From: Sandy Natarajan
Sent: Friday, 19 August 2016 3:43 PM
To: Elizabeth Arnott
Subject: RE: Confidential FW: Vietnam
Attachments: Confidential FW: Vietnam; GRNSW Delegation Visit - Vietnam June 2016.docx; Vietnam Greyhoun Racing Operation - Findings and Recommendations PN.DOCX; Vietnam Greyhound Racing Operation - Findings and Recommendations Revised.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Liz,

Please see attached the following documents:

- The initial delegation visit document;
- The first attempt of the report with Paul's critical feedback;
- The second attempt of the report.

The initial request from Vietnam – see email trail below - was 'hoping we can get the report on our Track and dogs here. It would help us a lot and we want to get this feedback as we have already started implementing changes here'.

Paul's request and subsequent feedback is: An external facing document we can issue to Vietnam that provides sufficient context and detail recommendations and implementation path. He indicated that a package of tools to assist them is desired keeping in mind and cultural sensitivities and language barriers.

Your understand below appears to align with Paul's request.

Happy to discuss further and thanks so much.

Kind regards

sandy natarajan
EXECUTIVE MANAGER
greyhound racing new south wales
Building B | 1 Homebush Bay Drive Rhodes NSW 2138
t: 02 8316 4217 | m: 0429 995 140
website: www.grnsw.com.au

From: Elizabeth Arnott
Sent: Friday, 19 August 2016 12:10 PM
To: Sandy Natarajan
Subject: RE: Confidential FW: Vietnam

HI Sandy,

When you send me through all the relevant info, some clarity on the purpose of the required document would be

great. From what I am understanding it is to act as a guidance piece for the management and husbandry of racing greyhounds with the target audience the employees of the Vietnam racing track/precinct.

Kind regards,
Liz

From: Sandy Natarajan
Sent: Friday, 19 August 2016 12:06 PM
To: Paul Newson
Cc: Elizabeth Arnott
Subject: RE: Confidential FW: Vietnam

Hi Paul,

As discussed yesterday, I have spoken with Liz to arrange for her capability to further develop this piece. Liz will incorporate relevant tools including the socialisation fact sheet and will draw on other tools and recommendations from the revised Code of Practice she has been developing.

I will update you as this progresses.

Sandy

sandy natarajan
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website: www.grnsw.com.au

From: Sandy Natarajan
Sent: Tuesday, 16 August 2016 9:15 AM
To: Paul Newson
Subject: RE: Confidential FW: Vietnam

Hi Paul

Please see a revised version of the document for your review.

Kind regards

sandy natarajan
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website: www.grnsw.com.au

From: Paul Newson
Sent: Monday, 25 July 2016 12:47 PM
To: Sandy Natarajan
Subject: RE: Confidential FW: Vietnam

Sandy disappointing progress with this work. I have made a few comments at page 1 & 2. I have not read further.

paul **newson**
CHIEF EXECUTIVE
greyhound racing new south wales
Building B | 1 Homebush Bay Drive Rhodes NSW 2138
t: 02 8767 0500 | m: 0409 334 919
website: www.grnsw.com.au

From: Sandy Natarajan
Sent: Wednesday, 20 July 2016 9:21 AM
To: Paul Newson
Subject: RE: Confidential FW: Vietnam

Hi Paul

External facing report for your consideration.

Kind regards

sandy **natarajan**
EXECUTIVE MANAGER
greyhound racing new south wales
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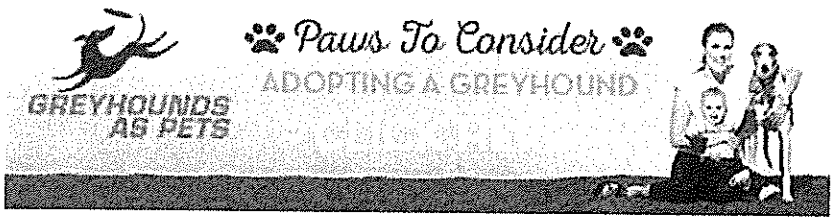
website: www.grnsw.com.au



From: Paul Newson
Sent: Wednesday, 13 July 2016 6:32 AM
To: Sandy Natarajan
Cc: Paul Nahmias; Madeleine Love; Rhonda Blackett
Subject: Confidential FW: Vietnam

Sandy can you please liaise with Paul N in regard to extracting and further developing the recommendations in the Greyhound Racing Vietnam visit report.

We need an external facing document we can issue to Vietnam that provides sufficient context and detail recommendations and implementation path.

Dr Nick Branson is the supporting Vet and Bill Wilson is the track expert.

paul newson
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t: 02 8767 0500 | m: 0409 334 919
website: www.grnsw.com.au

From: Barry Hurst <barry@vabisgroup.com>
Date: Tuesday, 12 July 2016 at 10:01 PM
To: PAUL NEWSON <pnewson@grnsw.com.au>
Subject: Vietnam

Hi Paul.

Sorry to trouble you at this time, we are well aware of the turmoil happening with Greyhounds there at the moment.
We are all hoping that it does not come to the end of Greyhound Racing in NSW .

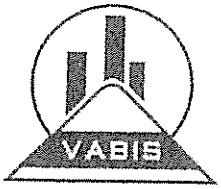
Also hoping we can get the report on our Track and dogs here.
It would help us a lot and we want to get this feedback as we have already started implementing changes here.

Can you let me know when we can expect something from you and I can inform Mr. My.

thanks

regards

Barry Hurst



Property Development
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Mr. Barry Hurst

Agriculture / Development Manager
Mobile: +84 1203 383 163
barry@vabisgroup.com

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info@vabisgroup.com
www.vabisgroup.com

From: Paul Newson
Sent: Wednesday, 13 July 2016 6:32 AM
To: Sandy Natarajan
Cc: Paul Nahmias; Madeleine Love; Rhonda Blackett
Subject: Confidential FW: Vietnam

Follow Up Flag: Follow up
Flag Status: Completed

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GRNSW Delegation
Visit - Vietn...

From: Barry Hurst <barry@vabisgroup.com>
Date: Tuesday, 12 July 2016 at 10:01 PM
To: PAUL NEWSON <pnewson@grnsw.com.au>
Subject: Vietnam

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thanks

regards

Barry Hurst

Mr. Barry Hurst

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GRNSW DELEGATION VISIT AND INSPECTION OF

- BA-RIA KENNEL FACILITY; AND
- VUNG TAU LAM SON GREYHOUND RACETRACK

VIETNAM, 4-5 JUNE 2016

1. OVERVIEW

Greyhound racing in Vietnam is operated by the Vietnam Racing Club, which bears an image of a racing thoroughbred racing greyhound as its logo, and is effectively managed by Mr. Nguyen Ngoc My (The Operator) through companies VabisGroup and Sports & Entertainment Services (SES), under the auspices of a pilot project authorized by the Government of Vietnam. Racing is presently only conducted at one racetrack (Lam Son) in Vung Tau, a seaside resort town some two hours drive south southeast from Saigon. As gambling remains prohibited under the constitution of Vietnam, limited gambling through a totalisator system is permitted only under this pilot project concession.

The operator established his business operations in Vietnam in 1993, having migrated back from Australia where he had run a construction concern in New South Wales. He is very well versed in business operations and maintains a significant business and political network across both countries.

Due to the local government's intention to resume the racetrack for other purposes, the operator has been granted use of a prime waterfront location whereupon he intends to build a new racetrack as part of a large five-star hotel and apartment complex. The land itself is yet to be cleared for development however his plans for the site have been extensively prepared.

1.1 GRNSW Visit

On 4-5 June 2016 a delegation from Greyhound Racing New South Wales (GRNSW), consisting of a veterinarian, a track expert and a legal/policy officer, conducted a visit to the Vung Tau Lam Son Stadium racing facility and Ba Ria kennel facility, in the vicinity of Saigon, Vietnam. The delegation obtained the services of an independent interpreter for the visit as recommended by the Australian Consulate in Saigon.

Although the delegation was afforded access to the sites at both Vung Tau and Ba Ria, members were significantly curtailed in relation to access to specific areas, inability to obtain photographs, and inability to obtain information from various officials at the Ba Ria facility. Furthermore no access was permitted to any documentary records at either facility, although the presence of detailed logbooks relating to injury and treatment records of racing greyhounds was visually confirmed by the delegation at the Ba Ria site.

A second visit to the Ba Ria facility on 5 June 2016 was facilitated after some discussion, whereby the delegation was permitted to take photographs with some restrictions. The delegation's veterinarian Dr Nick Branson was again not permitted to question officials at Ba Ria about veterinary treatment of greyhounds at the site.

The delegation visited a race event at the Vung Tau Lam Son Racetrack in the evening of Saturday 4 June 2016 in the company of the operator.

Betting is limited to a totalisator operation offered in both a general viewing area as well as a VIP section (entry for 60,000 VND – AUD 3.60) on the upper level of the viewing building. Bets can be placed at a minimum of 20,000 VND (AUD1.20) with no apparent maximum bet allowable. Betting slips are freely available, with a maximum bet value indicated thereupon of VND5,000,000 (AUD300.00).

Initial discussions with the operator at his offices in Saigon indicated that betting was conducted under a pilot project and restricted to very low amounts, however there did not appear to be any such official restriction.

The operator's principal business is an outsourcing service for online sports wagering. He claimed that this enterprise handled sports gambling services for thirty countries, and managed all aspects of the operations aside from money, as gambling remains illegal in Vietnam.

The principal explanation for the pilot project with greyhound wagering was that totalisator betting was deemed to be a form of 'investment' rather than gambling, essentially due to the wording on betting slips observed by Vietnamese lawmakers at the time authorization was granted. The operator indicated that gambling operations retain 30% of takings from the totalisator for taxes, wages and operating expenses. 70% of takings are returned to totalisator investors in the form of winnings. The operator stresses that he subsidises the loss-making operation as a hobby, costing him the order of USD45,000 per month.

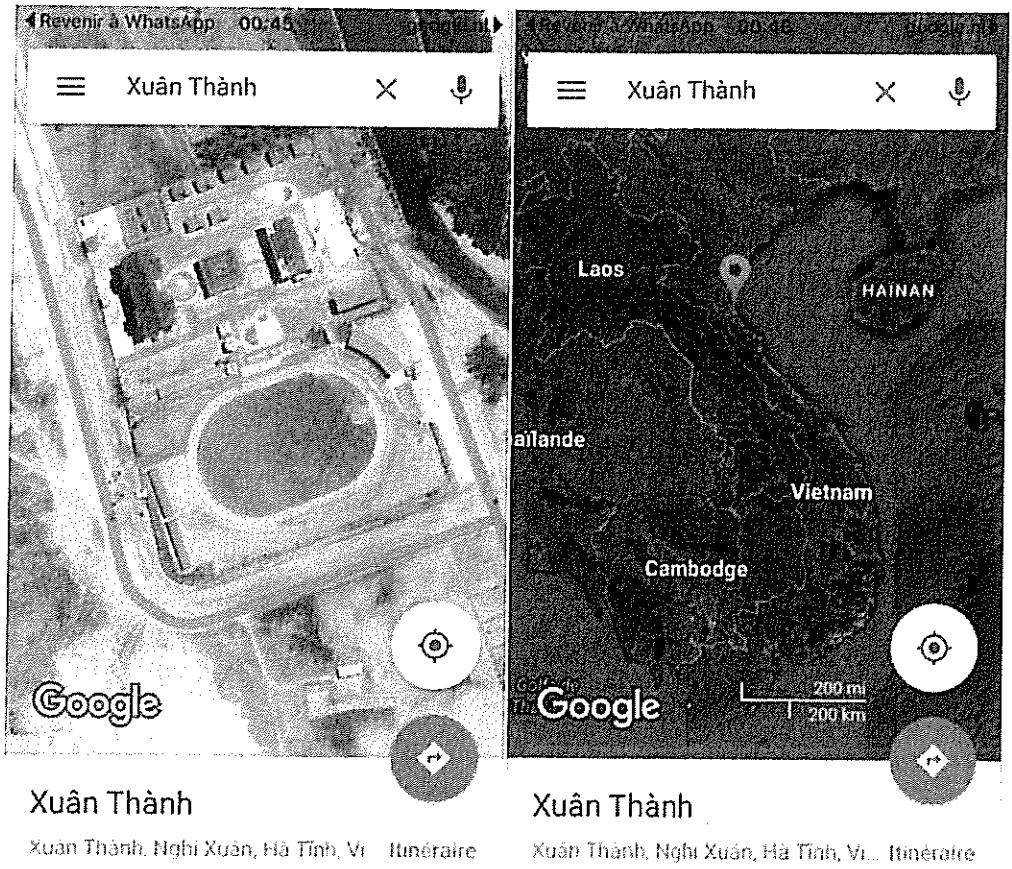
The operator advised that there was no risk of doping or other performance enhancement as all greyhounds were centrally owned. The delegation was further advised that there was no prize money on races. This two elements were contradicted by the operator's subsequent explanation that a number of foreign diplomats had 'bought a stake' in racing greyhounds at USD800.00 each. Furthermore a brief examination of the Vietnam Racing Club's social media presence revealed images illustrating prize stakes for greyhound racing in Vietnam up to AUD12,000 for the Tet (Vietnamese New Year) Cup in 2013.

The facility appeared to be professionally operated, with races displayed on large screens throughout the facility, local races interspersed with live coverage of races held in Australia. A printed nightly race programme is professionally produced and also displays details of races in Vietnam and Australia in a manner that may seek to indicate a degree of linkage between racing operations in the two countries.

The operator did not make mention of any other greyhound racing facilities in Vietnam during the course of the visit, however members of the GRNSW delegation succeeded in identifying and geo-locating a second facility at Xuan Thanh, in northern Vietnam. It is unknown as to whether this facility has commenced operations, however it does have a social media presence, and appears to have had its construction finalised.

XUAN THANH GREYHOUND

Xuan Thanh Greyhound Racing Logo per social media presence



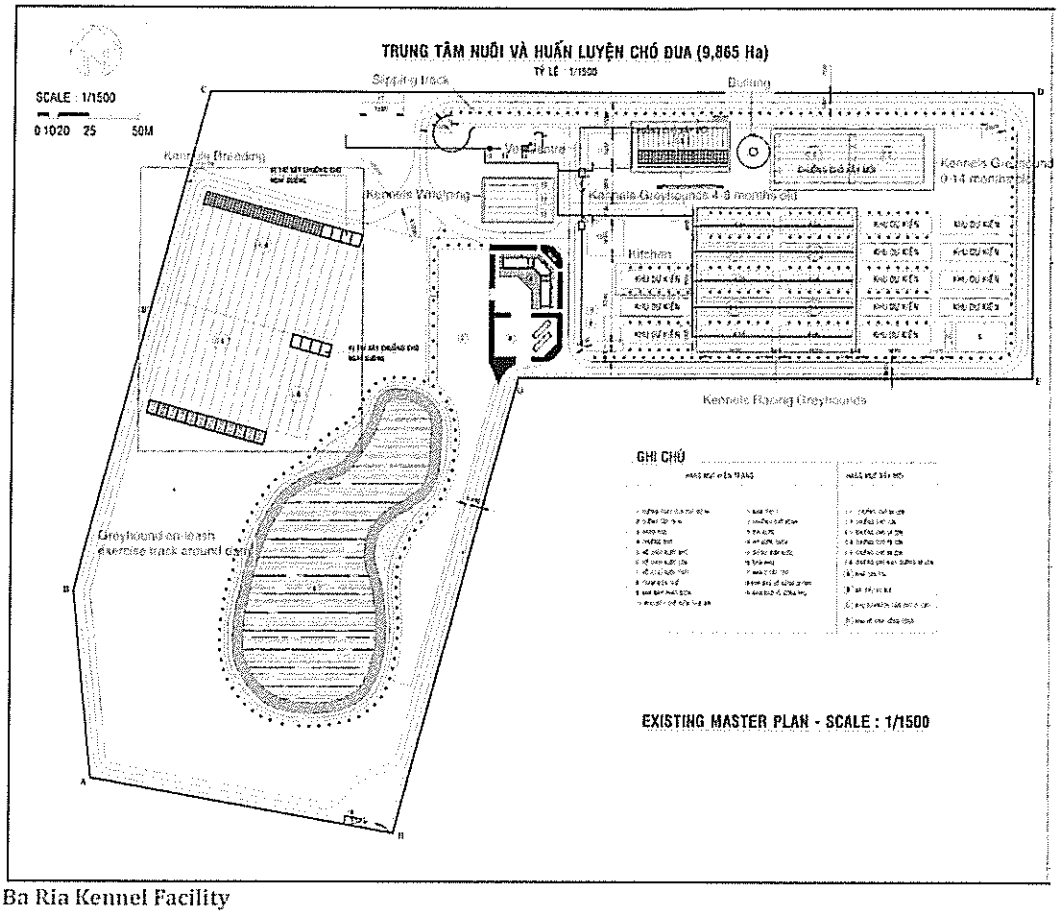
Close up of Xuan Thanh racetrack / Zoom out indicating presence of racetrack in northern Vietnam

Over the course of the visit, the delegation was asked repeatedly about whether GRNSW might be able to afford some assistance in the operator's efforts to lift a blockade, allegedly imposed by Animals Australia and/or other animal welfare activists, which was supposedly preventing the export of a large number of racehorses from Australia to Vietnam. The operator claimed to have been establishing a riding club, and repeatedly claimed not to be interested in horseracing, however these plans had been put on hold due to his inability to get the horses shipped from Australia. He further claimed that the horses were suffering at the property of an associate in Bathurst due to the cold weather, and the delay was causing him extreme concern about their welfare. In the course of this meeting, GRNSW delegation members noticed detailed plans for a thoroughbred racetrack in clear view inside the operator's office in Saigon.

The delegation members assured the operator that they were in no position to exert any influence in this area, and that the purpose of the visit was in relation to greyhound racing operations only.

2. WELFARE INSPECTION – BA RIA FACILITY

The delegation's first visit to Ba Ria was conducted on 4 June 2016 during which photography was not permitted. A plan of the facility was provided as follows:



Ba Ria Kennel Facility

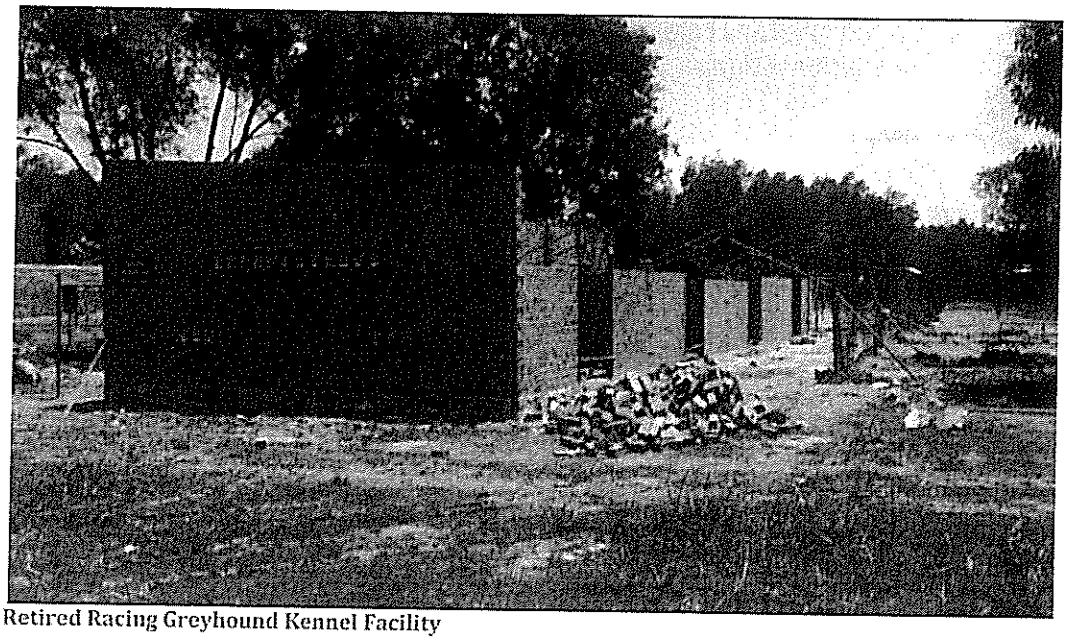
2.1 Kenneling Units

All units used for housing greyhounds at this site except the unit marked 'Kennels Whelping' contain indoor pens or cells connected to an outside run. 'Kennels Whelping' was observed as the only kenneling facility without ready access to an outdoor area for dogs kept within. A bitch was observed with a freshly whelped litter in one cell of this unit.

Access to outdoor runs varied across the other units as follows:

- Kennels Racing Greyhound – unlimited access to inside and outside run.
- Kennels Breeding (male and female) – individually housed in indoor runs with limited (rotated) sole access to outdoor run.
- Kennels Greyhound 4-8 months old – litter group housed in indoor runs with limited (rotated) access as a litter group to the outdoor run.
- Kennels Greyhound 9-14 months old – litter group housed in indoor runs with limited (rotated) access as a litter group to the outdoor run.

The operator drew the delegation's attention to a building that appeared to be under construction yet with no work underway, marked 'Retired Kennel'. No greyhounds were housed or indeed could be housed in this unit at this stage, and no other unit was noted as housing for retired greyhounds.



Retired Racing Greyhound Kennel Facility

2.1.1 Kennels Racing Greyhound (Single Housing)

The ten sheds have been constructed with an internal corridor and twenty runs located on each side of the corridor, making a total of forty runs per shed. The ten sheds thus can accommodate 400 racing greyhounds. Racing greyhounds are provided with unlimited access to an outside and inside area, with the dimensions for the outside area being 1940mm by 1780mm, and the inside area being 1690mm by 1690mm. Greyhounds in this facility had ready access to water and shade. The operator advised that this kennel complex housed 316 racing greyhounds in June 2016.

Exercise:

The operator advised that the racing greyhounds were provided with 3km of daily on-leash exercise around the dam pictured in the schematic map between the hours of 7am and 9am. The greyhounds are also given a swim and massage between those hours.

Given that human pedestrian walking speeds are considered to be around 6km per hour, a crude calculation would mean that is one person were to walk two dogs, they could walk two dogs per hour. Applying this hypothetical scenario to 316 dogs being walked each way between 7am and 9am, 79 people would be required to work continuously walking dogs for two hours. We were advised

that there were 75 kennel staff at the facility, so this scenario is almost mathematically possible.

There is a slipping track at the facility but no information was provided as to when or how it is used in training greyhounds or for fitness maintenance. There was also no information concerning whether greyhounds were transported to the Lam Son stadium (Vung Tau) for fitness maintenance.

Food:

There was no food observed in the dog runs.

Body Conditions:

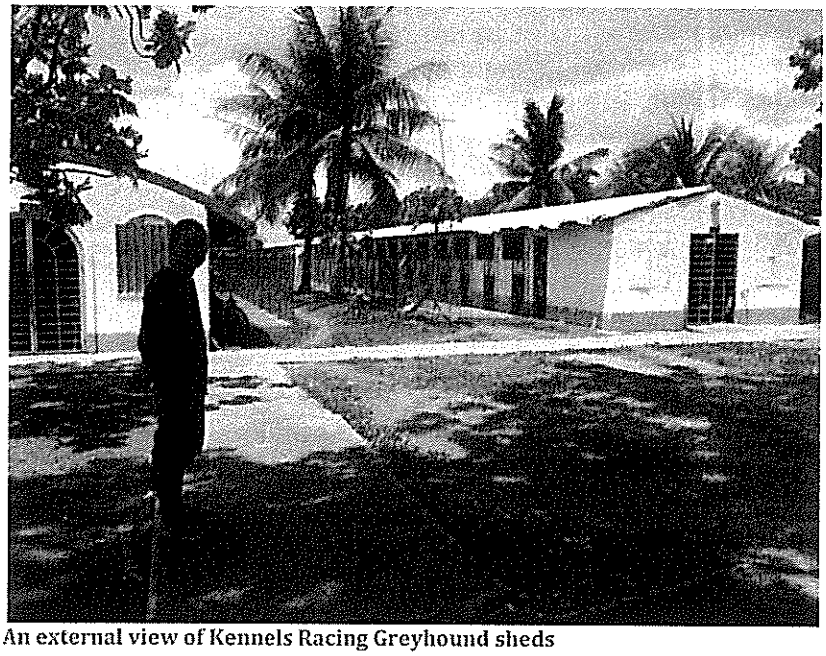
The greyhounds appeared to be in optimal body condition

Kennel Conditions:

Rusty wire with occasional holes. Runs were very clean and appeared freshly washed out prior to the inspection. No soft bedding material was seen in the indoor pens.

Environmental Enrichment:

None



An external view of Kennels Racing Greyhound sheds

2.1.2 Kennels Breeding (single housing)

This unit consisted of two identical sheds, with each shed having 16 outdoor runs joined to an undercover shed with four pens on each side of an internal corridor, providing a total of 8 pens joined to each of the 16 outdoor runs.

Each dog was singly housed in one of the undercover pens, providing accommodation for a potential 256 dogs. The dimension of the pens was 1650mm by 1450mm, with a concrete and wire mesh construction.

All adult breeding greyhounds in this unit were housed individually in the undercover pens. No dogs were in the outside runs, and nor could they access the runs at the time of the inspection. Dogs held in this unit had ready access to water and shade.

Exercise:

The operator advised that dogs are given individual access to the outside run but was unclear as to the frequency and length of time they were permitted to spend there.

Food:

No food was observed in the dog runs or pens.

Body Conditions:

The dogs appeared to be in optimal body condition

Kennel Conditions:

The pens' wire was rusted with occasional holes. Pens were very clean and appeared to have been washed out prior to the inspection. No soft bedding material was seen in the indoor pens.

Environmental Enrichment:

None

Note:

An empty section containing eight pens was observed to be housing chickens, enclosed in a number of individual pens. Chickens were also seen enclosed in two of the 16 outdoor runs, as well as wandering freely at the Ba Ria complex.

The operator requested the deletion of photographs taken of this unit during the second inspection.

2.1.3 Kennels Whelping (bitch + litter)

There were three identical sheds each containing six pens on each side of an internal corridor meaning twelve pens per shed and a total of 36 pens at this unit. Each pen measured 1700mm by 1700mm. There were no outside runs connected to these internal runs. An adult breeding female and puppies observed in one of the pens were not provided with access to an outside run. Dogs kept in this unit had ready access to water and shade.

The operator advised that there were 37 unweaned pups in this unit at the time of the inspection.

Exercise:

The dogs in this unit are not exercised

Body Condition:

The dogs appeared to be in optimal body condition

Food:

There was no food observed in this unit

Kennel Conditions:

Very clean. Unit appeared to have been washed out prior to the inspection. No soft bedding material was seen in the indoor pens.

Environmental Enrichment:

None.

2.1.4 Kennels Greyhounds 4-8 Months Old (litter group)

This unit was made up of one large shed with 18 runs. Each run was connected to a subdivision containing three indoor pens on each side (6 pens per subdivision). The unit could provide housing for a total of 108 litters. Indoor pens measured 1730mm by 1870mm.

A rough head count at the time of the first inspection estimated that there were approximately 200 pups in this unit. The questionnaire responses from the operator indicated the presence of 223 dogs aged between weaning and 12 months of age at the time of inspection.

A head count at the time of the second inspection (subsequent day) estimated the presence of only 40 pups in this unit. No information was forthcoming as to the population discrepancy for this unit between the two inspections.

The dogs housed in this unit had read access to water and shade only when able to access the inside runs. At the time of the first inspection, litters of pups were observed confined to the outside runs only without access to any shade or water. A number of pups were observed clawing at the closed wire gate preventing access to the inside runs where shade and water were available.

Exercise:

The operator advised that litters were given access to the outside runs but no details were forthcoming regarding the frequency and duration of this access.

Food:

There was no food observed in this dog runs.

Body Condition:

The dogs appeared to be in optimal condition.

Kennel Condition:

Wire fencing was observed to be rusty with sporadic holes. Runs were clean and appeared to have been freshly washed out. Sand used for outdoor runs appeared to contain shards of crushed shell material. Concern was raised by the delegation's track expert about potential injuries to dog paws and webbing.

No soft bedding material was seen in the indoor pens.

Environmental Enrichment:

None

2.1.5 Kennels Greyhounds 9-14 Months Old (litter group)

There were two undercover sheds with eight runs connected to each, providing housing for up to 16 litters. Each shed including runs measured 5000mm by 6500mm.

A rough head count during the first inspection indicated that there were approximately 60 pups in this unit. Questionnaire responses from the operator advised that there were 223 dogs between weaning and 12 months of age at the time of inspection. The delegation's estimate at the time of the first inspection was closer to 260.

The dogs housed in this unit had ready access to water and shade only when they were in the inside runs. No dogs situated outside were observed to be in distress at the time of the inspection, however most dogs were kept in the inside section.

Exercise:

The operator advised that the dogs were given individual access to the outside run however the frequency with which this would occur and the length of time they would be allowed out was unclear.

Food:

There was no food observed in these runs

Body Condition:

The dogs appeared to be in optimal body condition

Kennel Conditions:

Wire fencing was rusted with occasional holes. The outside run appeared clean, however sand used in the runs contained what appeared to be small pieces of crushed shell.

Environmental Enrichment:

None.

2.1.6 Kitchen

The kitchen building illustrated in the schematic map was clean and contained a large table piled up with stainless steel food bowls containing a dry dog food and fresh meat. Based on the physical appearance of the dogs observed, the diet provided appears to be meeting their nutritional needs.

2.1.7 Veterinary Centre

The delegation was provided with limited supervised access to the veterinary facility on two separate visits over consecutive days.

The general impression gained from the visit was that it appeared to have been set up as a display, and as such did not convey a sense of being an operational facility. Based on information provided by the operator, the centre is staffed by one nurse and four veterinarians. In Vietnam, there is no requirement for a veterinarian to have completed a tertiary level qualification in veterinary medicine and surgery. The nature of training received by persons introduced to the delegation as veterinarians remains unknown, as the operator permitted only limited conversation with veterinarians through the delegation's

interpreter. The delegation was unable to ascertain with any level of confidence the practitioners' knowledge concerning veterinary matters.

The delegation was prohibited from obtaining any photographs during the first inspection, and was permitted limited photographic opportunities during the second, with a caveat on obtaining any images of medicinal packaging and paraphernalia observed.

The building contained very few items of veterinary equipment that would routinely be seen in a contemporary clinic. Stainless steel examination tables were clean but such slippery surfaces are unsuitable for examining large dogs such as greyhounds. There was a noticeable absence of diagnostic equipment, X ray, ultrasound, or surgical equipment and consumable items such as needles and syringes that would be required for the treatment of greyhounds.

There were two medicine cabinets observed however none of the packages appeared to be open. This conveyed an impression that these were placed there for display purposes only. A locked door marked "Pharmacy" appeared to denote a room for such purpose, however the delegation was prohibited from entering this room.

There were no inpatients in the three hospital cages observed. There were folders observed on shelves however the delegation was prohibited from looking at them or asking any questions of staff in relation to record keeping. Consequently the delegation was unable to ascertain any information concerning the veterinary treatment of sick or injured greyhounds.

2.1.8 Disposal Areas

The video footage shown on the ABC 7:30 episode titled "Australian Greyhounds Deemed to Slow Exported to Macau, China Against Industry Rules" showed deceased dogs being buried in a large hole that appeared to be at the Ba Ria facility (near the upper left quadrant of the schematic map marked C). Yet upon visiting the Ba Ria facility, and also from observation of potential sites of moved earth from historical satellite imagery of the facility, it did not appear that the burial of dogs had occurred at the facility on a regular basis.

The operator advised that deceased dogs were bagged and buried in the lower right quadrant of the schematic map (marked E). An attempt was made by the delegation to conduct a closer observation however the operator, expressing concern about time constraints, hampered access.

The delegation was unable to obtain any further information about the manner of disposal of deceased greyhounds at this facility.

3. VUNG TAU STADIUM

3.1 Transportation of Greyhounds

The Ba Ria facility is located approximately half an hour's drive from the Vung Tau racetrack. For the race meeting attended by the delegation on Saturday 4 June 2016, two buses were used to transport greyhounds between the sites. Greyhounds arrived at the Vung Tau track approximately one hour prior to the commencement of races.

Buses used for greyhounds' transportation are devoid of seats, and instead wire crates had been placed inside, stacked two high on either side of a central corridor. Wire crates were also observed in the luggage storage compartment under the passenger section of the bus.

3.2 Pre Race Preparation and Veterinary Inspection

The pre-race preparation and veterinary inspection appeared to be essentially similar to those conducted at Australian greyhound racing tracks. Prior to the race the dogs were removed from their cages, a muzzle was applied and each dog was scanned for microchip before being moved to the veterinary table. A small number of dogs were bandaged prior to racing. Muzzles were only observed on greyhounds at the racetrack. No evidence of muzzling was seen during two inspections of the Ba Ria facility.

It was not clear as to why dogs were microchipped as the number on the scanner did not appear to be cross checked with any identification documents at the time.

Whilst dogs were on the veterinary table an examination was conducted by the same veterinarian introduced to the delegation at Ba Ria during the first inspection. After the dogs were inspected, they remained in a yard on a lead before being walked out onto the track just prior to the race.

3.3 Post Racing

At the conclusion of the race, dogs were hosed down and then returned to their cages. The delegation was advised that there was a Steward on duty for the race meeting. It was not clear as to who the steward was or whether they were present at the race meeting. It was also not clear whether there was any process in place for dogs to be assessed for injuries by the veterinarian after racing.

3.4 Treatment Room

The same veterinarian allowed access to the veterinary treatment room. The room was presented much in the same way as the veterinary centre at Ba Ria, conveying an impression that it was prepared for display rather than functionality, with a medicine cabinet containing similar drugs as those seen at Ba Ria – drugs bearing little relevance to the likely needs of greyhounds injured at the racetrack. A bottle of a drug named Zoletil that can be used for general anaesthesia in dogs was observed inside the cabinet, however the veterinarian explained that he did not have any needles or syringes on site that would be required to use the drug.

3.5 Puppies on Show in Public Area

The delegation viewed a number of very young pups surrounded by a makeshift wire fence in the public area of the Vung Tau racetrack. It appeared that these pups had been placed there so as to allow children to view and pet them. The pups had no access to water in the makeshift fenced area within which they were confined.

4. VUNG TAU TRACK INSPECTION

The greyhound track facility, located within the old Lam Son Stadium site in Vung Tau, commenced operation in May 2000. The track surface as well as the necessary racing infrastructure was constructed, supplied or supervised by certain personnel and suppliers from New South Wales, including GRNSW veterinarian Dr John Newell and former CEO of the NSW NCA Mr. Phil Bell.

The design and layout of the track is typical to the existing tracks found within the TAB sector of NSW. It is however a smaller circumference at only 396 metres which provides a much tighter circuit than found in NSW.

Another interesting factor which must be considered with regard to track speed and safety is that this design consists of extremely short straights and wider turns, however with no transition from the straights into the turns.

Whilst in the early days of racing at Vung Tau, the racing included 260m, 450m and 630m, currently the only race distance used is 450m.

4.1 Environmental Conditions

The local weather conditions have been taken into consideration in the design and construction of the greyhound track. Vung Tau experiences an annual rainfall of approximately 1550mm per year, including torrential monsoon rains, however the most important consideration in the design and ongoing maintenance of this track are the local evaporation rates which impact directly on the racing surface.

4.2 Historical Injury Rates

It was stated by the operator when asked about fatalities at the Vung Tau track that there had only been one single fatality on the track and two other injuries which resulted in the deaths of dogs over sixteen years of racing since 2000. Of significance is the fact that it was stated that the reason for no other fatalities at the track as a result of racing is due to the dogs in Vietnam, racing at a slower pace than those in Australia. Consequently a low race speed leads to a lower injury rate. The following table illustrates average race times and speeds on comparative tracks in NSW over 450m:

SURFACE TYPE	TRACK	AVE RACE TIME	AVE SPEED KM/HR
SAND	MAITLAND NSW (5th Grade Class)	25.66 seconds	63.13 km/h
SAND	MAITLAND NSW (Maiden Class)	25.73 seconds	62.96 km/h
GRASS	TAMWORTH NSW	26.78 seconds	61.43 km/hr
SAND	VUNG TAU VIETNAM	27.79 seconds	58.29 km/h

This line of logic can best be related to driving a motor vehicle in torrential rain. Speeds may be reduced, yet the likelihood of accident is potentially increased due to overall conditions.

4.3 On Site Inspection

The delegation was given the opportunity to inspect and carry out specific diagnostic tests on the racing surface approximately three hours prior to racing as well as on the following morning post-race. Whilst this opportunity was presented, it was cut short due to time restrictions prior to racing.

4.3.1 Track Monitoring KPIs

A per monitoring tracks within the NSW TAB sector, three specific indicators were measured and observed at the Vung Tau track prior to racing. At this time it would be expected that the track would be in racing condition, that is that the track would have been well watered and prepared leading into the first race.

The visual observation of the track led to the opposite conclusion. The three indicators measured using the identical diagnostic equipment used in NSW were:

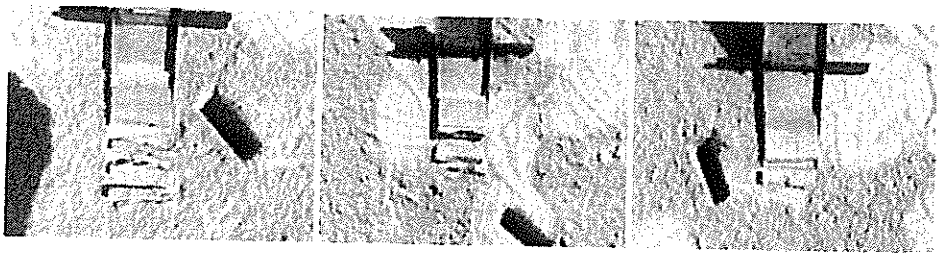
- Profile Layering
- Track Hardness
- Water Content

4.3.2 Profile Layering

Random samples were taken of the track profile using a sand profiler. Information provided previously indicated that the depth of sand was 150mm. Whilst this may have been correct at the time of construction, it appears that over time and due to factors such as heavy rain, lack of regular sand replacement, and track leveling, the profile depth is variable.

The profiles taken and displayed below clearly indicate a track profile that is severely layered. This layering is caused by regular shallow harrowing of the track to depths of no more than 25-40mm.

This layering impacts on track hardness, water infiltration and movement into and through the track profile as well as a direct relationship with racing injuries. It should be noted that the profiles were taken with minimal water content present

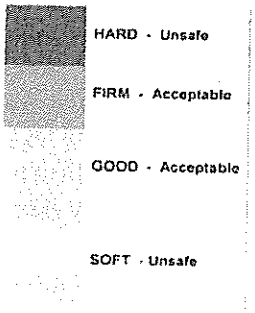


4.3.3 Track Hardness

Upon first analysis the track had a very firm feel, bordering on hard. The standard practice at Vung Tau during track preparation is to lightly harrow and fluff up the surface of the track to provide a slight give in the surface. Below this surface layer the track profile appeared hard.

The penetrometer was used at random locations around the track to measure track hardness. This tool is used to measure the hardness within the top 75mm of the racing track profile, not the actual 25mm or so upon which the dogs race.

The scale used in NSW to assess track hardness is illustrated to the right. The penetrometer readings taken on the Vung Tau track prior to racing averaged at 75, which sits at the line between Firm (60-80) and Hard (over 80). Readings taken the next morning, less than twelve hours after racing, showed an average well into the upper 80s.



There is a proven relationship between track layering and track hardness so these high and concerning readings were not surprising.

4.3.4 Water Content in Track

As illustrated above, there is a direct relationship between track layering, hardness and water content. In short when a track reaches a certain level of hardness beneath the actual surface, water cannot vertically penetrate or infiltrate the track profile.

As per the previous two readings, the identical tool used in NSW for measuring and mapping water content was used at Vung Tau. Whilst time did not allow a complete survey of the track, isolated readings were obtained.

Visual inspection of the track indicated a lack of water within the track profile and racing surface, and the readings taken supported this view. There was variation across the track, yet even with this variation no individual reading exceeded 16% volumetric water content (VWC).

Based on NSW TAB sector tracks, the average water content present in a pre-race situation, whilst varying from different sands, would average at between 30% and 40%. Water content is the single more important track maintenance resource in managing a safe and consistent racing surface.

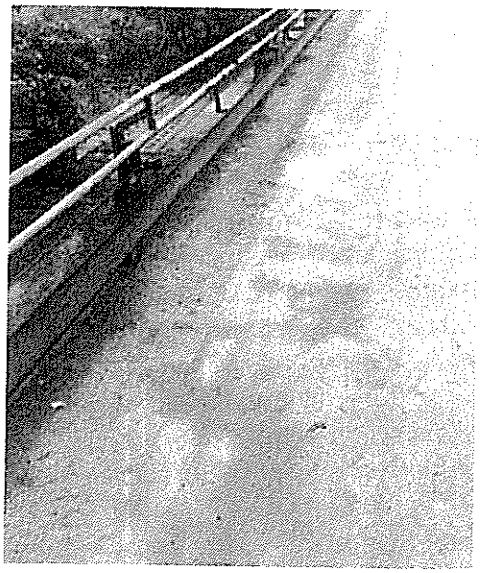
It should be noted that due to the local monsoonal rains and high annual rainfall, no fixed irrigation system is present at Vung Tau. There are fixed watering points and whilst a small isolated area of the home straight was manually watered in the presence of the inspection team, it did nothing to improve the safety and race-ability of the track and, as it was only done for a small area of the track, this practice created inconsistency in the track surface.

4.3.5 Sand Type

No scientific or physical analysis was carried out on the track sand, however the sand appears to be reasonably coarse. It was stated by the operator that the sand was manufactured to represent sands found in NSW back in the late 1990s. Inspection of the sand presents a degree of doubt as to any similarity and so far as present standards in NSW are concerned, the sand would not be acceptable for racing. It was also mentioned that silt and clay was added to the main sand supply in order to provide some water retention and to improve the softness of the track surface.

Sand does not work this way. There was a percentage of aggregate material averaging in size of 10mm, which may have been brought onto the track by tractor, however it is possible that the initial screening process for the original sand may have been deficient.

The illustration to the right shows the residue of silt and clay left near the rail in the swale that has developed from the dogs and lack of adequate track maintenance.



The residue is situated directly where hand watering had taken place, supporting the fact that the track profile is too hard and compacted beneath the surface, whereby much of the water applied inconsistently via hose, manually or even via torrential rainfall, will flow across the track surface taking with it the finer silt, clay and very fine sand particles with it, to be deposited in the lowest areas of the track.

In NSW where the concrete under the rail lure is designed differently, this is where the finer particles would be found. In order to improve the track sand and profile, those fine particles need to be blended back into the track. This point was discussed with the operator during the visit.

4.3.6 Sand Depth

As referred to above, the depth of sand across the total track surface should be a consolidated depth of 150mm, in line with the design specification utilized in 1999/2000. This depth is now variable and this variation compromises all aspects of track maintenance, performance and safety. The operator advised that the track is re-sanded every three years, which is an insufficiently frequent interval to maintain proper track conditions. It was stressed to the operator that sand depth across the track has a direct impact on the important surface grades and cambers, being factors vital in ensuring safe racing conditions.

4.3.7 Surface Grades and Cambers

Inspections of grades or levels by laser and other precision equipment could not be undertaken.

Surface grades and cambers on any track, particularly on turns, are critically important in ensuring that the greyhounds are able to maintain speed and remain on the racing surface as they enter, run through and exit turns (due to the application of centrifugal force).

This is of particular importance at Vung Tau due to the tightness of the overall layout and the drier condition of the texture of the track sand. The cambers to the naked eye appear below the specified grades of 4%, 6% and 8%.

The result of inadequate cambers, together with a unacceptably hard, dry and shifting surface, is that racing greyhounds are more likely to be injured. It is the professional opinion of both the track expert and the veterinarian responsible for this inspection that, despite assurances that the dogs racing at this facility are significantly slower than Australian greyhounds, that each race meeting at this facility would result in a steady stream of injured greyhounds, spanning from muscle strains, split webbing and fractured toes to more serious, life-threatening injuries.

In the course of races being conducted on the track, it was observed that greyhounds were struggling to maintain traction, particularly during the first turn. The noticeable sand displacement and shear on the surface must be addressed at first instance. It was consistently observed that dogs, irrespective of age, breeding or condition, are unable to achieve optimum speed as they are unable to gain any purchase from the track surface. Although slower race times may be positive in some circumstances, whereby injury rates may be reduced, on this particular track it is clear that the risk of injury is significantly heightened purely as a consequence of the track conditions. Concerns about race times are null when faced against considerations of safety and welfare.

Just as greyhounds running wide on the track will be doing so due to the shifting nature of the surface, so too is the likelihood that some will hug the lure rail – possibly coming into contact with the rail itself, leading to injury. Although the

track has a full safety rail installed to prevent dogs from going over the rail, they can still come into contact with the cable

The illustration at left clearly indicates paw prints against the lure rail. It is reasonable to expect that the dog that made those prints would have come into contact at that point.

The illustration at right shows the 'racing' line within 1.5 metres of the rail. The track surface in this area has been dished out to where a noticeable swale is present, which would inevitably create an inconsistent surface for racing greyhounds.

This type of surface irregularity is common on sand tracks where track curators or managers have no hard surface such as concrete to work from in order to maintain the integrity of the surface when dragging or, in this case, lightly harrowing the sand. The principle area of concerns is within the rail shadow line in the illustration at right at the foot of the previous page.

4.3.8 Lure Rail and Safety Rail

The racetrack at Vung Tau is fitted with a current and standard cable lure system and variable electronic motor as per Australian standards. Unlike a number of NSW tracks, this track also installed a total safety rail built in as part of the actual lure post and rail. The lure rail does vary in height from the track surface to the top of the rail and is for the majority of the track at a height of less than the NSW standard of 420mm.

It should be noted that unlike NSW this track has no concrete slab installed beneath the rail, but instead has a concrete kerb with drainage holes cut in to remove excess storm water. The design of the safety rail is safe and functional, and has utilized two separate rails of smaller diameter, as opposed to the larger single rail used in NSW. It should also be noted that in NSW and other states, in

particular Victoria, the safety rail also doubles as the main supply line for the fixed irrigation system.

4.3.9 Track Maintenance and Preparation

The current track maintenance and preparation procedures have developed over a period of time since the original construction of the track, without the input of external experts whom would be required to monitor the performance in line with expectations of change in the track surface over time. Following the construction of the track, a maintenance schedule was allegedly provided to the operator. Although the delegation was not provided with a copy of such schedule, its relevance in relation to present day standards and specifications would be questionable.

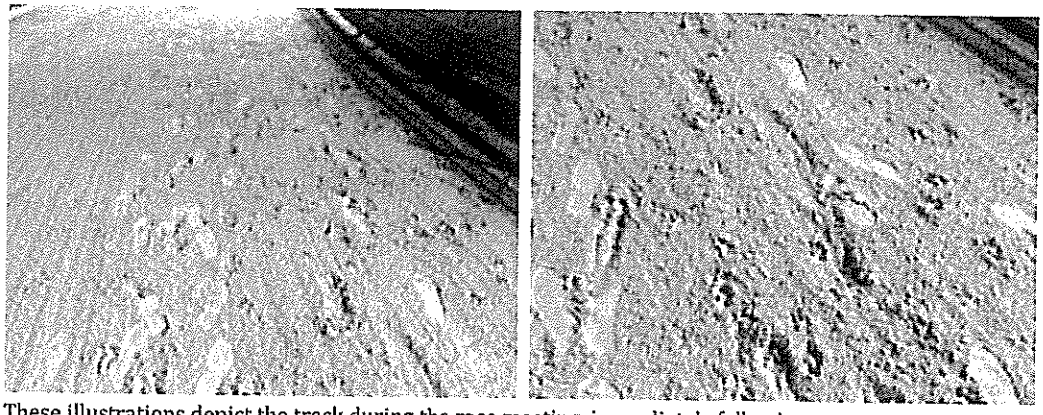
There are two major concerns with the current track maintenance which are closely related and have a direct impact and bearing on the safety of the track:

- Water application; and
- Sand preparation

There is no permanently fixed irrigation system due to high average annual rainfall. Despite the wetter than usual conditions at this particular facility, if water is not applied to the existing track regularly and consistently, the sand cannot bind. This leads to an unsafe and shifting surface as witnessed at the track during the inspection.

The surface harrowing procedure employed by the track operator both pre race and during race intervals leads to a reduced ability for greyhounds to grip the track. It would be expected that after 5mm of rainfall, the track would be just as unsafe as it would maintain extremely hard underlayers and a very soft, almost boggy, surface level.

A 20mm downpour may result in better conditions as the perimeter drainage system would remove surface water, and yet more of the water would be absorbed into the lower layers of the track.



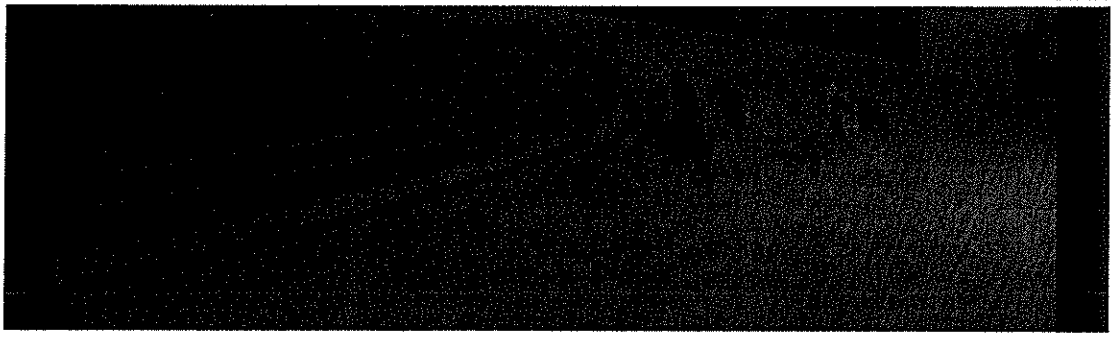
These illustrations depict the track during the race meeting, immediately following a race.

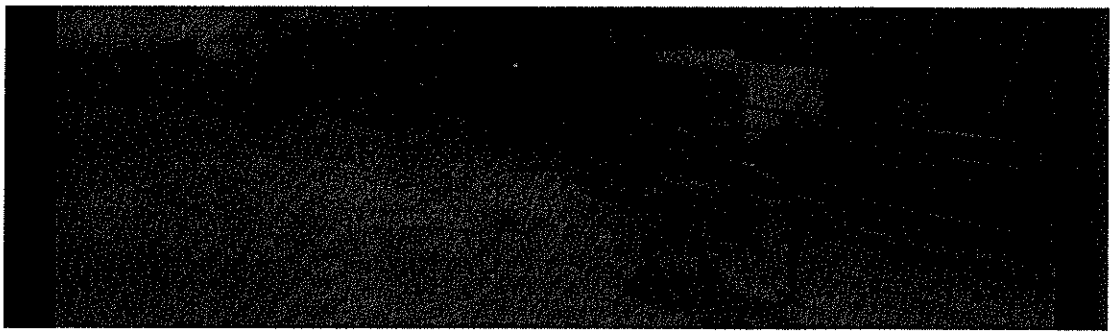
This is a difficult principle to explain in Australia or Vietnam. If the operator were to visit the beachfront at Vung Tau, they would observe three separate degrees of water content in the sand:

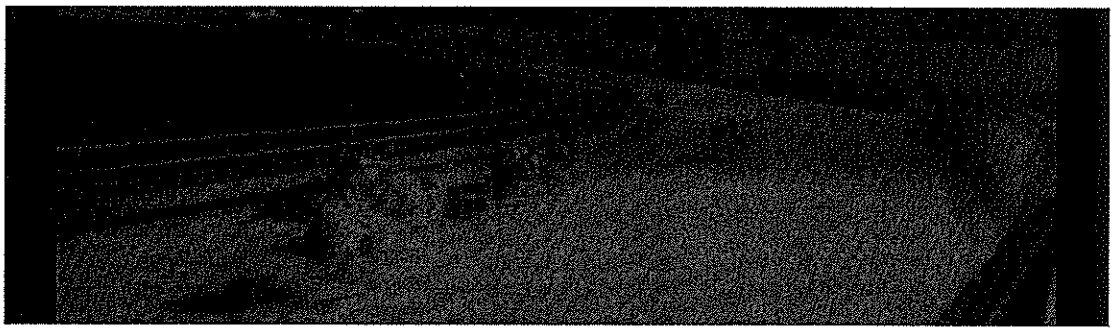
- Saturated – where the tide is lapping the sand (safe to race)
- Field capacity – where the tide has receded and the sand is firm to walk on (ideal to race); and
- Wilting point – where the sand is dry and shifting as the water is unable to reach it.

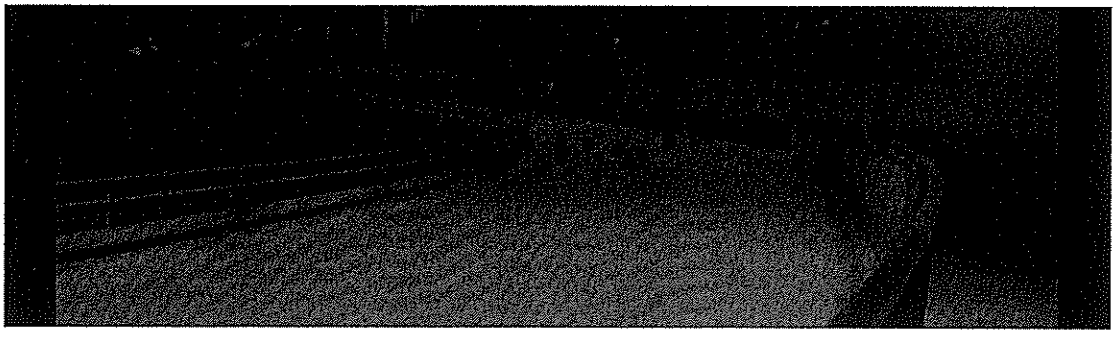
The current condition of the Vung Tau track is best described closest to the third degree of water content, which is unacceptable from any perspective unless slower times are the principle objective. It must be noted that these slower times are coupled with an increase in actual race injuries, irrespective as to the predominance of minor race injuries. No documentation was provided by the operator to allow for analyses of injury rates, or indeed to substantiate the claim of only three fatal injuries being suffered in sixteen years of track operation.

4.3.10 Stills of Race Video Obtained on Saturday 4 June 2016









5. RECOMMENDATIONS

5.1 Welfare Recommendations

The Five Freedoms represent an internationally accepted framework for assessing whether the basic needs of animals are being met by humans. Thus they provide a robust reference point from which to assess the welfare of racing greyhounds in Vietnam.

The Five Freedoms are:

1. Freedom from hunger or thirst by ready access to fresh water and a diet to maintain full health and vigour.
2. Freedom from discomfort by providing an appropriate environment including shelter and a comfortable resting area
3. Freedom from pain, injury or disease by prevention or rapid diagnosis and treatment
4. Freedom to express normal behaviours by providing sufficient space, proper facilities and company of the animal's own kind
5. Freedom from fear and distress by ensuring conditions and treatment which avoid mental suffering

Based on the Five Freedoms model, the following section highlights concerns that racing greyhounds in Vietnam are not being kept in conditions that ensure high welfare standards are maintained.

5.2 Key Points

The key points of concern about greyhound welfare are listed as follows:

i. Co-housing of compatible dogs should be adopted as standard practice for greyhounds at all stages of their lifecycle.
ii. Transportation - Dogs on the bottom row of wire crates being urinated and defaecated upon by dogs in the top row of wire crates
iii. An environmental enrichment and socialisation program should be adopted
iv. Water and Shade should always be provided
v. Veterinary treatment program and veterinary expertise is unclear
vi. Euthanasia protocol is unclear (The way that greyhounds are disposed of after euthanasia is also unclear)

5.2.1 Co-housing of compatible dogs should be adopted as standard practice for greyhounds at all stages of their lifecycle

At the Ba Ria facility, greyhounds are housed with litter mates until they begin to race. From this point in the dog's lives onwards, it appeared that they are singly

housed at all times. The Ba Ria facility does not currently have an off-leash exercise area for the greyhounds. The delegation was advised that part of the plan to build a kennel block for retired greyhounds includes the development of the Ba Ria facility as a tourist destination for visitors to interact with the greyhounds.

Recommendation:

An off-leash exercise area should be established so as to allow all compatible adult greyhounds (racing and retired) to interact socially with other greyhounds on a regular basis.

5.2.2 Transportation welfare concern: dogs on the bottom row of wire crates being urinated and defaecated upon by dogs in the top row of wire crates

Greyhounds should never be housed in wire crates underneath another greyhound without a solid barrier preventing them being urinated and defaecated upon by dogs caged above.

Recommendation:

A solid barrier should be inserted between upper and lower wire cages that are stacked for housing greyhounds.

5.2.3 Requirement for an environmental enrichment and socialisation program

Environmental enrichment refers to the provision of both social and physical items to stimulate the brain of captive animals. The greyhounds at the Ba Ria facility were held in empty wire and concrete pens without any form of environmental enrichment other than a water bowl. Ba Ria management advised that although at one stage they had provided beds for the greyhounds, they no longer did as the greyhounds preferred to lie on the cool concrete. From an animal welfare perspective, this decision is considered to be inherently short-sighted as it removes the opportunity for the individual greyhound to have a choice about where it lies down. The issue of choice is considered to be a very important part of environmental enrichment.

The sensitive period of development describes the time of rapid brain development at which optimal socialisation occurs, and dogs most readily learn about new stimuli. It has been found that a window of opportunity exists, between 3 weeks to 14 weeks, during which optimal socialisation effects can be fully realised. Socialisation is a very important part of a racing greyhound's development. It did not appear that a planned program had been developed to meet the need for socialisation of puppies being reared at the Ba Ria Kennels.

Recommendation:

Expert outside assistance be sought by Ba Ria management to develop an environmental enrichment and socialisation program for greyhounds.

5.2.4 Access to water and shade should always be provided

The practice of locking litter of puppies in the outside runs without water and shade is unacceptable.

Recommendation:

Water and shade must be provided for greyhounds to access in the outdoor runs at all times. At no stage should greyhounds be restricted to an unshaded area.

5.2.5 Veterinary treatment program and veterinary expertise is unclear

Vietnam's Law on Animal Health was passed on June 19, 2015 and will be effective from 1st July 2016. An unofficial translation of this Law sourced from the USDA Agricultural Service is attached to this document.

Article 108 provides information regarding conditions for veterinary practitioners and for veterinary practice organisations as:

- *For individual veterinary practitioner:*

> *a) To have professional certificate suitable to each the type of veterinary practice.*
> *b) To have professional morality.*
> *c) To have a good health for practice.*

- *For veterinary practice organizations:*

> *a) To have technical staff meeting requirement regulated at Clause 1 this Article;*
> *b) To have facilities, technology suitable to types of practice as regulated by legislation.*

- *The Government shall regulate details for this Article.*

The translation of Vietnam's Law on Animal Health refers to the list of Veterinary Drugs Permitted for Circulation in Vietnam and the list of Prohibited Veterinary Drugs in Vietnam. Sodium pentobarbitone is currently on the list of Prohibited Veterinary Drugs in Vietnam.

Recommendation:

Expert outside assistance should be sought by Ba Ria facility management in order to ensure that the level of veterinary care and equipment and medication available for the treatment of greyhounds is in line with best practice.

5.2.6 Euthanasia Protocol

There are four criteria that must be satisfied to ensure that a method used to kill an animal is humane and therefore, can therefore be referred to as euthanasia ('a good death'). The method must:

- be painless
- achieve rapid unconsciousness followed by death
- minimise fear and distress
- be reliable and irreversible

The drug of choice for euthanasia of greyhounds is sodium pentobarbitone, however in Vietnam it is listed as a banned substance and cannot be used. Due to the conflicting nature of the information that was presented to the delegation, it was not possible to draw a conclusion regarding how greyhounds are disposed of in Vietnam and therefore, whether or not they are effectively euthanased.

The sources of information available regarding the fate of greyhounds in Vietnam are restricted to the following:

A) Observations of secretly recorded footage as broadcast in Australia on ABC 7:30 in December 2015.

This footage showed greyhounds being injected with approximately 10mls of a light brown coloured liquid described by the voiceover as Ecotraz, an insecticide registered for external (skin) use only. The product datasheet for Ecotraz 125 and 250 describes it as a light brown liquid.

The toxicology of Ecotraz was investigated further by the veterinary expert attached to the delegation.

Toxicity of Ecotraz in dogs:

http://parasitipedia.net/index.php?option=com_content&view=article&id=2690&Itemid=2961

This reference states that the oral LD 50 of Ecotraz in dogs is 100mg/kg. This means that when dogs are given Ecotraz by mouth, 50% of the dogs will die if they consume 100mg/kg. For a medium sized (30 kg) greyhound, this calculates to be 3000mg Ecotraz.

'Ecotraz 250' contains 250mg/litre. This means that approximately 12 litres of the product 'Ecotraz 250' would need to be consumed by mouth for half of the dogs to die.

Ecotraz cattle pour-on 2g/litre:

http://www.ecoanimalhealth.com/_assets/documents/38.pdf.

This equates to 1.5L/dog orally

http://parasitipedia.net/index.php?option=com_content&view=article&id=2690&Itemid=2961

B) Conversation with Ba Ria Facility Veterinarian

On the first inspection of the Ba Ria facility on Saturday 4 June 2016, the operator gave permission for delegation member Dr Nick Branson to ask the veterinarian on site about the euthanasia protocol for sick or injured dogs at the kennels.

Communicating via the delegation's independent interpreter, the veterinarian advised that they did not euthanase dogs at Ba Ria, and that any sick or injured dogs would be transferred to 'an Institution'. Although it was not made clear what this reference to 'an Institution' meant, it appeared to refer to a different location to Ba Ria, and that euthanasia of sick or injured dogs was not carried out at Ba Ria.

This conversation had barely commenced at which time the operator entered the room and prohibited the veterinarian from answering any more questions. A brief conversation via the interpreter was held subsequently at the Lam Son (Vung Tau) Stadium about the protocol for the euthanasia of greyhounds injured at the racetrack with the same vet. He said that greyhounds injured at the track would not be euthanased at the track, but rather that they would be transported to the Ba Ria Kennels. This statement appeared to contradict the explanation given about the way an injured dog at Ba Ria would be managed, in that the dog would be transferred to 'an institution'.

On Sunday 5 June 2016, during the second inspection to the Ba Ria facility the delegation was shown a bottle of Zoletil (an anaesthetic agent) and also some sachets of magnesium sulphate powder. The use of these two agents in combination has been described as Conditionally Acceptable by the World Society for the Protection of Animals (WSPCA) in a document titled *Methods for the Euthanasia of Dogs and Cats: Comparison and Recommendations.*

The protocol involves the dog firstly being injected with Zoletil to induce a state of general anaesthesia or unconsciousness. The dog is then injected intravenously with magnesium sulphate to cause death by cardiac arrest (heart attack). The use of magnesium sulphate without first inducing unconsciousness is considered inhumane.

There are logistical, practical and cost concerns associated with this euthanasia protocol, The requirement for the use of an anaesthetic drug before injecting magnesium sulphate adds to both the time taken to perform euthanasia and to

its cost. It is critical that the person responsible can competently assess anaesthetic depth in a dog to make sure that surgical depth of anaesthesia has been achieved before an injection of magnesium sulphate is given to a dog.
Magnesium sulphate is available commercially as an injectable solution and a powder. The powder does not dissolve readily in water and it is recommended that boiling water should be used. This would then need to be cooled prior to it being injected into a dog. Once it is diluted in water, the magnesium sulphate solution is very thick and this makes it difficult to inject intravenously. Large volumes are required for euthanasia and the dose required to cause death varies between individuals – a 30kg greyhound might require 40-80mls injected intravenously to cause death. Significant skill, care and special equipment would need to be on-hand to ensure that such a large volume of magnesium sulphate could be delivered accurately and consistently.

The potential exists for dogs to experience a painful death with this euthanasia technique.

Recommendation:

As it is illegal to use sodium pentobarbitone in Vietnam, in the first instance, an alternative protocol should be developed. The combination of Zoletil to induce general anesthesia followed by magnesium sulphate to stop the heart could be adopted however, as described above, there are a number of concerns associated with this method. To ensure that this method could be adopted a number of additional steps are required:

- Investigating whether injectable solutions of magnesium sulphate are available in Vietnam and can legally be used for animal treatment

- Competency assessment to ensure that the person who will be injecting the greyhounds is able to assess that a suitable depth of anaesthetic has been reached before magnesium sulphate is injected

- Investigating and sourcing the equipment that is required to euthanase the greyhounds using this method.

- Ensuring that all of the equipment and drugs required to euthanase greyhounds using this method is always available at both the Ba Ria Kennels and the Lam Son Stadium

- Ensuring that a person who is competent to euthanase a greyhound with this protocol is available when required.

It is also recommended that Ba Ria facility management should contact the Department of Animal Health for advice regarding the procedure described in *Article 78 General Regulation on Vet Drug Management*, as is required to be followed, in order to submit an application for an import permit for sodium pentobarbitone.

5.2 Track Maintenance Recommendations

5.2.1 Track Monitoring

- Develop and implement a recording procedure for track profile and track hardness
- Purchase necessary diagnostic tools to monitor track profiles and hardness (approx. USD550)
- Train track staff to use and understand monitoring procedures and how to interpret results
- Monitor injury rates to track conditions

5.2.2 Sand Type

- Test sand composition (physical analysis) at least twice yearly
- Purchase set of sand sieves to monitor track composition monthly (approx. USD1200)

5.2.3 Sand Depth

- By using a sand profiler as above, track staff can monitor sand depth and maintain as required
- Apply sand to track as required to ensure consistent depth
- Track should be blended using a rotary hoe or similar at least annually, if not more regularly

5.2.4 Surface Grades & Cambers

- When applying new sand, surface grades and levels must be checked and reinstated if required
- If machinery is not available, it can be done satisfactorily with labour and string-lines
- The more frequently surface grades are attended to, the less work required and the safer the track will be
- Mark on inside and outside concrete kerb, the levels required to ensure necessary grades

5.2.5 Track Maintenance & Preparation

- Train track staff to better understand requirements
- Consider purchase of a water cart which can be towed by tractor to evenly

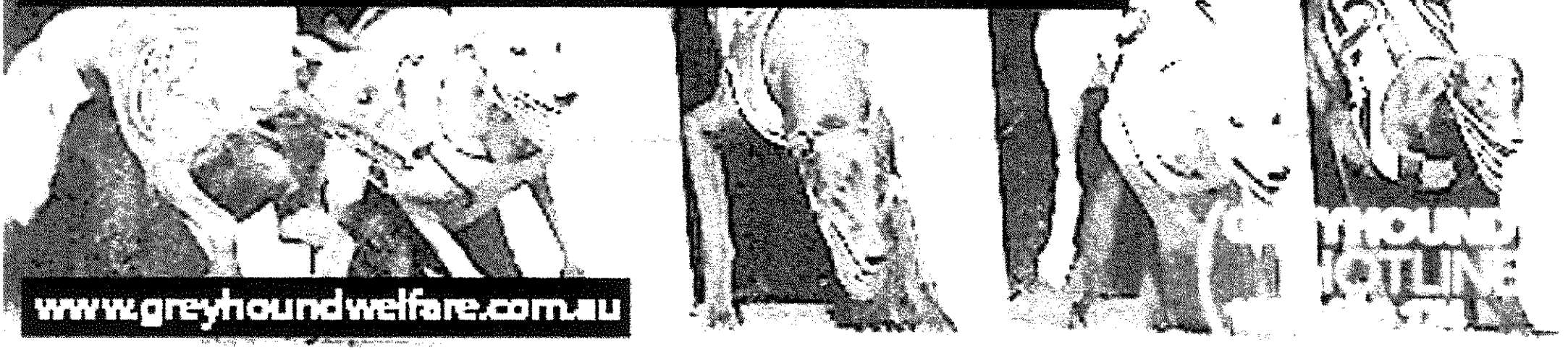
apply water when required

- Consider manufacturing similar track harrow implement to achieve greater depth to soften track
- Consider dragging track to smooth finish as opposed to current harrowed and fluffy surface
- Develop procedures and contact to remain up to date with 'best practice' in Australia

5.2.6 Miscellaneous

- Develop an educational process for track steward(s) and Vets to understand track conditions and relevant and direct impacts on type and frequency of racing injuries
- Develop a simple Cause & Effect table for the above
- Monitor and document all track related injuries for each race meeting

DO YOU HAVE A WELFARE OR INTEGRITY CONCERN ABOUT THE GREYHOUND INDUSTRY?



www.greyhoundwelfare.com.au

HOTLINE

GRNSW DELEGATION VISIT AND INSPECTION OF

- BA-RIA KENNEL FACILITY; AND
- VUNG TAU LAM SON GREYHOUND RACETRACK

VIETNAM, 4-5 JUNE 2016

1. OVERVIEW

Greyhound racing in Vietnam is operated by the Vietnam Racing Club, which bears an image of a racing thoroughbred racing greyhound as its logo, and is effectively managed by Mr. Nguyen Ngoc My (The Operator) through companies VabisGroup and Sports & Entertainment Services (SES), under the auspices of a pilot project authorized by the Government of Vietnam. Racing is presently only conducted at one racetrack (Lam Son) in Vung Tau, a seaside resort town some two hours drive south southeast from Saigon. As gambling remains prohibited under the constitution of Vietnam, limited gambling through a totalisator system is permitted only under this pilot project concession.

The operator established his business operations in Vietnam in 1993, having migrated back from Australia where he had run a construction concern in New South Wales. He is very well versed in business operations and maintains a significant business and political network across both countries.

Due to the local government's intention to resume the racetrack for other purposes, the operator has been granted use of a prime waterfront location whereupon he intends to build a new racetrack as part of a large five-star hotel and apartment complex. The land itself is yet to be cleared for development however his plans for the site have been extensively prepared.

1.1 GRNSW Visit

On 4-5 June 2016 a delegation from Greyhound Racing New South Wales (GRNSW), consisting of a veterinarian, a track expert and a legal/policy officer, conducted a visit to the Vung Tau Lam Son Stadium racing facility and Ba Ria kennel facility, in the vicinity of Saigon, Vietnam. The delegation obtained the services of an independent interpreter for the visit as recommended by the Australian Consulate in Saigon.

Although the delegation was afforded access to the sites at both Vung Tau and Ba Ria, members were significantly curtailed in relation to access to specific areas, inability to obtain photographs, and inability to obtain information from various officials at the Ba Ria facility. Furthermore no access was permitted to any documentary records at either facility, although the presence of detailed logbooks relating to injury and treatment records of racing greyhounds was visually confirmed by the delegation at the Ba Ria site.

A second visit to the Ba Ria facility on 5 June 2016 was facilitated after some discussion, whereby the delegation was permitted to take photographs with some restrictions. The delegation's veterinarian Dr Nick Branson was again not permitted to question officials at Ba Ria about veterinary treatment of greyhounds at the site.

The delegation visited a race event at the Vung Tau Lam Son Racetrack in the evening of Saturday 4 June 2016 in the company of the operator.

Betting is limited to a totalisator operation offered in both a general viewing area as well as a VIP section (entry for 60,000 VND – AUD 3.60) on the upper level of the viewing building. Bets can be placed at a minimum of 20,000 VND (AUD1.20) with no apparent maximum bet allowable. Betting slips are freely available, with a maximum bet value indicated thereupon of VND5,000,000 (AUD300.00).

Initial discussions with the operator at his offices in Saigon indicated that betting was conducted under a pilot project and restricted to very low amounts, however there did not appear to be any such official restriction.

The operator's principal business is an outsourcing service for online sports wagering. He claimed that this enterprise handled sports gambling services for thirty countries, and managed all aspects of the operations aside from money, as gambling remains illegal in Vietnam.

The principal explanation for the pilot project with greyhound wagering was that totalisator betting was deemed to be a form of 'investment' rather than gambling, essentially due to the wording on betting slips observed by Vietnamese lawmakers at the time authorization was granted. The operator indicated that gambling operations retain 30% of takings from the totalisator for taxes, wages and operating expenses. 70% of takings are returned to totalisator investors in the form of winnings. The operator stresses that he subsidises the loss-making operation as a hobby, costing him the order of USD45,000 per month.

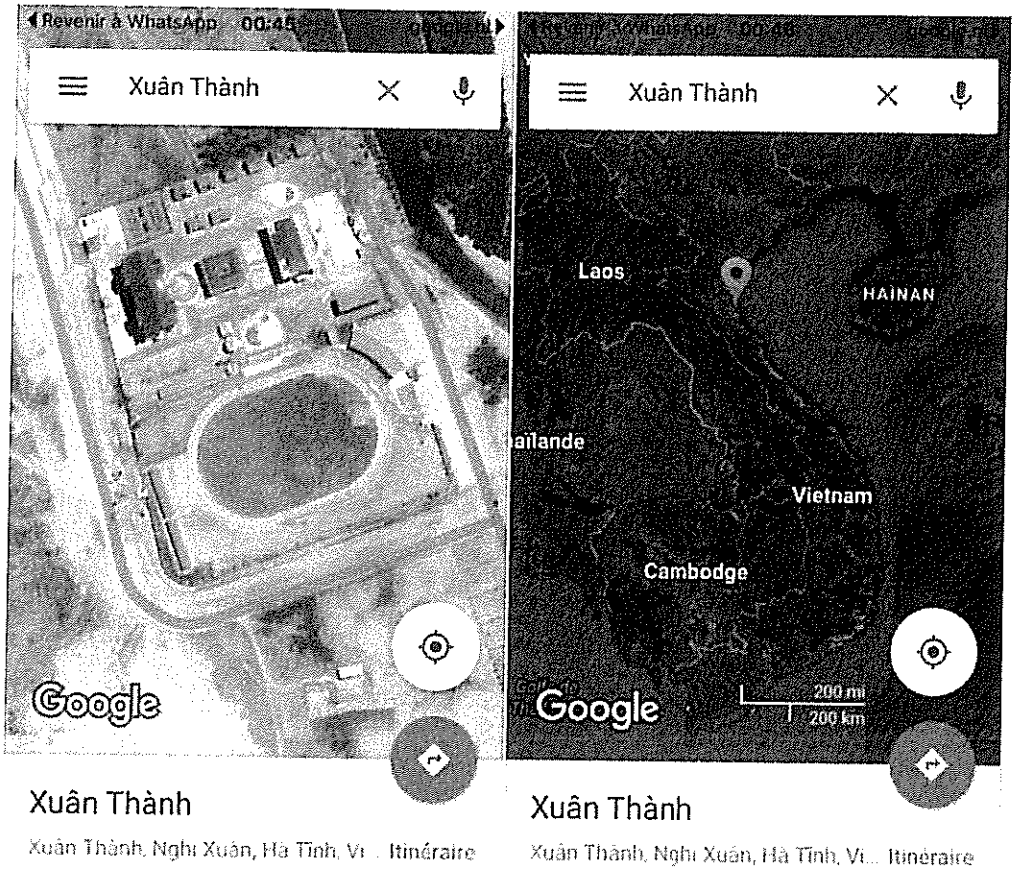
The operator advised that there was no risk of doping or other performance enhancement as all greyhounds were centrally owned. The delegation was further advised that there was no prize money on races. This two elements were contradicted by the operator's subsequent explanation that a number of foreign diplomats had 'bought a stake' in racing greyhounds at USD800.00 each. Furthermore a brief examination of the Vietnam Racing Club's social media presence revealed images illustrating prize stakes for greyhound racing in Vietnam up to AUD12,000 for the Tet (Vietnamese New Year) Cup in 2013.

The facility appeared to be professionally operated, with races displayed on large screens throughout the facility, local races interspersed with live coverage of races held in Australia. A printed nightly race programme is professionally produced and also displays details of races in Vietnam and Australia in a manner that may seek to indicate a degree of linkage between racing operations in the two countries.

The operator did not make mention of any other greyhound racing facilities in Vietnam during the course of the visit, however members of the GRNSW delegation succeeded in identifying and geo-locating a second facility at Xuan Thanh, in northern Vietnam. It is unknown as to whether this facility has commenced operations, however it does have a social media presence, and appears to have had its construction finalised.

XUAN THANH GREYHOUND

Xuan Thanh Greyhound Racing Logo per social media presence



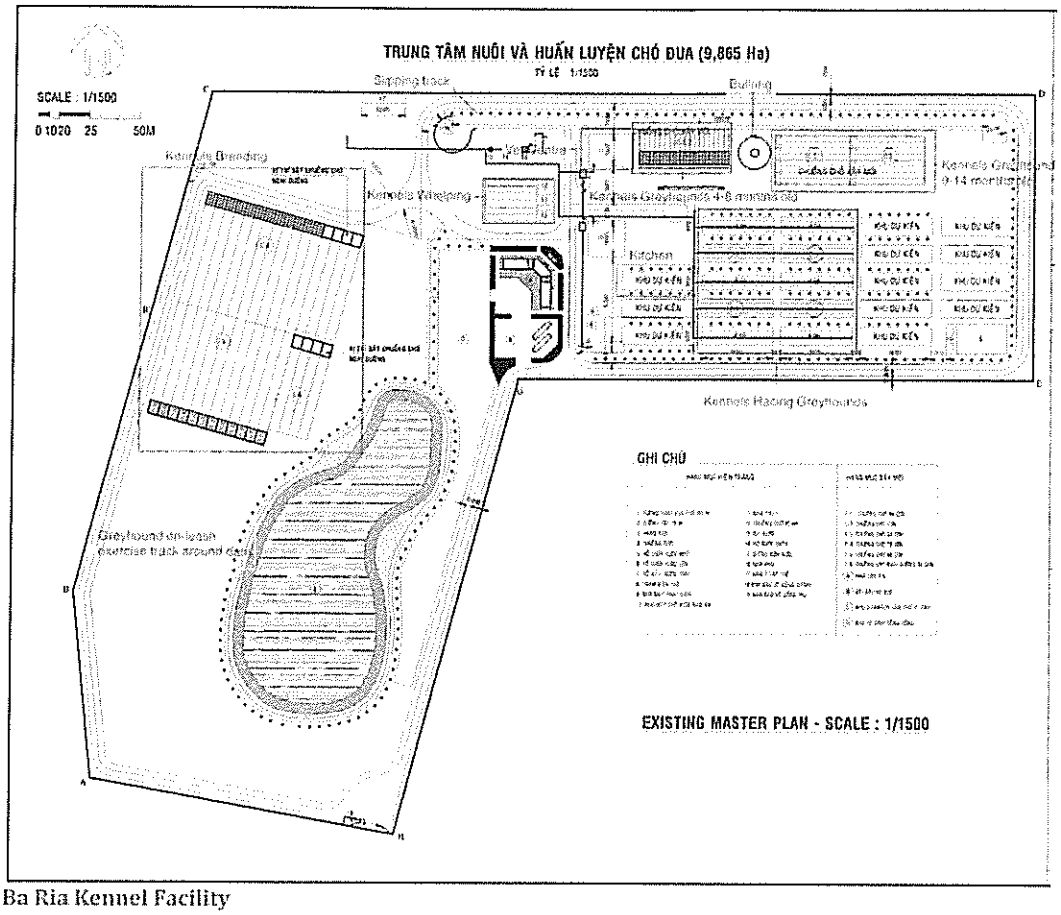
Close up of Xuan Thanh racetrack / Zoom out indicating presence of racetrack in northern Vietnam

Over the course of the visit, the delegation was asked repeatedly about whether GRNSW might be able to afford some assistance in the operator's efforts to lift a blockade, allegedly imposed by Animals Australia and/or other animal welfare activists, which was supposedly preventing the export of a large number of racehorses from Australia to Vietnam. The operator claimed to have been establishing a riding club, and repeatedly claimed not to be interested in horseracing, however these plans had been put on hold due to his inability to get the horses shipped from Australia. He further claimed that the horses were suffering at the property of an associate in Bathurst due to the cold weather, and the delay was causing him extreme concern about their welfare. In the course of this meeting, GRNSW delegation members noticed detailed plans for a thoroughbred racetrack in clear view inside the operator's office in Saigon.

The delegation members assured the operator that they were in no position to exert any influence in this area, and that the purpose of the visit was in relation to greyhound racing operations only.

2. WELFARE INSPECTION – BA RIA FACILITY

The delegation's first visit to Ba Ria was conducted on 4 June 2016 during which photography was not permitted. A plan of the facility was provided as follows:



Ba Ria Kennel Facility

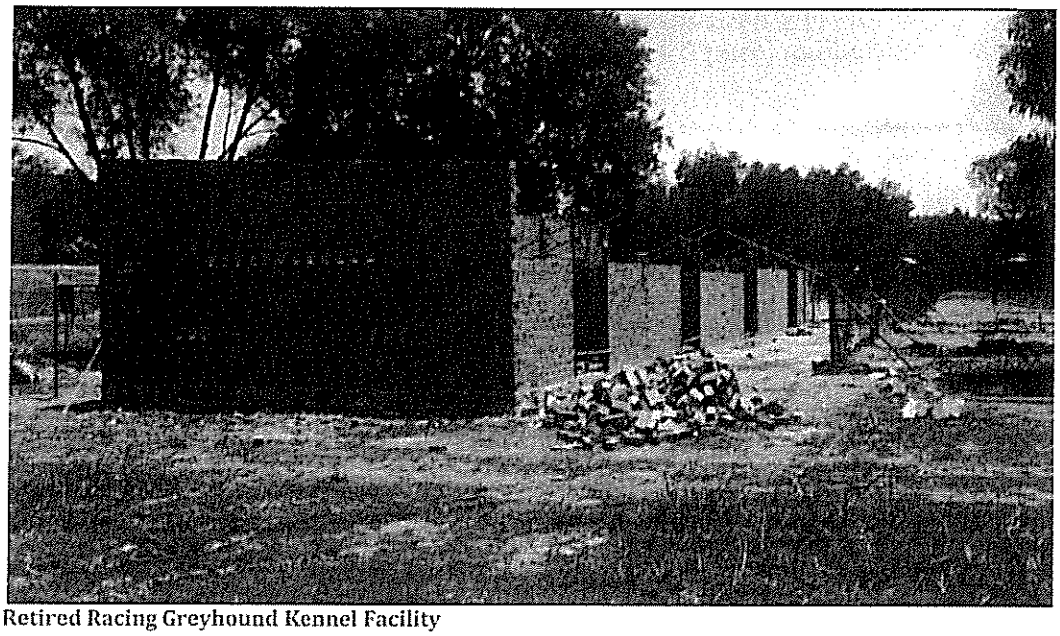
2.1 Kenneling Units

All units used for housing greyhounds at this site except the unit marked 'Kennels Whelping' contain indoor pens or cells connected to an outside run. 'Kennels Whelping' was observed as the only kenneling facility without ready access to an outdoor area for dogs kept within. A bitch was observed with a freshly whelped litter in one cell of this unit.

Access to outdoor runs varied across the other units as follows:

- Kennels Racing Greyhound – unlimited access to inside and outside run.
- Kennels Breeding (male and female) – individually housed in indoor runs with limited (rotated) sole access to outdoor run.
- Kennels Greyhound 4-8 months old – litter group housed in indoor runs with limited (rotated) access as a litter group to the outdoor run.
- Kennels Greyhound 9-14 months old – litter group housed in indoor runs with limited (rotated) access as a litter group to the outdoor run.

The operator drew the delegation's attention to a building that appeared to be under construction yet with no work underway, marked 'Retired Kennel'. No greyhounds were housed or indeed could be housed in this unit at this stage, and no other unit was noted as housing for retired greyhounds.



Retired Racing Greyhound Kennel Facility

2.1.1 Kennels Racing Greyhound (Single Housing)

The ten sheds have been constructed with an internal corridor and twenty runs located on each side of the corridor, making a total of forty runs per shed. The ten sheds thus can accommodate 400 racing greyhounds. Racing greyhounds are provided with unlimited access to an outside and inside area, with the dimensions for the outside area being 1940mm by 1780mm, and the inside area being 1690mm by 1690mm. Greyhounds in this facility had ready access to water and shade. The operator advised that this kennel complex housed 316 racing greyhounds in June 2016.

Exercise:

The operator advised that the racing greyhounds were provided with 3km of daily on-leash exercise around the dam pictured in the schematic map between the hours of 7am and 9am. The greyhounds are also given a swim and massage between those hours.

Given that human pedestrian walking speeds are considered to be around 6km per hour, a crude calculation would mean that is one person were to walk two dogs, they could walk two dogs per hour. Applying this hypothetical scenario to 316 dogs being walked each way between 7am and 9am, 79 people would be required to work continuously walking dogs for two hours. We were advised

that there were 75 kennel staff at the facility, so this scenario is almost mathematically possible.

There is a slipping track at the facility but no information was provided as to when or how it is used in training greyhounds or for fitness maintenance. There was also no information concerning whether greyhounds were transported to the Lam Son stadium (Vung Tau) for fitness maintenance.

Food:

There was no food observed in the dog runs.

Body Conditions:

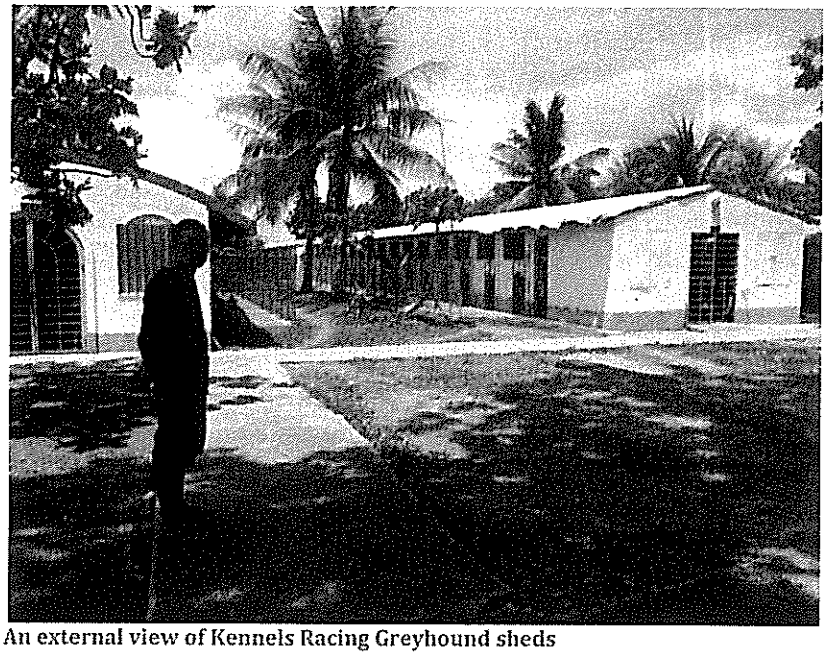
The greyhounds appeared to be in optimal body condition

Kennel Conditions:

Rusty wire with occasional holes. Runs were very clean and appeared freshly washed out prior to the inspection. No soft bedding material was seen in the indoor pens.

Environmental Enrichment:

None



An external view of Kennels Racing Greyhound sheds

2.1.2 Kennels Breeding (single housing)

This unit consisted of two identical sheds, with each shed having 16 outdoor runs joined to an undercover shed with four pens on each side of an internal corridor, providing a total of 8 pens joined to each of the 16 outdoor runs.

Each dog was singly housed in one of the undercover pens, providing accommodation for a potential 256 dogs. The dimension of the pens was 1650mm by 1450mm, with a concrete and wire mesh construction.

All adult breeding greyhounds in this unit were housed individually in the undercover pens. No dogs were in the outside runs, and nor could they access the runs at the time of the inspection. Dogs held in this unit had ready access to water and shade.

Exercise:

The operator advised that dogs are given individual access to the outside run but was unclear as to the frequency and length of time they were permitted to spend there.

Food:

No food was observed in the dog runs or pens.

Body Conditions:

The dogs appeared to be in optimal body condition

Kennel Conditions:

The pens' wire was rusted with occasional holes. Pens were very clean and appeared to have been washed out prior to the inspection. No soft bedding material was seen in the indoor pens.

Environmental Enrichment:

None

Note:

An empty section containing eight pens was observed to be housing chickens, enclosed in a number of individual pens. Chickens were also seen enclosed in two of the 16 outdoor runs, as well as wandering freely at the Ba Ria complex.

The operator requested the deletion of photographs taken of this unit during the second inspection.

2.1.3 Kennels Whelping (bitch + litter)

There were three identical sheds each containing six pens on each side of an internal corridor meaning twelve pens per shed and a total of 36 pens at this unit. Each pen measured 1700mm by 1700mm. There were no outside runs connected to these internal runs. An adult breeding female and puppies observed in one of the pens were not provided with access to an outside run. Dogs kept in this unit had ready access to water and shade.

The operator advised that there were 37 unweaned pups in this unit at the time of the inspection.

Exercise:

The dogs in this unit are not exercised

Body Condition:

The dogs appeared to be in optimal body condition

Food:

There was no food observed in this unit

Kennel Conditions:

Very clean. Unit appeared to have been washed out prior to the inspection. No soft bedding material was seen in the indoor pens.

Environmental Enrichment:

None.

2.1.4 Kennels Greyhounds 4-8 Months Old (litter group)

This unit was made up of one large shed with 18 runs. Each run was connected to a subdivision containing three indoor pens on each side (6 pens per subdivision). The unit could provide housing for a total of 108 litters. Indoor pens measured 1730mm by 1870mm.

A rough head count at the time of the first inspection estimated that there were approximately 200 pups in this unit. The questionnaire responses from the operator indicated the presence of 223 dogs aged between weaning and 12 months of age at the time of inspection.

A head count at the time of the second inspection (subsequent day) estimated the presence of only 40 pups in this unit. No information was forthcoming as to the population discrepancy for this unit between the two inspections.

The dogs housed in this unit had read access to water and shade only when able to access the inside runs. At the time of the first inspection, litters of pups were observed confined to the outside runs only without access to any shade or water. A number of pups were observed clawing at the closed wire gate preventing access to the inside runs where shade and water were available.

Exercise:

The operator advised that litters were given access to the outside runs but no details were forthcoming regarding the frequency and duration of this access.

Food:

There was no food observed in this dog runs.

Body Condition:

The dogs appeared to be in optimal condition.

Kennel Condition:

Wire fencing was observed to be rusty with sporadic holes. Runs were clean and appeared to have been freshly washed out. Sand used for outdoor runs appeared to contain shards of crushed shell material. Concern was raised by the delegation's track expert about potential injuries to dog paws and webbing.

No soft bedding material was seen in the indoor pens.

Environmental Enrichment:

None

2.1.5 Kennels Greyhounds 9-14 Months Old (litter group)

There were two undercover sheds with eight runs connected to each, providing housing for up to 16 litters. Each shed including runs measured 5000mm by 6500mm.

A rough head count during the first inspection indicated that there were approximately 60 pups in this unit. Questionnaire responses from the operator advised that there were 223 dogs between weaning and 12 months of age at the time of inspection. The delegation's estimate at the time of the first inspection was closer to 260.

The dogs housed in this unit had ready access to water and shade only when they were in the inside runs. No dogs situated outside were observed to be in distress at the time of the inspection, however most dogs were kept in the inside section.

Exercise:

The operator advised that the dogs were given individual access to the outside run however the frequency with which this would occur and the length of time they would be allowed out was unclear.

Food:

There was no food observed in these runs

Body Condition:

The dogs appeared to be in optimal body condition

Kennel Conditions:

Wire fencing was rusted with occasional holes. The outside run appeared clean, however sand used in the runs contained what appeared to be small pieces of crushed shell.

Environmental Enrichment:

None.

2.1.6 Kitchen

The kitchen building illustrated in the schematic map was clean and contained a large table piled up with stainless steel food bowls containing a dry dog food and fresh meat. Based on the physical appearance of the dogs observed, the diet provided appears to be meeting their nutritional needs.

2.1.7 Veterinary Centre

The delegation was provided with limited supervised access to the veterinary facility on two separate visits over consecutive days.

The general impression gained from the visit was that it appeared to have been set up as a display, and as such did not convey a sense of being an operational facility. Based on information provided by the operator, the centre is staffed by one nurse and four veterinarians. In Vietnam, there is no requirement for a veterinarian to have completed a tertiary level qualification in veterinary medicine and surgery. The nature of training received by persons introduced to the delegation as veterinarians remains unknown, as the operator permitted only limited conversation with veterinarians through the delegation's

interpreter. The delegation was unable to ascertain with any level of confidence the practitioners' knowledge concerning veterinary matters.

The delegation was prohibited from obtaining any photographs during the first inspection, and was permitted limited photographic opportunities during the second, with a caveat on obtaining any images of medicinal packaging and paraphernalia observed.

The building contained very few items of veterinary equipment that would routinely be seen in a contemporary clinic. Stainless steel examination tables were clean but such slippery surfaces are unsuitable for examining large dogs such as greyhounds. There was a noticeable absence of diagnostic equipment, X ray, ultrasound, or surgical equipment and consumable items such as needles and syringes that would be required for the treatment of greyhounds.

There were two medicine cabinets observed however none of the packages appeared to be open. This conveyed an impression that these were placed there for display purposes only. A locked door marked "Pharmacy" appeared to denote a room for such purpose, however the delegation was prohibited from entering this room.

There were no inpatients in the three hospital cages observed. There were folders observed on shelves however the delegation was prohibited from looking at them or asking any questions of staff in relation to record keeping. Consequently the delegation was unable to ascertain any information concerning the veterinary treatment of sick or injured greyhounds.

2.1.8 Disposal Areas

The video footage shown on the ABC 7:30 episode titled "Australian Greyhounds Deemed to Slow Exported to Macau, China Against Industry Rules" showed deceased dogs being buried in a large hole that appeared to be at the Ba Ria facility (near the upper left quadrant of the schematic map marked C). Yet upon visiting the Ba Ria facility, and also from observation of potential sites of moved earth from historical satellite imagery of the facility, it did not appear that the burial of dogs had occurred at the facility on a regular basis.

The operator advised that deceased dogs were bagged and buried in the lower right quadrant of the schematic map (marked E). An attempt was made by the delegation to conduct a closer observation however the operator, expressing concern about time constraints, hampered access.

The delegation was unable to obtain any further information about the manner of disposal of deceased greyhounds at this facility.

3. VUNG TAU STADIUM

3.1 Transportation of Greyhounds

The Ba Ria facility is located approximately half an hour's drive from the Vung Tau racetrack. For the race meeting attended by the delegation on Saturday 4 June 2016, two buses were used to transport greyhounds between the sites. Greyhounds arrived at the Vung Tau track approximately one hour prior to the commencement of races.

Buses used for greyhounds' transportation are devoid of seats, and instead wire crates had been placed inside, stacked two high on either side of a central corridor. Wire crates were also observed in the luggage storage compartment under the passenger section of the bus.

3.2 Pre Race Preparation and Veterinary Inspection

The pre-race preparation and veterinary inspection appeared to be essentially similar to those conducted at Australian greyhound racing tracks. Prior to the race the dogs were removed from their cages, a muzzle was applied and each dog was scanned for microchip before being moved to the veterinary table. A small number of dogs were bandaged prior to racing. Muzzles were only observed on greyhounds at the racetrack. No evidence of muzzling was seen during two inspections of the Ba Ria facility.

It was not clear as to why dogs were microchipped as the number on the scanner did not appear to be cross checked with any identification documents at the time.

Whilst dogs were on the veterinary table an examination was conducted by the same veterinarian introduced to the delegation at Ba Ria during the first inspection. After the dogs were inspected, they remained in a yard on a lead before being walked out onto the track just prior to the race.

3.3 Post Racing

At the conclusion of the race, dogs were hosed down and then returned to their cages. The delegation was advised that there was a Steward on duty for the race meeting. It was not clear as to who the steward was or whether they were present at the race meeting. It was also not clear whether there was any process in place for dogs to be assessed for injuries by the veterinarian after racing.

3.4 Treatment Room

The same veterinarian allowed access to the veterinary treatment room. The room was presented much in the same way as the veterinary centre at Ba Ria, conveying an impression that it was prepared for display rather than functionality, with a medicine cabinet containing similar drugs as those seen at Ba Ria – drugs bearing little relevance to the likely needs of greyhounds injured at the racetrack. A bottle of a drug named Zoletil that can be used for general anaesthesia in dogs was observed inside the cabinet, however the veterinarian explained that he did not have any needles or syringes on site that would be required to use the drug.

3.5 Puppies on Show in Public Area

The delegation viewed a number of very young pups surrounded by a makeshift wire fence in the public area of the Vung Tau racetrack. It appeared that these pups had been placed there so as to allow children to view and pet them. The pups had no access to water in the makeshift fenced area within which they were confined.

4. VUNG TAU TRACK INSPECTION

The greyhound track facility, located within the old Lam Son Stadium site in Vung Tau, commenced operation in May 2000. The track surface as well as the necessary racing infrastructure was constructed, supplied or supervised by certain personnel and suppliers from New South Wales, including GRNSW veterinarian Dr John Newell and former CEO of the NSW NCA Mr. Phil Bell.

The design and layout of the track is typical to the existing tracks found within the TAB sector of NSW. It is however a smaller circumference at only 396 metres which provides a much tighter circuit than found in NSW.

Another interesting factor which must be considered with regard to track speed and safety is that this design consists of extremely short straights and wider turns, however with no transition from the straights into the turns.

Whilst in the early days of racing at Vung Tau, the racing included 260m, 450m and 630m, currently the only race distance used is 450m.

4.1 Environmental Conditions

The local weather conditions have been taken into consideration in the design and construction of the greyhound track. Vung Tau experiences an annual rainfall of approximately 1550mm per year, including torrential monsoon rains, however the most important consideration in the design and ongoing maintenance of this track are the local evaporation rates which impact directly on the racing surface.

4.2 Historical Injury Rates

It was stated by the operator when asked about fatalities at the Vung Tau track that there had only been one single fatality on the track and two other injuries which resulted in the deaths of dogs over sixteen years of racing since 2000. Of significance is the fact that it was stated that the reason for no other fatalities at the track as a result of racing is due to the dogs in Vietnam, racing at a slower pace than those in Australia. Consequently a low race speed leads to a lower injury rate. The following table illustrates average race times and speeds on comparative tracks in NSW over 450m:

SURFACE TYPE	TRACK	AVE RACE TIME	AVE SPEED KM/HR
SAND	MAITLAND NSW (5th Grade Class)	25.66 seconds	63.13 km/h
SAND	MAITLAND NSW (Maiden Class)	25.73 seconds	62.96 km/h
GRASS	TAMWORTH NSW	26.78 seconds	61.43 km/hr
SAND	VUNG TAU VIETNAM	27.79 seconds	58.29 km/h

This line of logic can best be related to driving a motor vehicle in torrential rain. Speeds may be reduced, yet the likelihood of accident is potentially increased due to overall conditions.

4.3 On Site Inspection

The delegation was given the opportunity to inspect and carry out specific diagnostic tests on the racing surface approximately three hours prior to racing as well as on the following morning post-race. Whilst this opportunity was presented, it was cut short due to time restrictions prior to racing.

4.3.1 Track Monitoring KPIs

A per monitoring tracks within the NSW TAB sector, three specific indicators were measured and observed at the Vung Tau track prior to racing. At this time it would be expected that the track would be in racing condition, that is that the track would have been well watered and prepared leading into the first race.

The visual observation of the track led to the opposite conclusion. The three indicators measured using the identical diagnostic equipment used in NSW were:

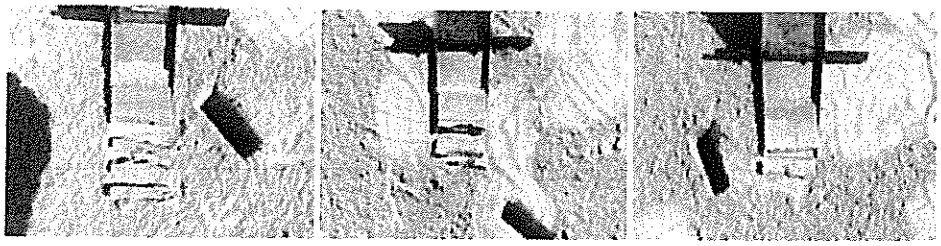
- Profile Layering
- Track Hardness
- Water Content

4.3.2 Profile Layering

Random samples were taken of the track profile using a sand profiler. Information provided previously indicated that the depth of sand was 150mm. Whilst this may have been correct at the time of construction, it appears that over time and due to factors such as heavy rain, lack of regular sand replacement, and track leveling, the profile depth is variable.

The profiles taken and displayed below clearly indicate a track profile that is severely layered. This layering is caused by regular shallow harrowing of the track to depths of no more than 25-40mm.

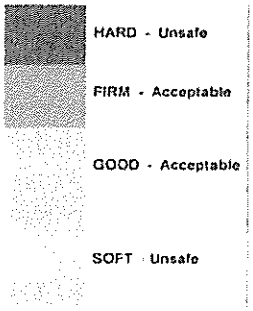
This layering impacts on track hardness, water infiltration and movement into and through the track profile as well as a direct relationship with racing injuries. It should be noted that the profiles were taken with minimal water content present



4.3.3 Track Hardness

Upon first analysis the track had a very firm feel, bordering on hard. The standard practice at Vung Tau during track preparation is to lightly harrow and fluff up the surface of the track to provide a slight give in the surface. Below this surface layer the track profile appeared hard.

The penetrometer was used at random locations around the track to measure track hardness. This tool is used to measure the hardness within the top 75mm of the racing track profile, not the actual 25mm or so upon which the dogs race.



The scale used in NSW to assess track hardness is illustrated to the right. The penetrometer readings taken on the Vung Tau track prior to racing averaged at 75, which sits at the line between Firm (60-80) and Hard (over 80). Readings taken the next morning, less than twelve hours after racing, showed an average well into the upper 80s.

There is a proven relationship between track layering and track hardness so these high and concerning readings were not surprising.

4.3.4 Water Content in Track

As illustrated above, there is a direct relationship between track layering, hardness and water content. In short when a track reaches a certain level of hardness beneath the actual surface, water cannot vertically penetrate or infiltrate the track profile.

As per the previous two readings, the identical tool used in NSW for measuring and mapping water content was used at Vung Tau. Whilst time did not allow a complete survey of the track, isolated readings were obtained.

Visual inspection of the track indicated a lack of water within the track profile and racing surface, and the readings taken supported this view. There was variation across the track, yet even with this variation no individual reading exceeded 16% volumetric water content (VWC).

Based on NSW TAB sector tracks, the average water content present in a pre-race situation, whilst varying from different sands, would average at between 30% and 40%. Water content is the single more important track maintenance resource in managing a safe and consistent racing surface.

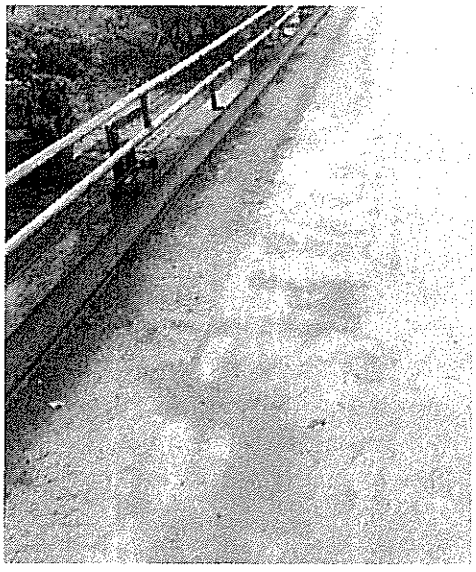
It should be noted that due to the local monsoonal rains and high annual rainfall, no fixed irrigation system is present at Vung Tau. There are fixed watering points and whilst a small isolated area of the home straight was manually watered in the presence of the inspection team, it did nothing to improve the safety and race-ability of the track and, as it was only done for a small area of the track, this practice created inconsistency in the track surface.

4.3.5 Sand Type

No scientific or physical analysis was carried out on the track sand, however the sand appears to be reasonably coarse. It was stated by the operator that the sand was manufactured to represent sands found in NSW back in the late 1990s. Inspection of the sand presents a degree of doubt as to any similarity and so far as present standards in NSW are concerned, the sand would not be acceptable for racing. It was also mentioned that silt and clay was added to the main sand supply in order to provide some water retention and to improve the softness of the track surface.

Sand does not work this way. There was a percentage of aggregate material averaging in size of 10mm, which may have been brought onto the track by tractor, however it is possible that the initial screening process for the original sand may have been deficient.

The illustration to the right shows the residue of silt and clay left near the rail in the swale that has developed from the dogs and lack of adequate track maintenance.



The residue is situated directly where hand watering had taken place, supporting the fact that the track profile is too hard and compacted beneath the surface, whereby much of the water applied inconsistently via hose, manually or even via torrential rainfall, will flow across the track surface taking with it the finer silt, clay and very fine sand particles with it, to be deposited in the lowest areas of the track.

In NSW where the concrete under the rail lure is designed differently, this is where the finer particles would be found. In order to improve the track sand and profile, those fine particles need to be blended back into the track. This point was discussed with the operator during the visit.

4.3.6 Sand Depth

As referred to above, the depth of sand across the total track surface should be a consolidated depth of 150mm, in line with the design specification utilized in 1999/2000. This depth is now variable and this variation compromises all aspects of track maintenance, performance and safety. The operator advised that the track is re-sanded every three years, which is an insufficiently frequent interval to maintain proper track conditions. It was stressed to the operator that sand depth across the track has a direct impact on the important surface grades and cambers, being factors vital in ensuring safe racing conditions.

4.3.7 Surface Grades and Cambers

Inspections of grades or levels by laser and other precision equipment could not be undertaken.

Surface grades and cambers on any track, particularly on turns, are critically important in ensuring that the greyhounds are able to maintain speed and remain on the racing surface as they enter, run through and exit turns (due to the application of centrifugal force).

This is of particular importance at Vung Tau due to the tightness of the overall layout and the drier condition of the texture of the track sand. The cambers to the naked eye appear below the specified grades of 4%, 6% and 8%.

The result of inadequate cambers, together with a unacceptably hard, dry and shifting surface, is that racing greyhounds are more likely to be injured. It is the professional opinion of both the track expert and the veterinarian responsible for this inspection that, despite assurances that the dogs racing at this facility are significantly slower than Australian greyhounds, that each race meeting at this facility would result in a steady stream of injured greyhounds, spanning from muscle strains, split webbing and fractured toes to more serious, life-threatening injuries.

In the course of races being conducted on the track, it was observed that greyhounds were struggling to maintain traction, particularly during the first turn. The noticeable sand displacement and shear on the surface must be addressed at first instance. It was consistently observed that dogs, irrespective of age, breeding or condition, are unable to achieve optimum speed as they are unable to gain any purchase from the track surface. Although slower race times may be positive in some circumstances, whereby injury rates may be reduced, on this particular track it is clear that the risk of injury is significantly heightened purely as a consequence of the track conditions. Concerns about race times are null when faced against considerations of safety and welfare.

Just as greyhounds running wide on the track will be doing so due to the shifting nature of the surface, so too is the likelihood that some will hug the lure rail – possibly coming into contact with the rail itself, leading to injury. Although the

track has a full safety rail installed to prevent dogs from going over the rail, they can still come into contact with the cable

The illustration at left clearly indicates paw prints against the lure rail. It is reasonable to expect that the dog that made those prints would have come into contact at that point.

The illustration at right shows the 'racing' line within 1.5 metres of the rail. The track surface in this area has been dished out to where a noticeable swale is present, which would inevitably create an inconsistent surface for racing greyhounds.

This type of surface irregularity is common on sand tracks where track curators or managers have no hard surface such as concrete to work from in order to maintain the integrity of the surface when dragging or, in this case, lightly harrowing the sand. The principle area of concerns is within the rail shadow line in the illustration at right at the foot of the previous page.

4.3.8 Lure Rail and Safety Rail

The racetrack at Vung Tau is fitted with a current and standard cable lure system and variable electronic motor as per Australian standards. Unlike a number of NSW tracks, this track also installed a total safety rail built in as part of the actual lure post and rail. The lure rail does vary in height from the track surface to the top of the rail and is for the majority of the track at a height of less than the NSW standard of 420mm.

It should be noted that unlike NSW this track has no concrete slab installed beneath the rail, but instead has a concrete kerb with drainage holes cut in to remove excess storm water. The design of the safety rail is safe and functional, and has utilized two separate rails of smaller diameter, as opposed to the larger single rail used in NSW. It should also be noted that in NSW and other states, in

particular Victoria, the safety rail also doubles as the main supply line for the fixed irrigation system.

4.3.9 Track Maintenance and Preparation

The current track maintenance and preparation procedures have developed over a period of time since the original construction of the track, without the input of external experts whom would be required to monitor the performance in line with expectations of change in the track surface over time. Following the construction of the track, a maintenance schedule was allegedly provided to the operator. Although the delegation was not provided with a copy of such schedule, its relevance in relation to present day standards and specifications would be questionable.

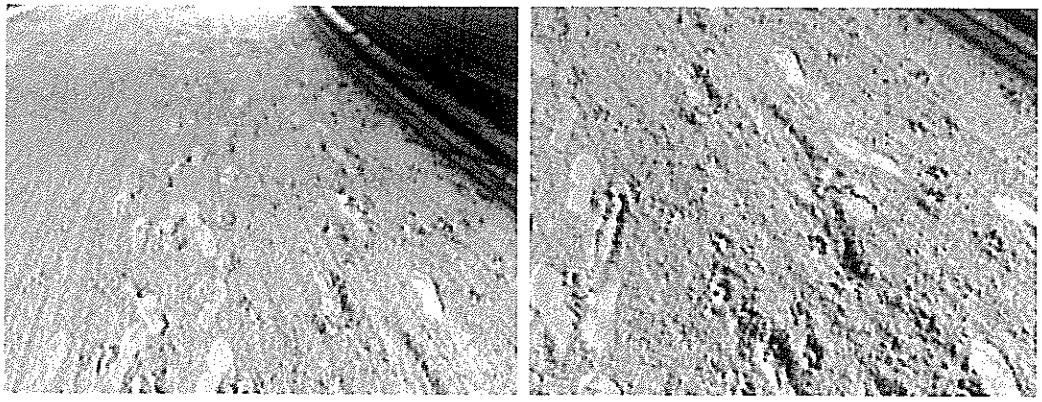
There are two major concerns with the current track maintenance which are closely related and have a direct impact and bearing on the safety of the track:

- Water application; and
- Sand preparation

There is no permanently fixed irrigation system due to high average annual rainfall. Despite the wetter than usual conditions at this particular facility, if water is not applied to the existing track regularly and consistently, the sand cannot bind. This leads to an unsafe and shifting surface as witnessed at the track during the inspection.

The surface harrowing procedure employed by the track operator both pre race and during race intervals leads to a reduced ability for greyhounds to grip the track. It would be expected that after 5mm of rainfall, the track would be just as unsafe as it would maintain extremely hard underlayers and a very soft, almost boggy, surface level.

A 20mm downpour may result in better conditions as the perimeter drainage system would remove surface water, and yet more of the water would be absorbed into the lower layers of the track.



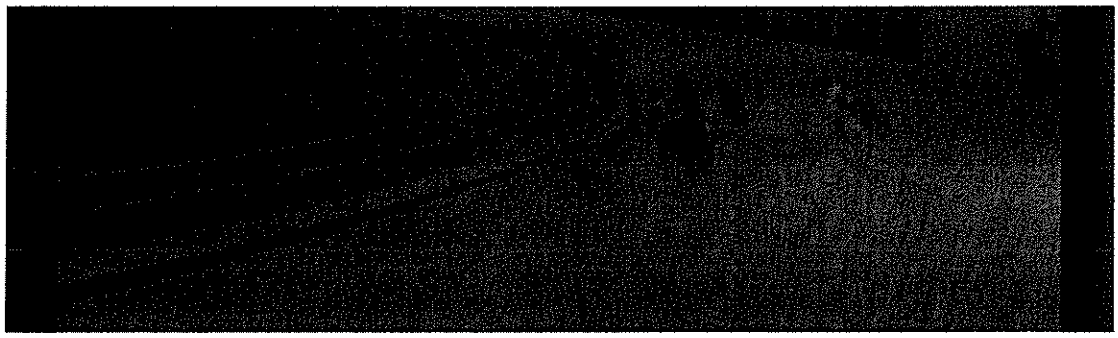
These illustrations depict the track during the race meeting, immediately following a race.

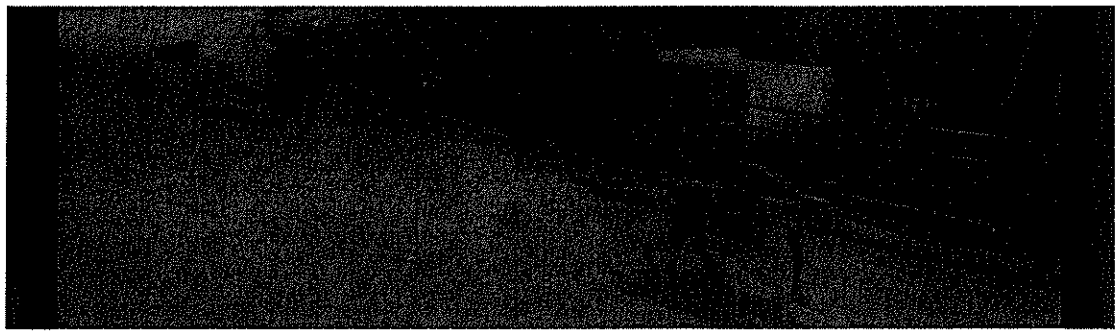
This is a difficult principle to explain in Australia or Vietnam. If the operator were to visit the beachfront at Vung Tau, they would observe three separate degrees of water content in the sand:

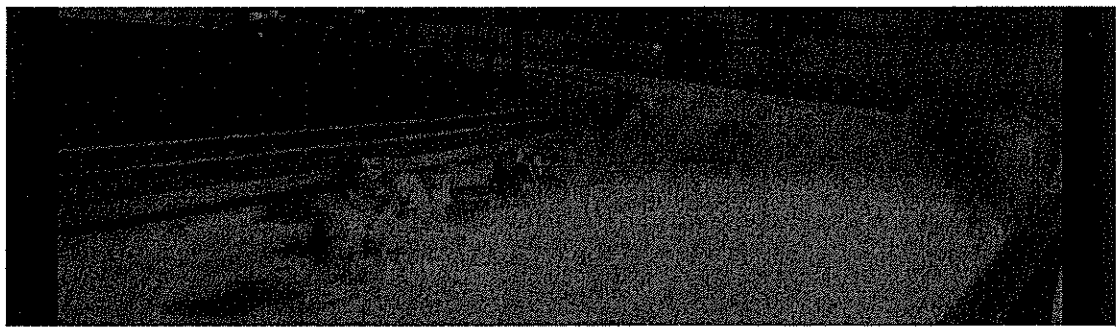
- Saturated – where the tide is lapping the sand (safe to race)
- Field capacity – where the tide has receded and the sand is firm to walk on (ideal to race); and
- Wilting point – where the sand is dry and shifting as the water is unable to reach it.

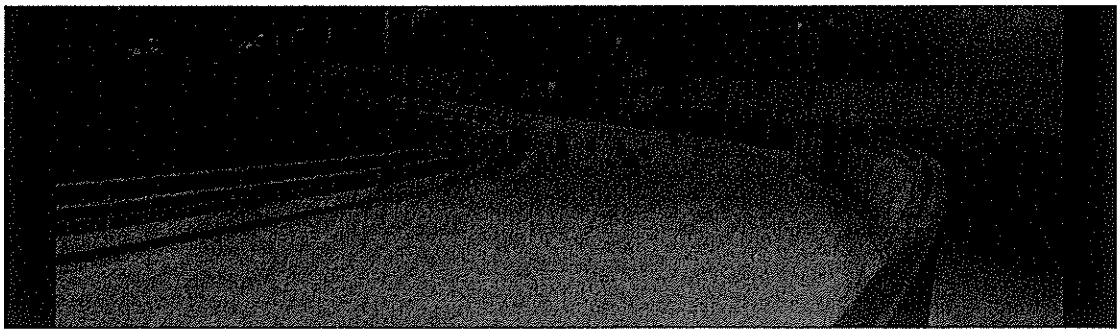
The current condition of the Vung Tau track is best described closest to the third degree of water content, which is unacceptable from any perspective unless slower times are the principle objective. It must be noted that these slower times are coupled with an increase in actual race injuries, irrespective as to the predominance of minor race injuries. No documentation was provided by the operator to allow for analyses of injury rates, or indeed to substantiate the claim of only three fatal injuries being suffered in sixteen years of track operation.

4.3.10 Stills of Race Video Obtained on Saturday 4 June 2016









5. RECOMMENDATIONS

5.1 Welfare Recommendations

The Five Freedoms represent an internationally accepted framework for assessing whether the basic needs of animals are being met by humans. Thus they provide a robust reference point from which to assess the welfare of racing greyhounds in Vietnam.

The Five Freedoms are:

1. Freedom from hunger or thirst by ready access to fresh water and a diet to maintain full health and vigour.
2. Freedom from discomfort by providing an appropriate environment including shelter and a comfortable resting area
3. Freedom from pain, injury or disease by prevention or rapid diagnosis and treatment
4. Freedom to express normal behaviours by providing sufficient space, proper facilities and company of the animal's own kind
5. Freedom from fear and distress by ensuring conditions and treatment which avoid mental suffering

Based on the Five Freedoms model, the following section highlights concerns that racing greyhounds in Vietnam are not being kept in conditions that ensure high welfare standards are maintained.

5.2 Key Points

The key points of concern about greyhound welfare are listed as follows:

i. Co-housing of compatible dogs should be adopted as standard practice for greyhounds at all stages of their lifecycle.
ii. Transportation - Dogs on the bottom row of wire crates being urinated and defaecated upon by dogs in the top row of wire crates
iii. An environmental enrichment and socialisation program should be adopted
iv. Water and Shade should always be provided
v. Veterinary treatment program and veterinary expertise is unclear
vi. Euthanasia protocol is unclear (The way that greyhounds are disposed of after euthanasia is also unclear)

5.2.1 Co-housing of compatible dogs should be adopted as standard practice for greyhounds at all stages of their lifecycle

At the Ba Ria facility, greyhounds are housed with litter mates until they begin to race. From this point in the dog's lives onwards, it appeared that they are singly

housed at all times. The Ba Ria facility does not currently have an off-leash exercise area for the greyhounds. The delegation was advised that part of the plan to build a kennel block for retired greyhounds includes the development of the Ba Ria facility as a tourist destination for visitors to interact with the greyhounds.

Recommendation:

An off-leash exercise area should be established so as to allow all compatible adult greyhounds (racing and retired) to interact socially with other greyhounds on a regular basis.

5.2.2 Transportation welfare concern: dogs on the bottom row of wire crates being urinated and defaecated upon by dogs in the top row of wire crates

Greyhounds should never be housed in wire crates underneath another greyhound without a solid barrier preventing them being urinated and defaecated upon by dogs caged above.

Recommendation:

A solid barrier should be inserted between upper and lower wire cages that are stacked for housing greyhounds.

5.2.3 Requirement for an environmental enrichment and socialisation program

Environmental enrichment refers to the provision of both social and physical items to stimulate the brain of captive animals. The greyhounds at the Ba Ria facility were held in empty wire and concrete pens without any form of environmental enrichment other than a water bowl. Ba Ria management advised that although at one stage they had provided beds for the greyhounds, they no longer did as the greyhounds preferred to lie on the cool concrete. From an animal welfare perspective, this decision is considered to be inherently short-sighted as it removes the opportunity for the individual greyhound to have a choice about where it lies down. The issue of choice is considered to be a very important part of environmental enrichment.

The sensitive period of development describes the time of rapid brain development at which optimal socialisation occurs, and dogs most readily learn about new stimuli. It has been found that a window of opportunity exists, between 3 weeks to 14 weeks, during which optimal socialisation effects can be fully realised. Socialisation is a very important part of a racing greyhound's development. It did not appear that a planned program had been developed to meet the need for socialisation of puppies being reared at the Ba Ria Kennels.

Recommendation:

Expert outside assistance be sought by Ba Ria management to develop an environmental enrichment and socialisation program for greyhounds.

5.2.4 Access to water and shade should always be provided

The practice of locking litter of puppies in the outside runs without water and shade is unacceptable.

Recommendation:

Water and shade must be provided for greyhounds to access in the outdoor runs at all times. At no stage should greyhounds be restricted to an unshaded area.

5.2.5 Veterinary treatment program and veterinary expertise is unclear

Vietnam's Law on Animal Health was passed on June 19, 2015 and will be effective from 1st July 2016. An unofficial translation of this Law sourced from the USDA Agricultural Service is attached to this document.

Article 108 provides information regarding conditions for veterinary practitioners and for veterinary practice organisations as:

- *For individual veterinary practitioner:*

> *a) To have professional certificate suitable to each the type of veterinary practice.*
> *b) To have professional morality.*
> *c) To have a good health for practice.*

- *For veterinary practice organizations:*

> *a) To have technical staff meeting requirement regulated at Clause 1 this Article;*
> *b) To have facilities, technology suitable to types of practice as regulated by legislation.*

- *The Government shall regulate details for this Article.*

The translation of Vietnam's Law on Animal Health refers to the list of Veterinary Drugs Permitted for Circulation in Vietnam and the list of Prohibited Veterinary Drugs in Vietnam. Sodium pentobarbitone is currently on the list of Prohibited Veterinary Drugs in Vietnam.

Recommendation:

Expert outside assistance should be sought by Ba Ria facility management in order to ensure that the level of veterinary care and equipment and medication available for the treatment of greyhounds is in line with best practice.

5.2.6 Euthanasia Protocol

There are four criteria that must be satisfied to ensure that a method used to kill an animal is humane and therefore, can therefore be referred to as euthanasia ('a good death'). The method must:

- be painless
- achieve rapid unconsciousness followed by death
- minimise fear and distress
- be reliable and irreversible

The drug of choice for euthanasia of greyhounds is sodium pentobarbitone, however in Vietnam it is listed as a banned substance and cannot be used. Due to the conflicting nature of the information that was presented to the delegation, it was not possible to draw a conclusion regarding how greyhounds are disposed of in Vietnam and therefore, whether or not they are effectively euthanased.

The sources of information available regarding the fate of greyhounds in Vietnam are restricted to the following:

A) Observations of secretly recorded footage as broadcast in Australia on ABC 7:30 in December 2015.

This footage showed greyhounds being injected with approximately 10mls of a light brown coloured liquid described by the voiceover as Ecotraz, an insecticide registered for external (skin) use only. The product datasheet for Ecotraz 125 and 250 describes it as a light brown liquid.

The toxicology of Ecotraz was investigated further by the veterinary expert attached to the delegation.

Toxicity of Ecotraz in dogs:

http://parasitipedia.net/index.php?option=com_content&view=article&id=2690&Itemid=2961

This reference states that the oral LD 50 of Ecotraz in dogs is 100mg/kg. This means that when dogs are given Ecotraz by mouth, 50% of the dogs will die if they consume 100mg/kg. For a medium sized (30 kg) greyhound, this calculates to be 3000mg Ecotraz.

'Ecotraz 250' contains 250mg/litre. This means that approximately 12 litres of the product 'Ecotraz 250' would need to be consumed by mouth for half of the dogs to die.

Ecotraz cattle pour-on 2g/litre:

http://www.ecoanimalhealth.com/_assets/documents/38.pdf.

This equates to 1.5L/dog orally

http://parasitipedia.net/index.php?option=com_content&view=article&id=2690&Itemid=2961

B) Conversation with Ba Ria Facility Veterinarian

On the first inspection of the Ba Ria facility on Saturday 4 June 2016, the operator gave permission for delegation member Dr Nick Branson to ask the veterinarian on site about the euthanasia protocol for sick or injured dogs at the kennels.

Communicating via the delegation's independent interpreter, the veterinarian advised that they did not euthanase dogs at Ba Ria, and that any sick or injured dogs would be transferred to 'an Institution'. Although it was not made clear what this reference to 'an Institution' meant, it appeared to refer to a different location to Ba Ria, and that euthanasia of sick or injured dogs was not carried out at Ba Ria.

This conversation had barely commenced at which time the operator entered the room and prohibited the veterinarian from answering any more questions. A brief conversation via the interpreter was held subsequently at the Lam Son (Vung Tau) Stadium about the protocol for the euthanasia of greyhounds injured at the racetrack with the same vet. He said that greyhounds injured at the track would not be euthanased at the track, but rather that they would be transported to the Ba Ria Kennels. This statement appeared to contradict the explanation given about the way an injured dog at Ba Ria would be managed, in that the dog would be transferred to 'an institution'.

On Sunday 5 June 2016, during the second inspection to the Ba Ria facility the delegation was shown a bottle of Zoletil (an anaesthetic agent) and also some sachets of magnesium sulphate powder. The use of these two agents in combination has been described as Conditionally Acceptable by the World Society for the Protection of Animals (WSPCA) in a document titled *Methods for the Euthanasia of Dogs and Cats: Comparison and Recommendations.*

The protocol involves the dog firstly being injected with Zoletil to induce a state of general anaesthesia or unconsciousness. The dog is then injected intravenously with magnesium sulphate to cause death by cardiac arrest (heart attack). The use of magnesium sulphate without first inducing unconsciousness is considered inhumane.

There are logistical, practical and cost concerns associated with this euthanasia protocol, The requirement for the use of an anaesthetic drug before injecting magnesium sulphate adds to both the time taken to perform euthanasia and to

its cost. It is critical that the person responsible can competently assess anaesthetic depth in a dog to make sure that surgical depth of anaesthesia has been achieved before an injection of magnesium sulphate is given to a dog.
Magnesium sulphate is available commercially as an injectable solution and a powder. The powder does not dissolve readily in water and it is recommended that boiling water should be used. This would then need to be cooled prior to it being injected into a dog. Once it is diluted in water, the magnesium sulphate solution is very thick and this makes it difficult to inject intravenously. Large volumes are required for euthanasia and the dose required to cause death varies between individuals – a 30kg greyhound might require 40-80mls injected intravenously to cause death. Significant skill, care and special equipment would need to be on-hand to ensure that such a large volume of magnesium sulphate could be delivered accurately and consistently.

The potential exists for dogs to experience a painful death with this euthanasia technique.

Recommendation:

As it is illegal to use sodium pentobarbitone in Vietnam, in the first instance, an alternative protocol should be developed. The combination of Zoletil to induce general anesthesia followed by magnesium sulphate to stop the heart could be adopted however, as described above, there are a number of concerns associated with this method. To ensure that this method could be adopted a number of additional steps are required:

- Investigating whether injectable solutions of magnesium sulphate are available in Vietnam and can legally be used for animal treatment

- Competency assessment to ensure that the person who will be injecting the greyhounds is able to assess that a suitable depth of anaesthetic has been reached before magnesium sulphate is injected

- Investigating and sourcing the equipment that is required to euthanase the greyhounds using this method.

- Ensuring that all of the equipment and drugs required to euthanase greyhounds using this method is always available at both the Ba Ria Kennels and the Lam Son Stadium

- Ensuring that a person who is competent to euthanase a greyhound with this protocol is available when required.

It is also recommended that Ba Ria facility management should contact the Department of Animal Health for advice regarding the procedure described in *Article 78 General Regulation on Vet Drug Management*, as is required to be followed, in order to submit an application for an import permit for sodium pentobarbitone.

5.2 Track Maintenance Recommendations

5.2.1 Track Monitoring

- Develop and implement a recording procedure for track profile and track hardness
- Purchase necessary diagnostic tools to monitor track profiles and hardness (approx. USD550)
- Train track staff to use and understand monitoring procedures and how to interpret results
- Monitor injury rates to track conditions

5.2.2 Sand Type

- Test sand composition (physical analysis) at least twice yearly
- Purchase set of sand sieves to monitor track composition monthly (approx. USD1200)

5.2.3 Sand Depth

- By using a sand profiler as above, track staff can monitor sand depth and maintain as required
- Apply sand to track as required to ensure consistent depth
- Track should be blended using a rotary hoe or similar at least annually, if not more regularly

5.2.4 Surface Grades & Cambers

- When applying new sand, surface grades and levels must be checked and reinstated if required
- If machinery is not available, it can be done satisfactorily with labour and string-lines
- The more frequently surface grades are attended to, the less work required and the safer the track will be
- Mark on inside and outside concrete kerb, the levels required to ensure necessary grades

5.2.5 Track Maintenance & Preparation

- Train track staff to better understand requirements
- Consider purchase of a water cart which can be towed by tractor to evenly

apply water when required

- Consider manufacturing similar track harrow implement to achieve greater depth to soften track
- Consider dragging track to smooth finish as opposed to current harrowed and fluffy surface
- Develop procedures and contact to remain up to date with 'best practice' in Australia

5.2.6 Miscellaneous

- Develop an educational process for track steward(s) and Vets to understand track conditions and relevant and direct impacts on type and frequency of racing injuries
- Develop a simple Cause & Effect table for the above
- Monitor and document all track related injuries for each race meeting

GREYHOUND RACING NSW

ANIMAL WELFARE AND TRACK MAINTENANCE: VUNG TAU GREYHOUND RACETRACK AND BA RIA KENNEL FACILITY

Background

In June 2016, a delegation of Greyhound Racing New South Wales (GRNSW) carried out an assessment of the Vung Tau Greyhound Racetrack and Ba Ria Kennel facility in Vietnam. The delegation comprised a veterinarian, track curator and policy expert.

The following findings and recommendations have been prepared to assist the operator of the facilities in improving standards relating to ***animal welfare*** and ***track maintenance*** with a view to implementing globally recognised best practices across the breadth of the greyhound racing industry in Vietnam.

Any industry reliant upon animals must ensure that welfare considerations are paramount in order to maintain an operation that is both sustainable and commercially viable in the long term. Welfare considerations stretch from housing and quality of life of animals, to conditions of equipment and facilities within the industry to which animals may be subjected. Attention to these welfare concerns can ensure a longer, healthier and more productive life for racing greyhounds, minimising rates of injury, illness and premature death.

It is with this mindset that careful consideration has also been paid to recommendations concerning track maintenance. It is in the interests of both general animal welfare concerns and the commercial viability of an industry involving animals to ensure that injury and wastage rates are kept to a minimum. Effective track maintenance is critical to ensuring safety and long term viability of racing greyhounds at this facility.

Animal Welfare: Findings and Recommendations

Overview

The Five Freedoms represent an internationally accepted framework for assessing whether the basic needs of animals are being met by humans. Thus they provide a robust reference point from which to assess the welfare of racing greyhounds in Vietnam.

The Five Freedoms are:

1. Freedom from hunger or thirst by ready access to fresh water and a diet to maintain full health and vigour.
2. Freedom from discomfort by providing an appropriate environment including shelter and a comfortable resting area
3. Freedom from pain, injury or disease by prevention or rapid diagnosis and treatment

4. Freedom to express normal behaviours by providing sufficient space, proper facilities and company of the animal's own kind
5. Freedom from fear and distress by ensuring conditions and treatment which avoid mental suffering

Based on the Five Freedoms model, findings and recommendations have been on the following areas to ensure racing greyhounds in Vietnam are kept in conditions that would be consistent with a high regard to animal welfare.

- Housing
- Transportation of dogs
- Socialisation
- Water and shade
- Veterinary treatment
- Euthanasia protocols.

Housing

Dogs are housed individually at the Ba Ria Kennels. It is recommended that co-housing of compatible dogs be adopted as standard practice for greyhounds at all stages of their lifecycle.

An off-leash exercise area should be established so as to allow all compatible adult greyhounds (racing and retired) to interact socially with other greyhounds on a regular basis.

Transportation

There are welfare concerns associated with the transportation of dogs between the Ba Ria Kennels and Vung Tau Greyhound Racetrack. Specifically, dogs on the bottom row of wire crates risk being urinated and defaecated upon by dogs in the top row of wire crates.

A solid barrier should be inserted between upper and lower wire cages that are stacked for housing greyhounds during transport.

Care must be taken to ensure adequate ventilation for greyhounds in transit at all times.

Socialisation

An environmental enrichment and socialisation programme must be implemented for greyhounds at all stages of their life cycle as it is currently absent.

Expert outside assistance should be sought by Ba Ria management to develop an environmental enrichment and socialisation program for greyhounds from an early age, with 3 weeks to 14 weeks being the critical period, through to maturity and post racing life.

At a minimum, soft bedding should be provided for each greyhound as an alternative against the concrete flooring, as the issue of choice is a very important part of environmental enrichment.

Water and shade

Water and shade must be provided for greyhounds to access in the outdoor runs at all times. At no stage should greyhounds be restricted to an unshaded area. Gates between shaded and unshaded areas should be left open to allow the dog to shelter from sun or inclement weather at all times.

Veterinary treatment

The veterinary treatment program and expertise is unclear. Expert outside assistance should be sought by Ba Ria facility management in order to ensure that the level of veterinary care and equipment and medication available for the treatment of greyhounds is in line with best practice.

Euthanasia Protocols

Protocols for euthanaia and disposing of greyhounds are unclear.

There are four criteria that must be satisfied to ensure that a method used to kill an animal is humane and therefore, can therefore be referred to as euthanasia ('a good death'). The method must:

- be painless
- achieve rapid unconsciousness followed by death
- minimise fear and distress,
- be reliable and irreversible.

The drug of choice for euthanasia of greyhounds is sodium-pentobarbitone, however in Vietnam it is listed as a banned substance and cannot be used. Due to the conflicting nature of the information that was presented to the delegation, it was not possible to draw a conclusion regarding how greyhounds are disposed of in Vietnam and therefore, whether or not they are effectively euthanased.

Suggestions were made by Ba Ria staff that Zoletil (an anaesthetic agent) and magnesium sulphate powder were sometimes used for euthanasia. The use of these two agents in combination has been described as Conditionally Acceptable by the World Society for the Protection of Animals (WSPCA) in a document titled

Methods for the Euthanasia of Dogs and Cats: Comparison and Recommendations

The protocol involves the dog firstly being injected with Zoletil to induce a state of general anaesthesia or unconsciousness. The dog is then injected intravenously with magnesium sulphate to cause death by cardiac arrest (heart attack). The

use of magnesium sulphate without first inducing unconsciousness is considered inhumane.

There are logistical, practical and cost concerns associated with this euthanasia protocol. The requirement for the use of an anaesthetic drug before injecting magnesium sulphate adds to both the time taken to perform euthanasia and to its cost. It is critical that the person responsible can competently assess anaesthetic depth in a dog to make sure that surgical depth of anaesthesia has been achieved before an injection of magnesium sulphate is given to a dog.

Magnesium sulphate is available commercially as an injectable solution and a powder. The powder does not dissolve readily in water and it is recommended that boiling water should be used. This would then need to be cooled prior to it being injected into a dog. Once it is diluted in water, the magnesium sulphate solution is very thick and this makes it difficult to inject intravenously. Large volumes are required for euthanasia and the dose required to cause death varies between individuals – a 30kg greyhound might require 40-80mls injected intravenously to cause death. Significant skill, care and special equipment would need to be on-hand to ensure that such a large volume of magnesium sulphate could be delivered accurately and consistently.

The potential exists for dogs to experience a painful death with this euthanasia technique.

Recommendation

As it is illegal to use sodium pentobarbitone in Vietnam, in the first instance, an alternative protocol should be developed. The combination of Zoletil to induce general anesthesia followed by magnesium sulphate to stop the heart could be adopted however, as described above, there are a number of concerns associated with this method. To ensure that this method could be adopted a number of additional steps are required:

- Investigating whether injectable solutions of magnesium sulphate are available in Vietnam and can legally be used for animal treatment.
- Competency assessment to ensure that the person who will be injecting the greyhounds is able to assess that a suitable depth of anaesthetic has been reached before magnesium sulphate is injected.
- Investigating and sourcing the equipment that is required to euthanase the greyhounds using this method.
- Ensuring that all of the equipment and drugs required to euthanase greyhounds using this method is always available at both the Ba Ria Kennels and the Lam Son Stadium.

- Ensuring that a person who is competent to euthanase a greyhound with this protocol is available when required.

It is also **highly recommended** that Ba Ria facility management should contact the Vietnamese Department of Animal Health for advice regarding the procedure described in *Article 78 General Regulation on Vet Drug Management*, as is required to be followed, in order to submit an application for an import permit for sodium pentobarbitone.

Track Maintenance: Findings and Recommendations

Overview

Findings and recommendations have been on the following areas:

- Track Monitoring
- Sand Type
- Sand Depth
- Surface Grades and Cambers
- Track Maintenance and Preparation.

Track Monitoring

The operator should seek to develop and implement a recording procedure for track profile and track hardness.

- A physical survey and scientific analysis of samples from the track would be required in order to determine the ideal water content that should be maintained at this particular site. This is referred to as 'benchmarking'. Each track would need to be appropriately benchmarked in order for subsequent recommendations to be successfully implemented.

- Following the benchmarking of the track, these procedures would require implementation:

  - A template of track should be prepared with ten designated positions marked on the track marked out.
  - The track curator would be required to take penetrometer readings from three locations at each of the ten positions, being three positions from the rail, 1m, 3m and 5m. This should be done weekly as a minimum, and ideally before every race meeting.
  - A water content reading should be obtained from various positions of the track, also from three subsections about 1m, 3m and 5m from the rail, to give an approximate total of 250 individual readings. This should be done before each race meeting, about one hour before the

first race. The intention behind such a comprehensive survey is to yield the most accurate mean moisture content across the track.

- Weekly monitoring of sand profile would also be required. This would involve a general check of about 15 location samples from across the track. This degree of sampling would be acceptable unless evidence suggests a particular layering problem in a specific area of the track.
- Track staff would require training to use and understand monitoring procedures and how to interpret results. A recognized track maintenance expert should be identified to provide a week long training session so as to ensure procedures are understood and properly implemented.
- Requirements:
  - Penetrometer - measures track hardness
  - Sand Profiler - determines layering of sand on track.
  - Water content reader (TDR300 Moisture Meter) - used to monitor water content.
  - Suitable training to operate equipment and assess results.

- Parallel to the technical aspects of track maintenance, the operator should also seek to develop an educational process for track steward(s) and veterinarians to understand track conditions and direct impacts on type and frequency of racing injuries, and develop a cause and effect table for same.

  - Staff should monitor injury rates to track conditions and maintain accurate records for subsequent reliable statistical analysis.
  - Staff should ensure that they identify the section of a track where an injury was incurred, as this crucial to assist in determining trends of injury type and frequency.
  - Requirements:
    - Record management system. This could span from a series of logbooks to an integrated track incident recording system,

Sand Type

The use of appropriate sand on a track is critical to ensure sufficient and effective water retention, as well as preventing contamination of sand with sharp edged material (such as crushed seashells) which could cause injury to racing greyhounds.

- Full sand composition testing (physical analysis) should be undertaken at least twice yearly.

  - First stage: Track staff walk along the track and take 50 individual

implemented.

- The use of a water cart, which can be towed by tractor to evenly apply water when required, is highly recommended.
- The operator should consider manufacturing a similar track harrow to that which is already used, but which could achieve greater depth to soften the track more effectively. Heavier equipment, to allow a regular harrowed depth of 50-70mm rather than the 10-20mm achieved by the harrow presently used, would be ideal and should be used weekly rather than before each race.
- Existing shallow harrowing practices should be modified in order to drag the track to a smooth finish as opposed to current harrowed and fluffy surface. The light harrowing between races has no more than a cosmetic effect on the track. It hides paw prints from previous races and nothing more.
- Develop procedures and contact to remain up to date with best practice.
- Requirements:
  - Water cart (approximate cost USD11000.00)
  - Modified heavy harrow to be towed behind existing tractor on a weekly basis for deep harrowing,
  - Modified light harrow to smooth track surface between races.

GREYHOUND RACING NSW

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It is with this mindset that careful consideration has also been paid to recommendations concerning track maintenance. It is in the interests of both general animal welfare concerns and the commercial viability of an industry involving animals to ensure that injury and wastage rates are kept to a minimum. Effective track maintenance is critical to ensuring safety and long term viability of racing greyhounds at this facility.

Animal Welfare: Findings and Recommendations

Overview

The Five Freedoms model for animal welfare was developed in 1965 and still represents an internationally accepted framework for assessing whether the basic needs of animals are being met. It encompasses the philosophical position that the assessment of an animal's welfare includes consideration of both its physical and psychological state. It forms the basis of an assessment tool frequently used by applied animal behavior scientists and as such provides a robust reference point from which to assess the welfare of racing greyhounds in Vietnam.

The Five Freedoms are:

1. Freedom from hunger or thirst by ready access to fresh water and a diet to maintain full health and vigour.

2. Freedom from discomfort by providing an appropriate environment including shelter and a comfortable resting area
3. Freedom from pain, injury or disease by prevention or rapid diagnosis and treatment
4. Freedom to express normal behaviours by providing sufficient space, proper facilities and company of the animal's own kind
5. Freedom from fear and distress by ensuring conditions and treatment which avoid mental suffering

Based on the Five Freedoms model, the following findings and recommendations have been on the following areas to ensure racing greyhounds in Vietnam are kept in conditions that would be consistent with a high regard to animal welfare.

- Housing
- Exercise
- Environmental enrichment
- Transportation of dogs
- Socialisation
- Water and shade
- Veterinary treatment
- Euthanasia protocols.

Housing

This recommendation is made to address one of the Five Freedoms 'to express normal behaviours by providing company of the animal's own kind'

At the Ba Ria facility, greyhounds are housed with littermates until they begin to race. From this point in the dog's lives onwards, it appeared that they are singly housed at all times. This practice eliminates the opportunity for greyhounds to meet one of the Five Freedoms 'to express normal behaviours by providing company of the animal's own kind' and therefore must be addressed in the following ways:

Recommendation

An immediate improvement to the welfare of racing greyhounds at the Ba Ria facility by running a trial of housing two compatible dogs together in the same run. This practice is becoming increasingly adopted by greyhound racing establishments in Australia, as well as other working dog industries, including detector, assistance, and police working dogs.

Longer term considerations should be given to the design of the kenneling facility for racing and breeding dogs, so as to ensure that larger runs are made available for co-housing adult as well as juvenile greyhounds.

Racing greyhounds are trained to wear muzzles, so the practice of placing muzzles on dogs the first time they are placed in a cage on a trial basis in a way that will ensure that the risk of injury from biting has been eliminated. Some staff

training may be required to ensure that an informed decision could be reached relating to the compatibility of two dogs to be co-housed before muzzles are removed.

Exercise

The Ba Ria facility does not currently have an off-leash exercise area for the greyhounds housed there. The delegation was advised that future plans include the development of the Ba Ria facility as a tourist destination for visitors to interact with the greyhounds.

The Ba Ria facility has large areas of vacant land available that could be set up as a dog off-leash area (DOLA). DOLAs are commonly provided in Australia by local Councils and provide dogs with the opportunity to run, exercise and socialise leash-free with other dogs and also people. This may be of particular interest for the inclusion in proposed plans at Ba Ria to set up a tourist visiting centre to pat and interact with the greyhounds. Some examples of DOLAs in Australia can be seen here - https://www.brisbane.qld.gov.au/facilities-recreation/parks-venues-brisbane/parks/park-facilities/dog-leash-areas-dog-parks.

Recommendation

An off-leash exercise area should be established so as to allow all compatible adult greyhounds (racing and retired) to interact socially with other greyhounds on a regular basis.

Benefit: Greyhounds would be given the opportunity to interact with their own kind and hence in accordance with the Five Freedoms, a significant improvement in greyhound welfare would result. Another benefit would be the positive response of visitors who would enjoy seeing greyhounds interacting with each other in the off-leash area.

Environmental enrichment

This recommendation is made to address three of the Five Freedoms:

- Freedom from discomfort by providing an appropriate environment including shelter and a comfortable resting area
- Freedom to express normal behaviours by providing sufficient space, proper facilities and company of the animal's own kind
- Freedom from fear and distress by ensuring conditions and treatment which avoid mental suffering

Environmental enrichment refers to the provision of both social and physical items to stimulate the brain of captive animals. The greyhounds at the Ba Ria facility were held in empty wire and concrete pens without any form of environmental enrichment other than a water bowl. Ba Ria management advised

that although at one stage they had provided beds for the greyhounds, however they no longer did this as management decided that greyhounds prefer to lie on concrete, as it is cooler.

This management decision is considered to be short-sighted as it removes the opportunity for the individual greyhound to make a choice about where it lies down. The issue of choice is a fundamentally important consideration for providing an environmental enrichment program. Furthermore it is inappropriate to assume what an individual animal's choice will be, and to offer the greyhounds such an empty kennel environment that removes the opportunity for the dog's to make choices.

Recommendation

Other recommendations for environmental enrichment include:

- Dog off-leash area (as described above)
- Slow release feeding devices such as Kong ® products that are available internationally through online ordering.
- The development of a rotation strategy for a range of interactive objects e.g. slow-release feeding devices such as Kong ® products to be placed into the greyhound's enclosures. A rotation strategy ensures that the items retain novelty. Staff training may be required to assist with the development of such an environmental enrichment program. Such programs are widely used for captive animals internationally and much information about available products and ordering is readily accessible online.

Transportation of dogs

This recommendation is made to address two of the Five Freedoms: 'Freedom from pain, injury or disease by prevention or rapid diagnosis and treatment; and freedom from fear and distress by ensuring conditions and treatment which avoid mental suffering.

Greyhounds should never be housed in wire crates underneath another greyhound without a solid barrier preventing them being urinated and defaecated upon by dogs caged above.

Recommendation

A solid barrier should be inserted between upper and lower wire cages that are stacked for housing greyhounds during transport by bus from Ba Ria facility to Lam Son (Vung Tau) Stadium.

This improvement to the current caging system would eliminate the risk of dogs housed in the bottom row of wire crates being exposed to infectious disease agents that are transmitted by the faeco-oral route. These agents include bacteria, viruses and gastrointestinal parasites that have the potential to spread rapidly between dogs housed together in a kennel environment.

Removing the potential for mental suffering for dogs transported by bus to the Lam Son (Vung Tau) Stadium in which they can end up covered in urine and faeces will be addressed by this change. Thus the insertion of a solid barrier would improve the maintenance of dog health, and therefore by default, racetrack performance. Ensuring that dog's don't arrive at the track covered in urine faeces will help the public audience to see that the racing greyhounds are provided with a high level of care.

Socialisation

This recommendation is made to address the Five Freedom:

- Freedom from fear and distress by ensuring conditions and treatment which avoid mental suffering

The sensitive period of development describes the time of rapid brain development at which optimal socialisation occurs, and dogs most readily learn about new stimuli. It has been found that a window of opportunity exists, between 3 weeks to 14 weeks, during which optimal socialisation effects can be fully realised. Socialisation is a very important part of a racing greyhound' development. It did not appear that a program had been developed to meet the need for socialisation of puppies being reared at the Ba Ria Kennels.
Puppies who do not experience an adequate socialization program during this period tend to be fearful of unfamiliar people, or dogs, or sounds, objects and environments.

Recommendation

The adoption and implementation of the Recommendations relating to co-housing of greyhounds and environmental enrichment provide the framework and infrastructure that will assist with developing a socialization program.

- Dog off-leash area
- Interactive objects
- Providing visiting tourists with a selection of dog toys and an opportunity to play and interact with greyhound puppies between 3 and 14 weeks would ensure the developing dogs gain exposure to a wide range of novel stimuli and unfamiliar people.

Water and shade

This recommendation is made to address one of the Five Freedoms:

> Freedom from hunger or thirst by ready access to fresh water and a diet to maintain full health and vigour. The practice of locking litter of puppies in the outside runs without water and shade is clearly unacceptable.

Recommendation

Water and shade must be provided for greyhounds to access in the outdoor runs at all times. At no stage should greyhounds be restricted to an unshaded area.

Veterinary treatment

The veterinary treatment program and expertise is unclear. Vietnam's Law on Animal Health was passed on June 19, 2015 and will be effective from 1st July 2016. An unofficial translation of this Law sourced from the USDA Agricultural Service is attached to this document.

Article 108 provides information regarding conditions for veterinary practitioners and for veterinary practice organisations as:

- For individual veterinary practitioner:

a) To have professional certificate suitable to each the type of veterinary practice.
b) To have professional morality.
c) To have a good health for practice.

- For veterinary practice organizations:

a) To have technical staff meeting requirement regulated at Clause 1 this Article;
b) To have facilities, technology suitable to types of practice as regulated by legislation.

- The Government shall regulate details for this Article.

The translation of Vietnam's Law on Animal Health refers to the list of Veterinary Drugs Permitted for Circulation in Vietnam and the list of Prohibited Veterinary Drugs in Vietnam. Sodium pentobarbitone is currently on the list of Prohibited Veterinary Drugs in Vietnam.

Recommendation

Expert outside assistance should be sought by Ba Ria facility management in order to ensure that the level of veterinary care and equipment and medication available for the treatment of greyhounds is in line with best practice.

Euthanasia Protocols

There are four criteria that must be satisfied to ensure that a method used to kill an animal is humane and therefore, can therefore be referred to as euthanasia ('a good death'). The method must:

- be painless
- achieve rapid unconsciousness followed by death
- minimise fear and distress
- be reliable and irreversible

The drug of choice for euthanasia of greyhounds is sodium pentobarbitone, however in Vietnam this is listed as a banned substance and cannot be used. Due to the conflicting nature of the information that was presented to the delegation, it was not possible to draw a conclusion regarding how greyhounds are disposed of in Vietnam and therefore, whether or not they are effectively euthanased.

Secretly recorded footage from the Ba Ria kennel facility broadcast in Australia on ABC 7:30 in December 2015.showed greyhounds being injected with approximately 10mls of a light brown coloured liquid described by the voiceover as Ecotraz, an insecticide registered for external (skin) use only. The product datasheet for Ecotraz 125 and 250 describes it as a light brown liquid.

The toxicology of Ecotraz was investigated further by the veterinary expert attached to the delegation.

Toxicity of Ecotraz in dogs:

http://parasitipedia.net/index.php?option=com_content&view=article&id=2690&Itemid=2961

This reference states that the oral LD 50 of Ecotraz in dogs is 100mg/kg. This means that when dogs are given Ecotraz by mouth, 50% of the dogs will die if they consume 100mg/kg. For a medium sized (30 kg) greyhound, this calculates to be 3000mg Ecotraz.

'Ecotraz 250' contains 250mg/litre. This means that approximately 12 litres of the product 'Ecotraz 250' would need to be consumed by mouth for half of the dogs to die.

Ecotraz cattle pour-on 2g/litre:

http://www.ecoanimalhealth.com/_assets/documents/38.pdf.

This equates to 1.5L/dog orally

http://parasitipedia.net/index.php?option=com_content&view=article&id=2690&Itemid=2961

Conversation with Ba Ria Facility Veterinarian

On the first inspection of the Ba Ria facility on Saturday 4 June 2016, the operator gave permission for delegation member Dr Nick Branson to ask the veterinarian on site about the euthanasia protocol for sick or injured dogs at the kennels.

Communicating via the delegation's independent interpreter, the veterinarian advised that they did not euthanase dogs at Ba Ria, and that any sick or injured dogs would be transferred to 'an Institution'. Although it was not made clear what this reference to 'an Institution' meant, it appeared to refer to a different location to Ba Ria, and that euthanasia of sick or injured dogs was not carried out at Ba Ria.

This conversation had barely commenced at which time the operator entered the room and prohibited the veterinarian from answering any more questions. A brief conversation via the interpreter was held subsequently at the Lam Son (Vung Tau) Stadium about the protocol for the euthanasia of greyhounds injured at the racetrack with the same vet. He said that greyhounds injured at the track would not be euthanased at the track, but rather that they would be transported to the Ba Ria Kennels. This statement appeared to contradict the explanation given about the way an injured dog at Ba Ria would be managed, in that the dog would be transferred to 'an instititution'.

On Sunday 5 June 2016, during the second inspection to the Ba Ria facility the delegation was shown a bottle of Zoletil (an anaesthetic agent) and also some sachets of magnesium sulphate powder. The use of these two agents in combination has been described as Conditionally Acceptable by the World Society for the Protection of Animals (WSPCA) in a document titled *Methods for the Euthanasia of Dogs and Cats: Comparison and Recommendations*.

The protocol involves the dog firstly being injected with Zoletil to induce a state of general anaesthesia or unconsciousness. The dog is then injected intravenously with magnesium sulphate to cause death by cardiac arrest (heart attack). The use of magnesium sulphate without first inducing unconsciousness is considered inhumane.

There are logistical, practical and cost concerns associated with this euthanasia protocol. The requirement for the use of an anaesthetic drug before injecting magnesium sulphate adds to both the time taken to perform euthanasia and to its cost. It is critical that the person responsible can competently assess anaesthetic depth in a dog to make sure that surgical depth of anaesthesia has been achieved before an injection of magnesium sulphate is given to a dog. Magnesium sulphate is available commercially as an injectable solution and a powder. The powder does not dissolve readily in water and it is recommended that boiling water should be used. This would then need to be cooled prior to it being injected into a dog. Once it is diluted in water, the magnesium sulphate solution is very thick and this makes it difficult to inject intravenously. Large volumes are required for euthanasia and the dose required to cause death varies between individuals – a 30kg greyhound might require 40-80mls injected intravenously to cause death. Significant skill, care and special equipment would

need to be on-hand to ensure that such a large volume of magnesium sulphate could be delivered accurately and consistently.

The potential exists for dogs to experience a painful death with this euthanasia technique.

Recommendation

As it is illegal to use sodium pentobarbitone in Vietnam, in the first instance, an alternative protocol should be developed. The combination of Zoletil to induce general anesthesia followed by magnesium sulphate to stop the heart could be adopted however, as described above, there are a number of concerns associated with this method. To ensure that this method could be adopted a number of additional steps are required:

- Investigating whether injectable solutions of magnesium sulphate are available in Vietnam and can legally be used for animal treatment
- Competency assessment to ensure that the person who will be injecting the greyhounds is able to assess that a suitable depth of anaesthetic has been reached before magnesium sulphate is injected
- Investigating and sourcing the equipment that is required to euthanase the greyhounds using this method.
- Ensuring that all of the equipment and drugs required to euthanase greyhounds using this method is always available at both the Ba Ria Kennels and the Lam Son Stadium
- Ensuring that a person who is competent to euthanase a greyhound with this protocol is available when required.

It is also recommended that Ba Ria facility management should contact the Department of Animal Health for advice regarding the procedure described in *Article 78 General Regulation on Vet Drug Management*, as is required to be followed, in order to submit an application for an import permit for sodium pentobarbitone.

Track Maintenance: Findings and Recommendations

Overview

Findings and recommendations have been on the following areas:

- Track Monitoring
- Sand Type
- Sand Depth
- Surface Grades and Cambers
- Track Maintenance and Preparation.

Track Monitoring

The operator should seek to develop and implement a recording procedure for track profile and track hardness.

- A physical survey and scientific analysis of samples from the track would be required in order to determine the ideal water content that should be maintained at this particular site. This is referred to as 'benchmarking'. Each track would need to be appropriately benchmarked in order for subsequent recommendations to be successfully implemented.

- Following the benchmarking of the track, these procedures would require implementation:

  - A template of track should be prepared with ten designated positions marked on the track marked out.
  - The track curator would be required to take penetrometer readings from three locations at each of the ten positions, being three positions from the rail, 1m, 3m and 5m. This should be done weekly as a minimum, and ideally before every race meeting.
  - A water content reading should be obtained from various positions of the track, also from three subsections about 1m, 3m and 5m from the rail, to give an approximate total of 250 individual readings. This should be done before each race meeting, about one hour before the first race. The intention behind such a comprehensive survey is to yield the most accurate mean moisture content across the track.
  - Weekly monitoring of sand profile would also be required. This would involve a general check of about 15 location samples from across the track. This degree of sampling would be acceptable unless evidence suggests a particular layering problem in a specific area of the track.
  - Track staff would require training to use and understand monitoring procedures and how to interpret results. A recognized track maintenance expert should be identified to provide a week long training session so as to ensure procedures are understood and properly implemented.
  - Requirements:
    - Penetrometer - measures track hardness
    - Sand Profiler - determines layering of sand on track.
    - Water content reader (TDR300 Moisture Meter) - used to monitor water content.
    - Suitable training to operate equipment and assess results.

- Parallel to the technical aspects of track maintenance, the operator should also seek to develop an educational process for track steward(s) and veterinarians to understand track conditions and direct impacts on type

and frequency of racing injuries, and develop a cause and effect table for same.

- Staff should monitor injury rates to track conditions and maintain accurate records for subsequent reliable statistical analysis.
- Staff should ensure that they identify the section of a track where an injury was incurred, as this crucial to assist in determining trends of injury type and frequency.
- Requirements:
  - Record management system. This could span from a series of logbooks to an integrated track incident recording system,

Sand Type

The use of appropriate sand on a track is critical to ensure sufficient and effective water retention, as well as preventing contamination of sand with sharp edged material (such as crushed seashells) which could cause injury to racing greyhounds.

- Full sand composition testing (physical analysis) should be undertaken at least twice yearly.
  - First stage: Track staff walk along the track and take 50 individual samples (2 cubic inches in volume each or thereabouts). Samples are mixed in a bag to establish approximately one kilogram of composite sample of the entire track.
  - The full sample should be dispatched to an accredited lab in order to conduct a particle analysis. GRNSW uses Sydney Sand and Soil Laboratories and Sports Turf Consultants (Victoria). Quarantine restrictions would prevent use of Australian experts analyzing samples. The operator would need to identify expert analysts in Vietnam.
  - Requirement:
    - Identify suitable sand and soil laboratory to which samples can be regularly submitted for analysis.
- Track composition should be assessed monthly if not more often. Specific training will be required for track staff to fully implement this recommendation.
  - Due to climatic conditions in Vietnam, whereby high and intense rainfall is often experienced, the track will require more attention than tracks based in NSW.
  - Samples should be taken from the top two inches of the track to form a composite sample. Sample is then placed into sand sieves to filter

out fine particles and separate the sample into to six different sizes of particles. Monitors will be able to regulate the consistency and compatibility of their track sand.

- Requirements:
  - Sand Sieves (approximate cost USD1200.00)
  - Suitable training.

Sand Depth

- By using a sand profiler, track staff can monitor sand depth and maintain as required. Track should be 150mm deep. Profiler gives a cross section of track to ensure adequate sand depth. Sand should be applied to the track whenever required so as to ensure consistent depth.

  - Beach sand should be avoided to due risk of shell particles and also due to the nature of its particles. The sand should consist of angular particles (river sand) rather than round particles (sea and ocean sand). Round particles have a lower water retention rate. Silt and Clay, as found in river sand, provide binding capabilities within sand profile and retain water more effectively.

- The track should be blended using a rotary hoe at least every six months if not more regularly. The hoe would be affixed to the rear of a tractor (such as the one already in use at the Vung Tau facility) and would blend all sand particles to the depth of 100mm.

- NB: The harrowing procedure undertaken at the Vung Tau track is only adequate to groom track surfaces prior to each race. It does not adequately blend sand particles across and through the depth of the track.

- Requirements:

  - Sand profiler (as for point 5.2.1)
  - Rotary hoe (approximate cost USD11000.00).

Surface Grades & Cambers

- When applying new sand, surface grades and levels must be checked and reinstated if required.

  - If machinery is not available, this can be done satisfactorily with manual labour and string-lines. Laser measuring equipment would be ideal.
  - Responsible staff would require significant training to ensure that they are able to assess correct cambers on all turns at the track, and direct

work undertaken to maintain surface grades and cambers where required.

- The more frequently surface grades are attended to, the less work required and the safer the track will be.
- Mark should be made on the inner and outer concrete kerbs of the track indicating the sand levels required to ensure necessary grades; for example indicating a 6% to 8% raise in the sand level from the inner kerb to the outer on turns. Physical marks on kerbs greatly facilitate the task of constant monitoring and maintenance of sand levels.
- Requirement:
  - Laser grading device or string line setup
  - Adequate training for track staff.

Track Maintenance and Preparation

- Once the track in question has been benchmarked in relation to water content requirements, methods to maintain water content should be implemented.

  - The use of a water cart, which can be towed by tractor to evenly apply water when required, is highly recommended.
  - The operator should consider manufacturing a similar track harrow to that which is already used, but which could achieve greater depth to soften the track more effectively. Heavier equipment, to allow a regular harrowed depth of 50-70mm rather than the 10-20mm achieved by the harrow presently used, would be ideal and should be used weekly rather than before each race.
  - Existing shallow harrowing practices should be modified in order to drag the track to a smooth finish as opposed to current harrowed and fluffy surface. The light harrowing between races has no more than a cosmetic effect on the track. It hides paw prints from previous races and nothing more.
  - Develop procedures and contact to remain up to date with best practice.
  - Requirements:
    - Water cart (approximate cost USD11000.00)
    - Modified heavy harrow to be towed behind existing tractor on a weekly basis for deep harrowing,
    - Modified light harrow to smooth track surface between races.