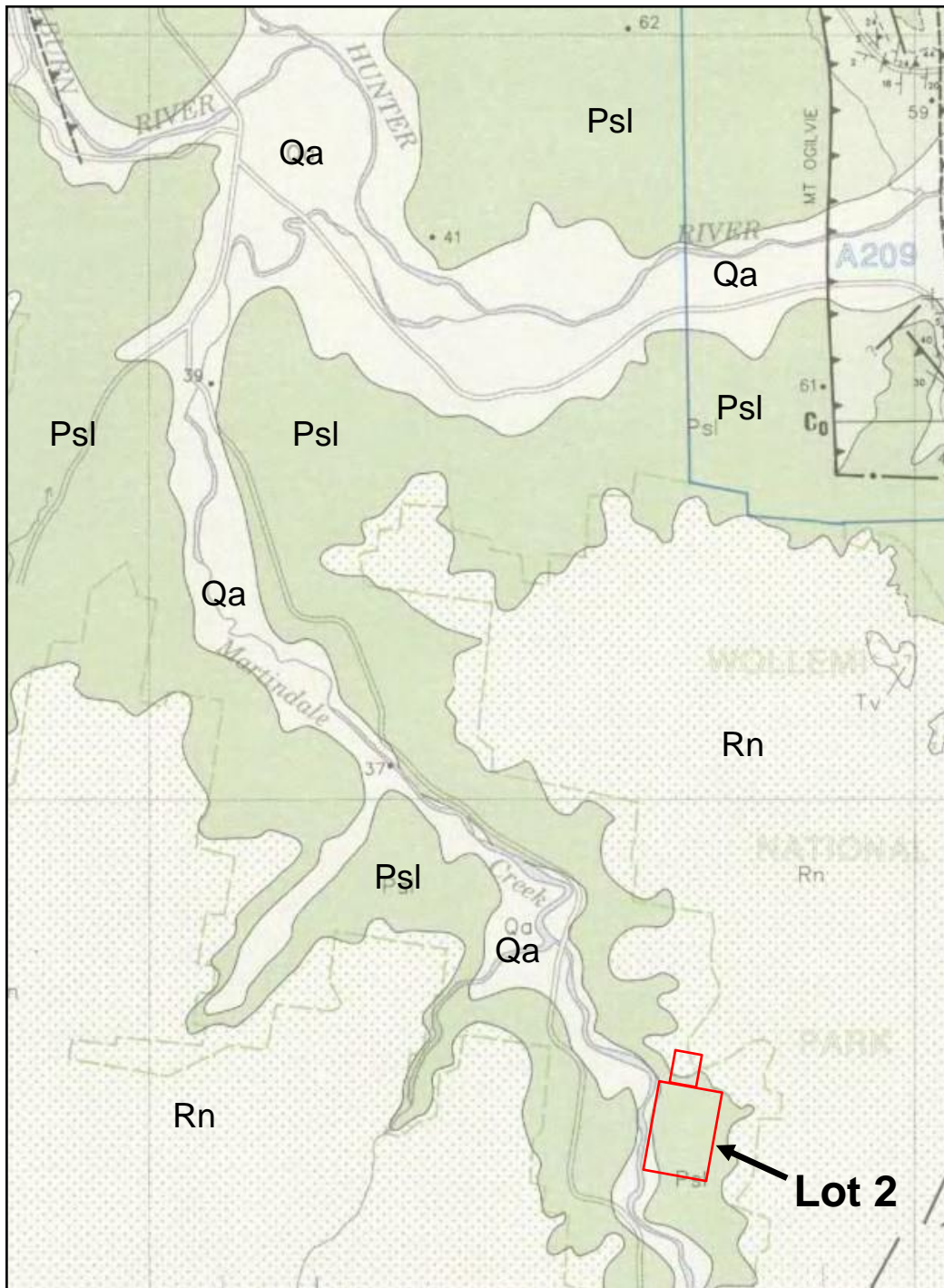
Larry Cook Consulting
PO Box 8146
Tumbi Umbi NSW 2261
Phone 02 4340 0193

Drought Security

Lot 2 in DP1088704
Martindale Road Martindale
Australian Rainfall – 122 years

Scale: As shown

FIGURE 3



Qa Quaternary Alluvium
 Rn Narrabeen Group
 Psl Wollombi Coal Measures

0 km 5



Larry Cook Consulting
 PO Box 8146
 Tumby Umbi NSW 2261
 Phone 02 4340 0193

Drought Security

Lot 2 in DP1088704
Martindale Road Martindale
 Geology Plan

Scale: As shown

FIGURE 4



0 m 200



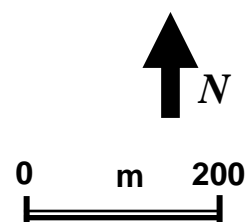
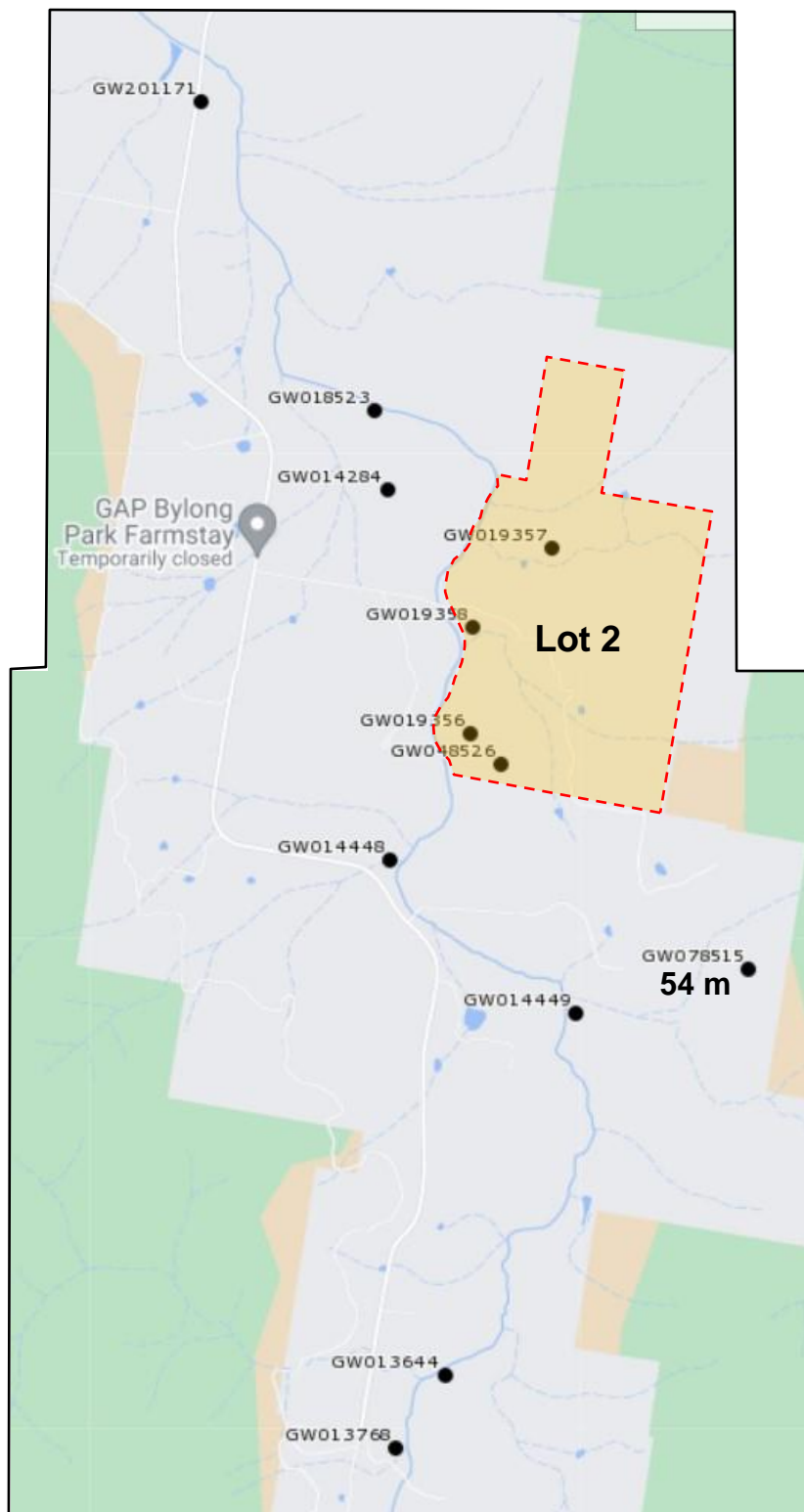
Larry Cook Consulting
PO Box 8146
Tumbi Umbi NSW 2261
Phone 02 4340 0193

Drought Security

Lot 2 in DP1088704
Martindale Road Martindale
Registered Bores in Lot 2

Scale: As shown

FIGURE 5



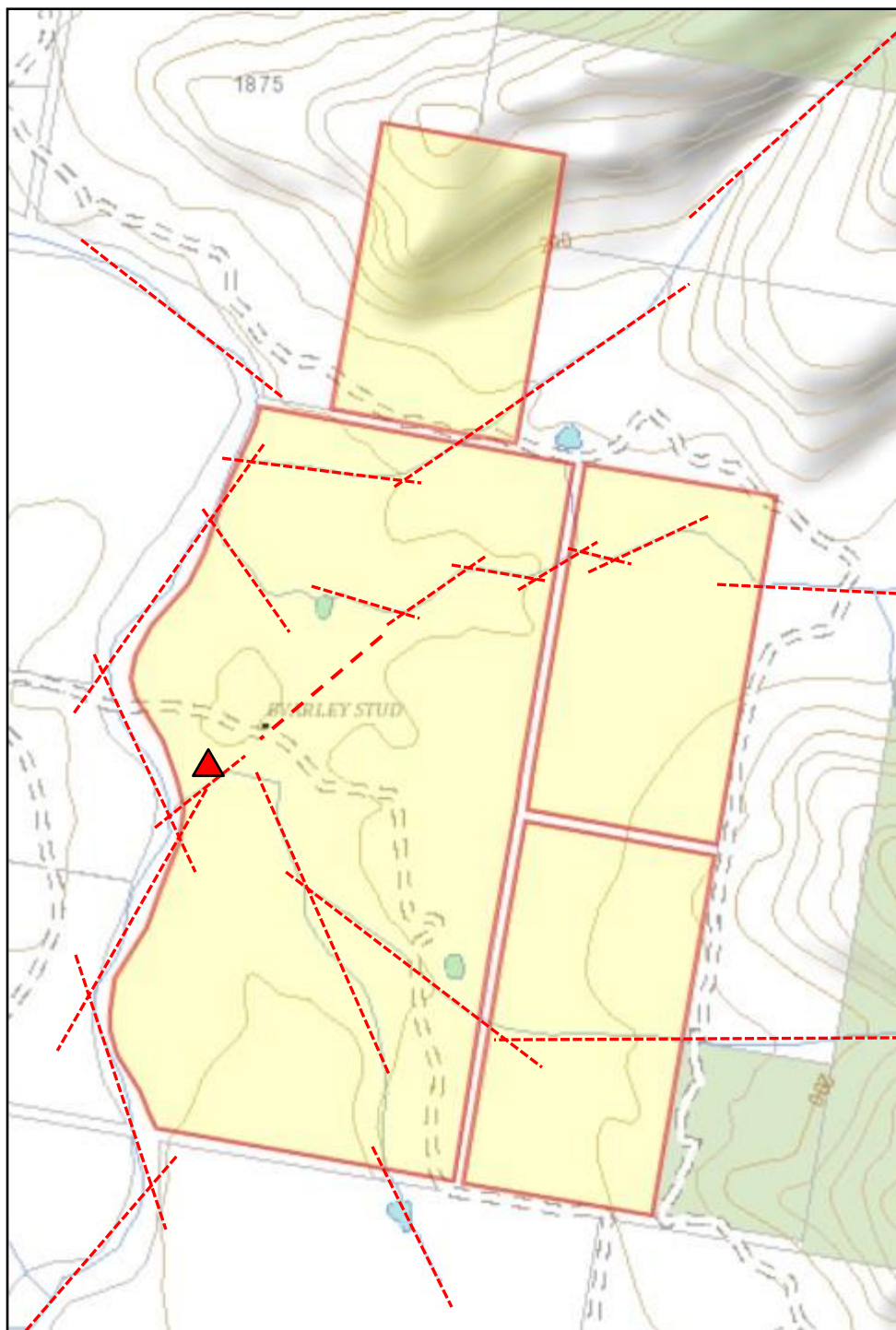
Larry Cook Consulting
 PO Box 8146
 Tumby Umbi NSW 2261
 Phone 02 4340 0193


Drought Security

Lot 2 in DP1088704
Martindale Road Martindale
 Registered Bores in Local Area

Scale: As shown

FIGURE 6



 Linear Feature (lineament)
 Groundwater Target

0 m 500

Larry Cook Consulting
 PO Box 8146
 Tumby Umbi NSW 2261
 Phone 02 4340 0193

Drought Security

Lot 2 in DP1088704
 Martindale Road Martindale
 Linear Features and Groundwater Target

Scale: As shown

FIGURE 7

CONSULTANT ADVICE NOTICE

Project	Bylong Park Rehab Care for Ex-Racing Greyhounds	Project No:	7246000
Prepared by:	Jakob Singer	Client:	Greyhound Racing NSW
Reviewed by:	Fernando Pinto	Issued to:	Tzannes
Approved by:	Tom Wise	Issue Date:	Tuesday, 31 May 2022
Discipline:	Hydraulic	Revision No.:	04
Document No.:	7246000-WSCE-HY-CA-0003 - Client Advice Notice [04] - Drought Hydraulic Equipment Concept.docx		
Title:	Drought Hydraulic Equipment Concept		

Section 1 Introduction

The purpose of this Consultant Advice Notice is to present hydraulic equipment concepts to facilitate water security during extended periods of drought which may affect the Bylong Park Greyhound Rehabilitation Centre.

The report prepared by Larry Cook Consulting titled "Drought Security Strategy" is to be read in conjunction with this report. Larry Cook's report presents drought historical and notes the difficulty in estimating the periods of droughts.

Weather data in this report is presented from records for weather station 061250 Paterson as this station was the closest to the project property which monitors evaporation. Distance of the weather station to the property (approximately 85 km).

In reviewing the water resilience strategy several options were reviewed aimed to reduce the reliance on Martindale Creek during drought periods. Martindale Creek has been known to stop flowing during extreme drought periods and the option of truck carting in water may not be possible during extreme drought periods.

The two cases for consideration are:

1. Non-drought periods
 - where water can be sourced from Martindale Creek, of which the property backs onto and possesses a water license for 170 million litres (ML) per year (License No. 23952).
2. Drought periods
 - where water usage is to be reduced significantly and not drawn from the creek.

In summary the facility proposes to build in drought resilience in the form of an onsite water tank storage farm (total volume of 6 ML) and further supplemented with an inground rainwater tank (total volume of 0.3 ML). These tanks will be constructed in a staged manner as the kennels are constructed and the site comes into operation.

Contents

Section 1	Introduction	1
Section 2	Alternate non-creek water sources	3
Section 3	Non-Drought Periods (Business as usual)	4
Section 4	Drought Period Study	6
Section 5	Proposed tanks	8
Section 6	Recommendations	12

Section 2 Alternate non-creek water sources

The non-creek, alternate water supplies which are summarised in below are taken from a combination of Larry Cook's report titled Drought Security Strategy and study of available roof area vs appropriate rainwater tank volume undertaken by Warren Smith Consulting Engineers (WSCE) refer to Section 4 in this report. Additional details for the water source items marked with an Asterix (*) below can be found in Larry Cook's report titled Drought Security Strategy.

Table 1 Non-Creek alternate water supplies

Water source	Consideration Status	Notes	Possible volumes
Buffer Tank storage	Proposed to be provided in staged construction inline with the construction of the kennels	Storage tanks filled from the creek during non-drought periods.	12 x 0.5 ML tanks Total volume: 6 ML
Rainwater tanks	Proposed to be provided in staged construction inline with the construction of the kennels	Proposed below ground rainwater tanks proposed to harvest rainfall falling on the kennel enclosure roofs (total catchment 5000m ²).	0.3 ML below ground tanks
Dam*	To be pursued in the future as an additional security measure subject to relevant applications.	A harvestable right is available to the site and could be explored in the future for additional robust additional security.	27 ML
Bore Water*	May be an option in the future if required but subject to relevant applications for intended use.	A bore in proximity is shown on the state government database and is yielding 4 L/s. Yield shown is based on a 1 L/s draw 60% of the time.	15 ML
Truck Carting from external	To be considered only as a backup.	Due to potential non-availability of water during drought period option not considered viable.	0.02 L per truck

* For additional information on items marked in table above refer to Larry Cook Consulting Report Drought Security Strategy.

Figure 2 below shows the site map with the kennel roof arrangements with a total catchment equivalent to 5,000m². This substantial catchment is proposed to have rainfall hitting these surfaces harvested, collected via a combination of downpipes / inground pipes and directed into a 0.3 ML inground rainwater tank. This inground rainwater tank will store collected rainwater for reuse and treatment as required.

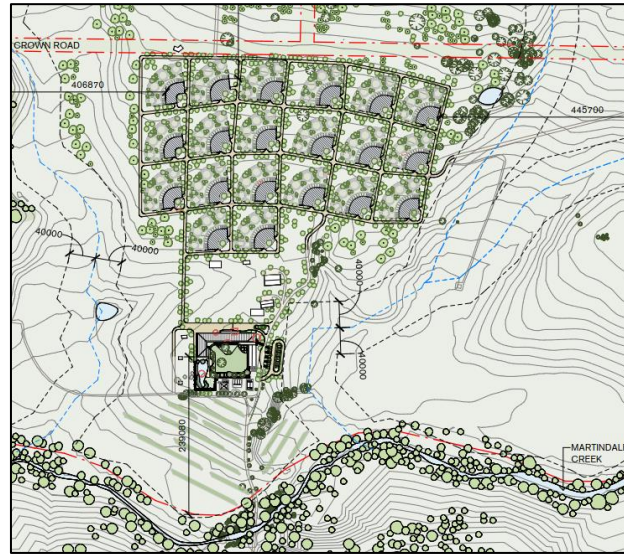


Figure 1 - Site Map

Section 3 Non-Drought Periods (Business as usual)

During non-drought periods, when water consumption is unrestricted and can be drawn from the creek source backing onto the property. Operational usage provided by Greyhound Racing is set-out in Table 2 below:

Table 2 - Non-Drought Period Water Use

Drinking water	Volume (L/day)
Dog drinking	2,000
Dog washing/bath	1,000
Dog food preparation	1,700
Clinical purposes	1,000
Site Staff hygiene	3,350
Laundry services	5,440
Total Drinking water =	14,490
Drinking water	Volume (L/day)
WC flushing	315
Pool filling	200
Pond filling	2,500
Kennel wash-downs	16,000
Misting of dog kennels	36,000
Irrigation	20,000
Vehicle washing area	100
General facility cleaning	800
Total Non-drinking water =	75,600
TOTAL WATER =	90,090

Refer to Table 3 below which presents the following data:

- Average monthly rainfall data from the Paterson weather station and potential harvest from the total kennel roof catchment (5,000m²).
- Water consumption offset against harvested rainfall with shortfall that has to be sourced via other means.

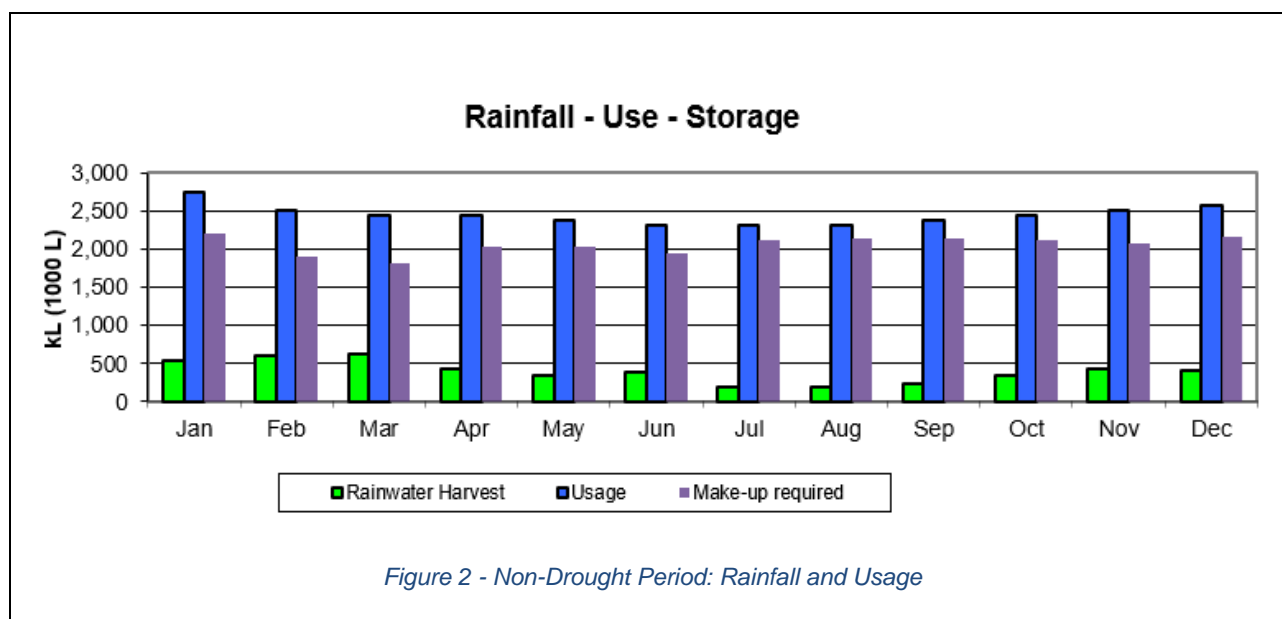
The estimated annual water usage is 33.0 ML / year, which results in an average monthly usage of 2,750 kL / month. Harvestable rainwater catchment roofs on the site equate to 5,000m². The resulting required makeup water is shown in Table 3 below.

Table 3 – Non-Drought Periods vs harvest from Roof

Harvest from roof													
Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
Harvest mean (kL)	535	598	625	423	344	386	196	186	241	335	425	402	4,694
Usage per month (kL)	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	2,750	33,005
Make-up required*	2,216	2,152	2,125	2,327	2,407	2,364	2,555	2,564	2,510	2,415	2,326	2,348	28,312

*Note: For non-drought periods, make-up shall be from the options set out in Table 1.

The graph in Figure 2 below shows a table for the non-drought period where the expected shortfall of water would be harvested from the creek shown in purple and the harvested water from rainfall shown in green.



In summary for non-drought periods, 24.8 ML / year is the shortfall which would to be drawn from local sources. The data in the presented in Table 3 and are estimates and based on the Paterson weather station data. It is noted that this is a simplistic approach and would require operational management to ensure the rainwater collection tanks were available to harvest all available rainfall although some losses could be expected during heavy storms and overflow / bypass. As rainfall can be higher or lower across regions these figures could change – there are also additional minor losses across surfaces and evaporation that would be expected. Future

climatic changes are unknown and have not been included at this stage. Cleaning and maintenance loses have also not been considered in the data above.

Section 4 Drought Period Study

During drought periods Greyhound Racing has provided the below reduced water consumption patterns, which, by using various business practices, the operator is able to reduce water consumption to essential uses only. The reduced water usage patterns are presented in Table 4 below.

Table 4 - Drought Period Reduced Water Use

Drinking water	Volume (L/day)	Rationalisation
Dog drinking	2,000	No Shell Pool Use.
Dog washing/bath	250	Minimal to no washing (except for medical needs). Reduced to equivalent of 5 washes per day.
Dog food preparation	170	Biodegradable bowls or frozen enrichment feeds can be offered to reduce washing. Estimated 10%.
Clinical purposes	1,000	Would remain the same.
Site Staff hygiene	480	Hand washing replaced by hand sanitizer if unsoiled.
Laundry services	4,080	Reduced by 25% capacity by shaking out bedding, reusing if unsoiled, restricting soft bedding in warmer months for elderly dogs or those in need of additional comfort. Can be washed with lower quality water.
TOTAL Drinking water =	7,500	
Drinking water	Volume (L/day)	Rationalisation
WC flushing	315	Remains unchanged – Low-volume cisterns used throughout facility.
Pool filling	0	Use of insulated pool blanket. Dogs requiring hydrotherapy could be reduced. Pool temperature to be reduced.
Pond filling	125	In severe droughts, pond can be allowed to dry up. Refill to 5% of loss per day. Surface plants planted to reduce evaporation rates.
Kennel wash-downs	5,920	Conserving water methods used for cleaning. High-pressure, low-flow machines and spot cleaning.
Misting of dog kennels	1,800	Misting reserved for extreme weather events to retain comfortable temperatures. Daily usage for misting reduced to 5%.
Irrigation	0	During extreme drought periods, irrigation is ceased, and targeted watering from rainwater tank will occur
Vehicle washing area	0	Vehicle washing will cease or be conducted off-site
General facility cleaning	80	Spot cleaning only
TOTAL Non-drinking water =	8,595	
Total water =	16,095	

The reduced essential annual water usage is 5.875 ML / year, resulting in an average monthly usage of 490 kL / month. It is proposed to include 6 million litres of above ground tank storage to cover a period of 12 months with no rainfall. A further 0.3 ML of in-ground rainwater tank storage is also proposed. Additional details of the tanks are presented in Section 4 of this report.

During the drought periods the pumps that draw from the creek will not be used. Any required make up water will be drawn from the above ground tank farm, where, 12 months of essential water supply will be on hand. With reference to Larry Cook's drought security strategy report a summary of drought data taken from the Bureau of Meteorology (BOM) is presented in appendix A. The maps generally show that even in periods of drought "very much below average rainfall water" was noted in the project area for the majority of periods. This minimal rainfall and any potential condensation falling on / generated the combined kennel roof (roof catchment totalling 5,000m²) is proposed to be harvested and directed into a proposed 300,000 L of inground rainwater tanks. This harvested rainfall and rainwater tank will prolong the 12 months of the above ground tank supply. In the future additional buffer storage is intended to be pursued in the form of an onsite dam which will provide further resilience.

Refer to Table 5 below which presents the following data:

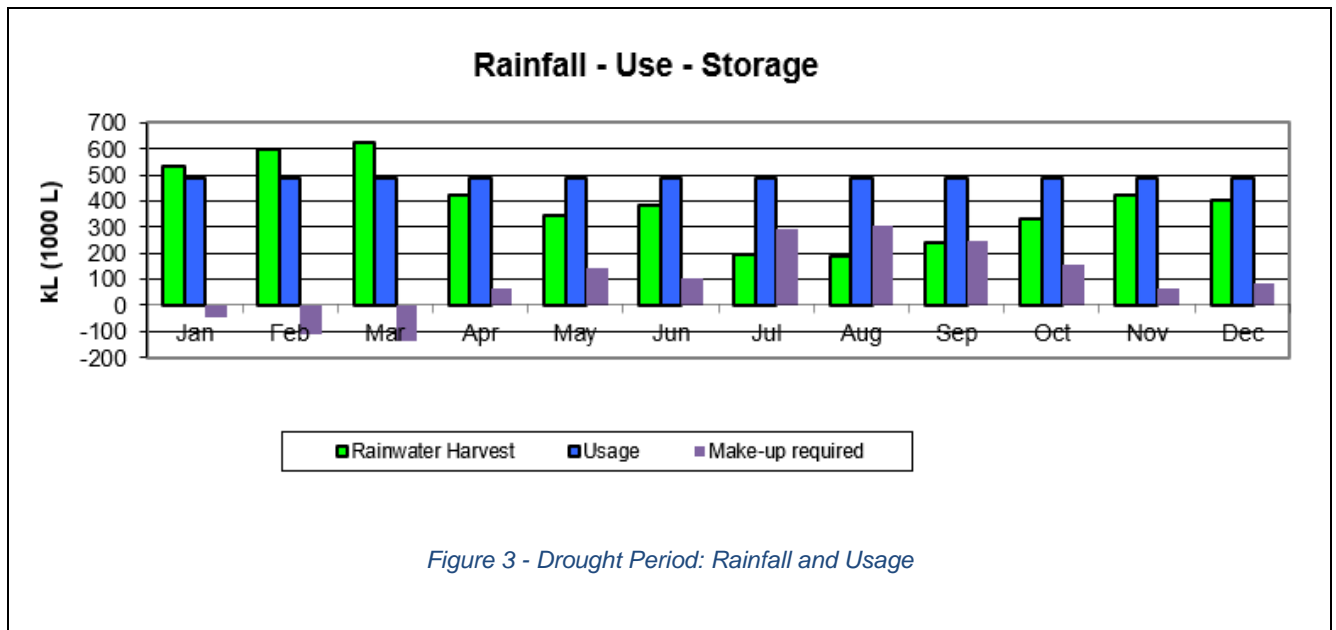
- 1st decile of monthly rainfall data potential to be collected from the total kennel roof catchment (5,000m²)
- Offset of water consumption against harvested rainfall and shortfall to be sourced via other means.

Table 5 - Drought Periods: 1st decile harvest from kennel roof catchment, usage and make up required

Harvest From Roof													
<i>Month</i>	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
<i>1st decile monthly rainfall (kL)</i>	108	121	194	84	58	116	21	23	47	59	110	112	1051
<i>Usage per month (kL)</i>	490	490	490	490	490	490	490	490	490	490	490	490	5,875
<i>Make-up required</i>	-45	-108	-135	67	146	104	294	304	249	155	65	88	1,181

The table in

Figure 3 below shows the harvested rainfall (based on the 1st decile of rainfall) collected from the kennel roofs vs the reduced water usage. Each month is presented on its own merit with no carry over of storage. It is noted that this is a simplistic approach and would require operational management to ensure the rainwater collection tanks were available to harvest all available rainfall although some losses could be expected during heavy storms via overflow / bypass. The purple graph in the table below is showing from January to March an expected net gain of rainfall may be possible even using the average of the lowest 10% rainfall data harvested from the kennel roofs (1st decile).



During the drought period the creek pumps will not be utilised and water will be drawn from the 6 M L onsite above ground farm. The tank farm proposed has capacity to cater for a 12 month period with zero rainfall. It is noted that this is a simplistic approach and would require operational management to ensure the rainwater collection tanks were available to harvest all available rainfall although some losses could be expected during heavy storms via overflow / bypass. The 12 month supply will be prolonged with the proposed inground rainwater tank. The data presented in Figure 3 above presents the rainfall from the 1st decile monthly rainfall data and demonstrates that even during periods of very low rainfall, the proposed kennel roof catchment can significantly prolong the tank farm and shows a reduced shortfall over a 12 month period in the order of approximately 1.2 ML. The data in the presented in Table 5 and Figure 3 are estimates and based on the Paterson weather station data. As rainfall can be higher or lower across regions these figures could change – there are also additional minor losses across surfaces and evaporation that would be expected. Future climatic changes are unknown and have not been included at this stage. The data above also assumes storage volume available in the rainwater tank, some bypass overflow may occur if collected rainwater was not transferred into tank storage. Cleaning and maintenance losses have also not been considered in the data above.

Section 5 Proposed tanks

The following are proposed on-site tanks and supporting systems which are envisaged to provide drought security:

1. A series of above ground water storage tanks which are intended to be interconnected to form a tank farm with a total volume of 6 ML.
2. An inground rainwater tank with a total volume of 0.3 ML which is fed by 5,000m² of kennel roof catchment

For initial drought resilience an onsite tank farm is proposed to be provided. These tanks will be constructed in a staged manner as the kennels are constructed and the operation comes online. Water will be stored within these tanks, initially drawn from the creek when water is available. During non-drought periods water will be continually drawn from the tanks and replenished from the creek. The above ground tanks will be provided with isolating valves between one another to allow isolation of individual or groups of tanks for maintenance purposes. Isolated above ground tanks could further be utilised in a drought strategy by pumping collected

rainwater held in the inground rainwater tank during periods when the rainwater tank was filled. In a drought period the strategy would be to isolate 2 tanks from the remainder of the tank farm especially from January to March and pump any rainwater entering the inground rainwater tank to fully maximise rainfall reuse.

During drought periods water will not be drawn from the creek and operational water use will be reduced to the minimum for essential purposes. The total tank volume proposed has been sized to cater for the reduced water consumption over a 12 month period with no rainfall. An onsite dam is proposed to be explored in the future to further provide additional water security. The tanks would be provided with chlorine dosing and a fining plant prior to being used onsite. The tanks in the tank farm are proposed to be in the order of 500 kL tanks, approximately 12m diameter and 4.75m tall each and are intended to be surrounded by landscaping to minimise aesthetic impacts.



Figure 4 – Typical above ground tank farm tank

The intended concept location for the above ground tank farm is indicated in red hatched zone in Figure 5 below. The final arrangement would include a study for a replacement strategy. As the tanks may initially receive heat gains due to solar would be treated as raw water and treated to drinking water standards prior to end use.

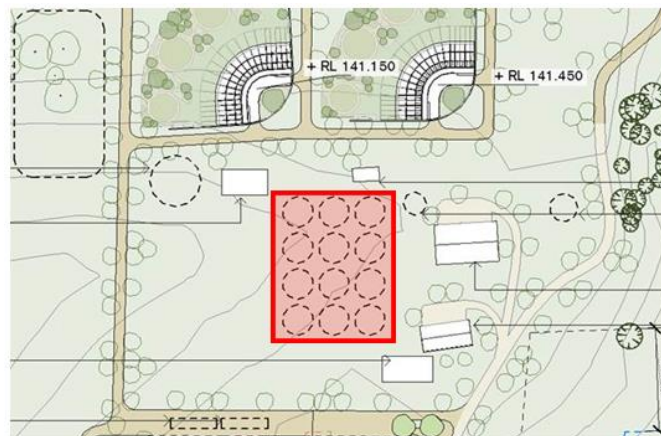
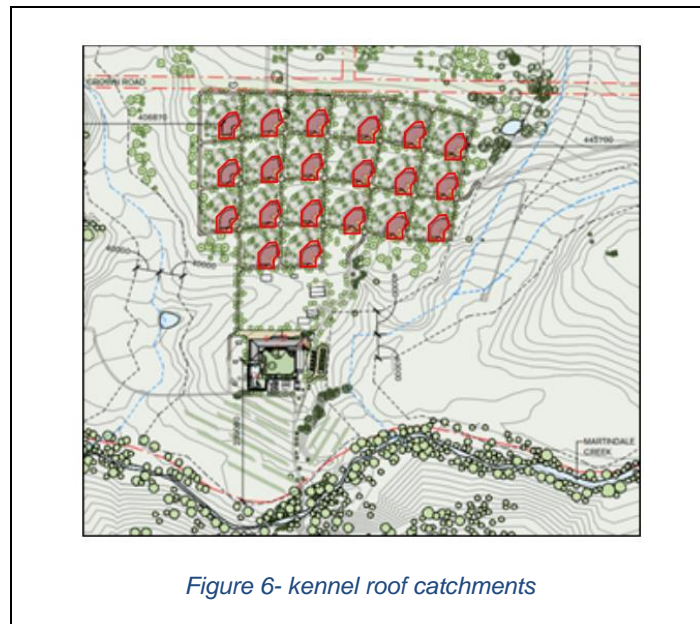


Figure 5 - Proposed above ground tank farm location

The below ground rainwater tanks are proposed to be 300,000 L in total volume. 300,000 L was selected based on the available catchment from the kennel roofs and the business as usual water usage patterns. The

kennel roof catchment is substantial and once all the stages are completed will total 5,000m². Refer to below for the intended configuration of the kennel roof catchments which are hatched in red and shown in Figure 6 below.



A study was conducted based on 55 years of data (1967 – 2022) collected from the weather station at Paterson station number 061250. The data was reviewed against the available kennel roof catchments which totals 5,000m² and the potential offset to the normal operation water usage to determine the most effective rainwater tank size.

The graphs in Figure 7 and Figure 8 demonstrate the optimal tank capacity to offset the water demands and demonstrate how much water is expected to be captured for reuse.

Figure 7 below compares tanks in sizes of 50 kL to 500 kL harvesting our proposed kennel roof catchment and the potential water offset. The graph shows the potential water savings based off the business as usual water usage patterns for the various tank sizes. The graph shows diminishing returns in providing a rainwater tank greater than 300 kL against the available catchment and water usage.

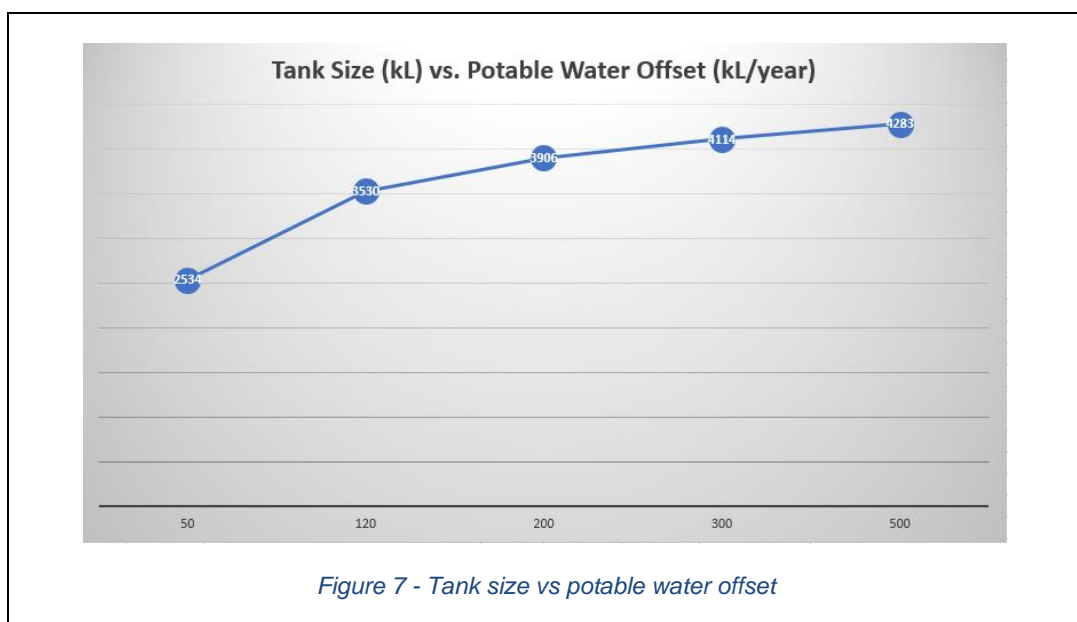
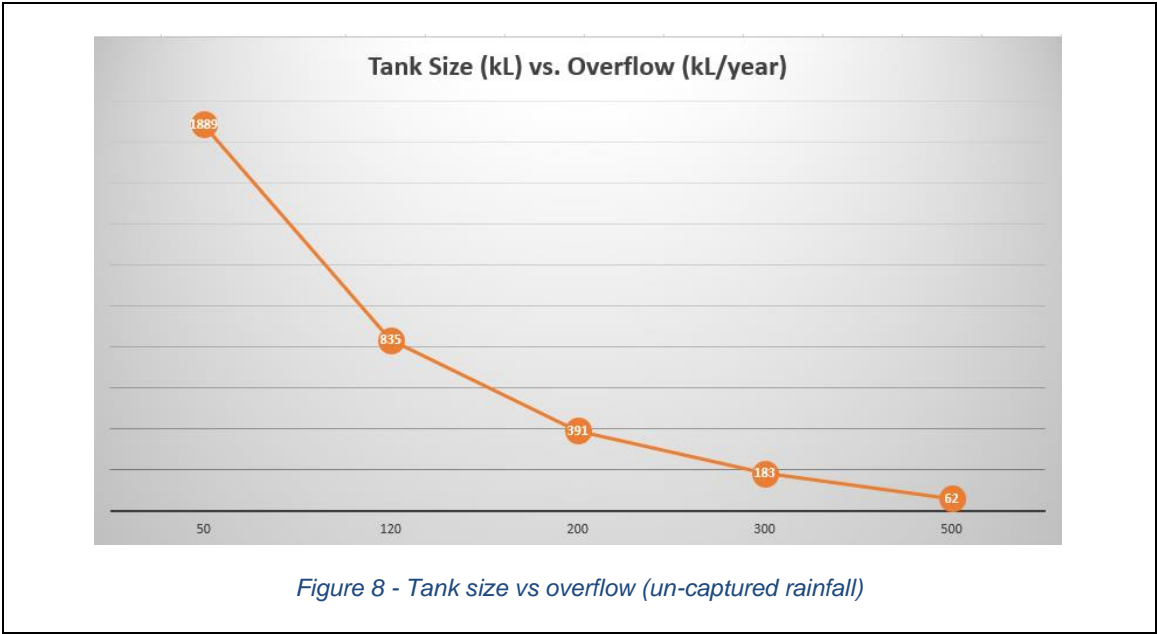


Figure 8Figure 7 below compares tanks in sizes of 50 kL to 500 kL and the overflows generated in rainwater hitting the proposed kennel roof catchments. The graph shows the water overflowing / bypassing the various tank sizes to compare which tank size would be most effective. Again, the table demonstrates diminishing returns in tanks greater than 300 kL in volume.



The below ground rainwater tanks are envisaged to be either concrete type or fibreglass suitable for installation at depth and potable water reuse. An example is shown in Figure 9 below (picture courtesy of Humes webpage). Consideration in future design to allow inclusion of a localised sump for sludge removal is required.



Figure 9 - Below ground rainwater tank

Section 6 Recommendations

The project is proposing to drought secure the property by installing 6 ML of above ground water tanks, which will allow the project site to operate for 12 months without drawing water from the creek during drought periods (at reduced operational water usage). This storage volume will be further supplemented with a 0.3 ML of in ground rainwater tank volume and collection of rainwater harvested from the kennel roofs to further extend the water security. The project team will look at reviewing a dam strategy in the future to further protect the site.

Approximate Greyhound Population Turnover at Bylong Park Rehabilitation Centre

The aim of Bylong Park is to give every greyhound the opportunity to become pet ready and transition to a GAP adoption centre for rehoming. The farm stay has been specifically designed to cater for a population of greyhounds that need more retraining before they can be rehomed.

GRNSW expect around 100 greyhounds per year to be admitted to Bylong Park and for them to pass through to a GAP adoption program within 6 weeks to 6 months. With our current knowledge of greyhound rehab we expect 5-10 dogs per year to become long-term residents. However, we expect this number to decrease to 1-5 within 2 years with improvements in our retraining processes, early socialisation initiatives and the farm stay environment.

There are approximately 30 greyhounds currently in long term GAP care which would benefit from the farm stay rehab program and be moved to the facility once it was operational. The majority of greyhounds in GAP care currently are pet ready from intake and would not need to spend any time at Bylong Park. This trend is expected to continue.