

Submissions: Greyhound Owners Trainers Breeders Association of Victoria Inc.

Traralgon Track Design Consultation

15 July 2019

Summary:

GRV has consulted on 2 track design options, excluding a 2 bend track.

Of the options given, GOTBA Vic expresses a preference for the 'U track'. It is more functional from the perspective of a greyhound racing participant. In the submission, we note some racing matters that will need to be monitored if a one bend design is ultimately implemented.

GRV's consultation says nothing about track base, drainage and surface. This was a, possibly the, major issue with the previous track – the Traralgon complex was redeveloped at a total cost of \$6m to GRV's budget in 2014/15. Much of that expenditure was wasted. Such waste cannot recur.

Development of any preferred design must settle on a carefully considered base, drainage and surface design solution, including "best for purpose" sand type before tendering, to avoid repeating past mistakes and impacts for the greyhound.

Finally, as a matter of fairness to participants, GRV should also, after considering submissions by us and others, summarise key feedback items, and publish a summary of GRV's consideration of them, to close the consultation loop.

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1. SUMMARY OF POSITION ON TRARALGON TRACK DESIGN CONSULTATION

QUESTION	ANSWER	WHY
Of the 2 options – J track or U track - which is preferred overall?	<u>U TRACK</u>	<ul style="list-style-type: none"> • Comparable cornering load on greyhound to J track; • Flat racing (J track, 3m rise, harder run). • Run to first turn is not as testing as J track • Single catching pen for all distances • Trialling access simpler than J track. • Less ‘radical’ a design for greyhounds and viewers
Key concerns / risks – preferred option	350m start; race vision	<ul style="list-style-type: none"> • Cost: as yet unknown. • 350m start. Short run into 1st turn (greyhounds accelerating to max speed at apex of 1st turn); • Race vision: alternative solutions required (but same issue both U and J tracks): blocked vision of 500m start • No distance racing at this track – though 500m run is a hard run
Key concerns / risks – J track (not preferred)	Type of run, catching pens, ease of access, race vision	<ul style="list-style-type: none"> • Maximum distance, with 3m rise, longer run to turn, a very hard 500m run. • Two catching pens may give rise to some safety issues; • 300m straight race distance not necessary (though useful for trialling) • Ease of access when trialling using bend distances;

		<ul style="list-style-type: none"> • Race vision for track attendees and TV viewers compromised; • Cost (as yet unknown, GOTBA Vic informed likely higher than U track design)
<u>Cautionary matters</u>	Track Surface; Wasted Expenditure; Cost	<ul style="list-style-type: none"> • GRV spent almost \$6m on Traralgon’s complete redevelopment in 2014/15 (Annual Report). Much of this was, in practice, wasted with the need now for complete re-design. • Track shape/design is one aspect only: base, drainage and surface profile must be right by tendering stage to avoid history repeating. The 2014/15 redeveloped Traralgon track had grievous base, drainage and consequently surface issues. • Track redevelopment is only worthwhile if track base, drainage and surface profile is “best for purpose” and does not itself contribute to reduced safety. • GRV still does not have a “gold standard” design specification for racing surfaces, despite receiving track base and surface reports and recommendations from independent consultants <u>over the last 5 years</u>. • GRV must incorporate soil science work, including base and drainage design alternatives, into any Traralgon redevelopment.
<u>Racing matters to consider further as part of development</u>	Bitches racing impacts; trialling; lure system; distance racing.	<ul style="list-style-type: none"> • <u>Bitches – racing impacts</u> – straight or longer transition one-bend tracks (eg U track) can favour larger (usually male) greyhounds. If this holds true (this should be monitored), a redeveloped track may require more bitches only races to be programmed to best use the available racing population.

		<ul style="list-style-type: none">• <u>Trialling</u> – Consider design or implementation matters to those trainers who wish to trial multiple greyhounds but who cannot attend trials with a second person.• <u>Lures</u> – the correct lure and drive system is an important racing safety matter. Selecting the best version for the track as redeveloped will be an important work item.• <u>Distance racing</u> – while the 500m U track distance would provide a strong test, it is not a distance race. Ongoing distance racing options in Gippsland will need to form part of GRV’s programming considerations.
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2. Introduction

- 2.1 These submissions are made by the committee of the Greyhound Owners, Trainers and Breeders Association of Victoria Inc. (Reg No: A0017661V) (ABN: 67 306 599 068) (**GOTBA Vic**) for and on behalf of GOTBA Vic.
- 2.2 GOTBA Vic represents a large number of Victoria's registered greyhound racing participants across a range of roles. As an organisation, we are committed to serving the interests of our members and advancing the sport of greyhound racing. This includes recognising that the welfare of the greyhound is at the centre of any robust greyhound racing industry, and participation in it.
- 2.3 Submissions are made in this document in respect of:
- the new Traralgon track design consultation information provided by Greyhound Racing Victoria - <https://www.grv.org.au/feedback-traralgon-track-designs/> . This is Appendix A to this submission; and
 - other critical matters relevant to re-development of Traralgon.

What we have considered in making this submission

- 2.4 GOTBA Vic has considered information or feedback provided to it in respect of a proposed Traralgon redevelopment as follows:
- The consultation release information released by GRV in June 2019;
 - Information (presentations and reports) from soil science experts and design experts provided to GOTBA Committee members by GRV when attending GRV's Industry Consultative Group or Racing Reference Group;
 - Feedback from participant consultation information sessions from GRV that we attended;
 - Member emails and other contacts in respect of the GRV consultation material.
- 2.5 We did not have an opportunity to conduct a survey of all of our membership.

3. Submission

U track is the preferred option of the two consulted on

- 3.1 GOTBA Vic, given a choice between the 'J track' (300m straight distance; 400m/500m one-bend distances, 3m rise from start; 2 catching pens; design not previously seen) and the 'U track' (350m, 420m, 500m one bend, one catching pen, flat run), at Traralgon, prefers the U track proposal.
- 3.2 In terms of pure design and theoretical cornering loads on a racing greyhound of the proposed shapes, the proposals are near identical. This can be seen from the GRV presentation regarding loads on greyhounds that accompanies consultation material.
- 3.3 This is backed up by significant research conducted by GRV. We are informed that this research is based on observed, measured review and analysis of actual greyhound races and greyhound running characteristics to prepare modelling that, while in some parts theoretical, is nonetheless based upon real evidence.
- 3.4 That significant body of work should give confidence to either design as a baseline safety matter (but it is not the be all and end all).
- 3.5 Our preference for the U track is primarily based on racing matters.
- 3.6 Based on considering material provided to us, the J track has issues regarding the use of multiple catching pens at different distances for straight and bend racing configurations, an uphill run and a very long run to the first turn that would probably cause a 500m run to be like a strong middle distance event, a shape that would require significant adjustment for race vision and may lengthen the time necessary to trial dogs. The U track does not have those issues, or has them to a lesser extent (save perhaps for race vision).

CAUTION 1: Base, drainage and surface profile / sand characteristics must not be forgotten

- 3.7 When closed in 2018, the Traralgon 2 bend track –GRV spent almost \$6m on redevelopment of Traralgon in 2014/15 - was found on investigation to have extremely serious problems with its surface, drainage and base conditions. As GOTBA Vic has said previously to GRV – and participants to us (GOTBA Vic's 2018 survey of participants) – this was clearly known to participants who raced there.

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- 3.8 There were two issues side by side with that track that together exacerbated risk to greyhound welfare: two bends (physical loads on greyhounds, interference, start positioning) AND an extremely poor and inconsistent track surface.
- 3.9 Track design – while the only thing that GRV asked for consultation on – is NOT everything. It may not even be the most important thing in terms of racing safety, as a well-designed track without a racing surface that provides consistent traction, stability and cushioning is nowhere near as safe as it could be.
- 3.10 The \$6m spent on Traralgon in 2014/15 – at least such of it as went to the 2 bend track itself – was wasted.
- 3.11 Track redevelopment is only worthwhile if track base, drainage and surface profile is best practice and does not itself contribute to reduced safety. Based on material we have seen and what we have been told in consultation, GRV still does not have a ‘gold standard’ design for racing surfaces developed by soil science experts, despite receiving independent track base, drainage and surface reports from soil science experts over the last 5 years.
- 3.12 It is **critical to the Traralgon redevelopment** that:
- any build is tendered with a clear track base, drainage and surface profile specification that is integrated, sustainable and complements the track design chosen;
 - that specification reflects the optimum solution based upon careful consideration and implementation of **all** previous base, drainage and surface and sand consultant reports known to GRV – there should not be a roll-out of existing GRV practice (eg using a road base and geofabric layer) without proper consideration of those independent recommendations or reports known to GRV; and
 - proper consideration is given to the potential sourcing of sand from local quarries if they meet specifications developed by soil science experts to provide consistent surface conditions.

CAUTION 2: Cost

- 3.13 Participants should be clearly informed of the proposed cost of the Traralgon redevelopment and where the money is coming from, precisely. That information is not presently included in the consultation information.
- 3.14 Cost and benefit must form part of any final position and decision on redevelopment.

Why there is no 2 turn track option

- 3.15 Participants have asked us why no 2 turn track was included in the design options.
- 3.16 GOTBA Vic believes acceptably safe 2 bend tracks can be developed now or in future. 2 bend designs should not be ‘off the table’ as a general rule. Their racing safety can be improved by various factors that are not track shape design – eg surface, lures, box placement.
- 3.17 However, Traralgon has limited options for a 2 turn track in terms of design – the available land and restrictions on it (eg protected trees) restricted such a track to basically (with minor alternate possibilities) the 2014 design/shape, with limited distance options. On the material we have seen from GRV, GOTBA Vic accepts that that particular shape at Traralgon, in terms of loads on a greyhound, is a less safe solution than either ‘one bend’ option.
- 3.18 While complete resurfacing and redevelopment of a 2 bend track would undoubtedly be a cheaper option to the point of the first race on the redeveloped track, at Traralgon it would probably cost the industry more in the longer term.

Other racing matters to be considered if developing a one-bend option

- 3.19 Participants have also raised certain other matters regarding a one bend design, which GRV should monitor and address upon any development occurring:
- Bitches – racing impacts – anecdotally, a one bend, long turn transition track – just as a straight track does - favours larger greyhounds, or at least reduces a competitive advantage to be gained by smaller, nimbler greyhounds (usually bitches) in 2 bend racing scenarios. Several experienced participants indicated to us that the Traralgon designs may similarly favour larger male greyhounds on an overall basis. This should be closely monitored by GRV – if it holds true this may

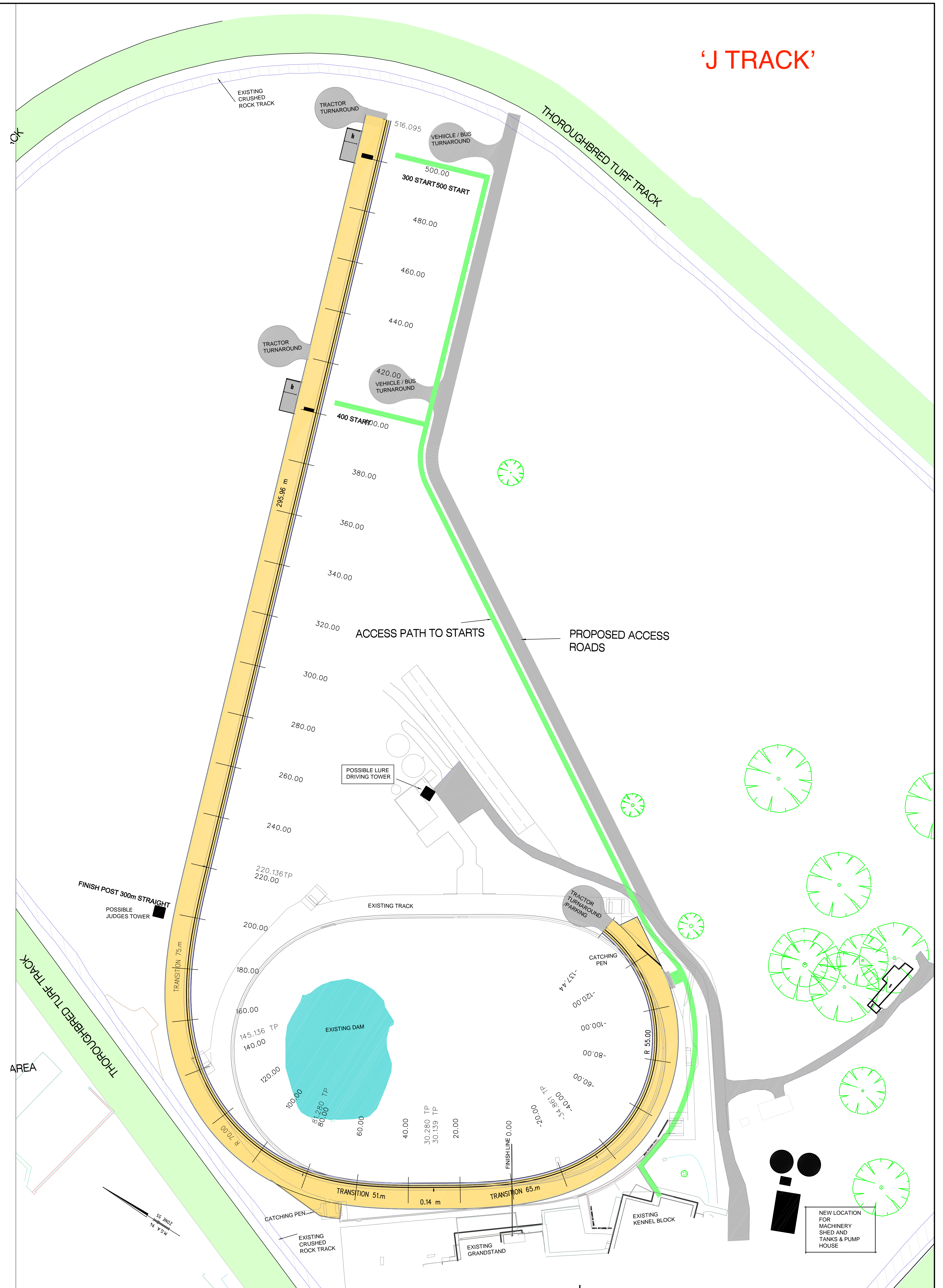
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require more bitches only races to be programmed to best use the available racing population.

- Trialling – further thought may need to be given to what, design-wise or implementation-wise, can assist those trainers who wish to trial multiple greyhounds but who cannot attend trials with a second person.
- Lures – the correct lure and drive system is an important racing safety matter. GRV is trialling different lure designs. Selecting the best version for the track as redeveloped will be an important work item.
- Distance racing – while the 500m distance will provide a strong test, it is not a distance race. While Traralgon has not run many distance races in recent years, ongoing distance racing options in Gippsland will need to form part of GRV's programming;

APPENDIX A – CONSULTATION MATERIAL AS RELEASED BY GRV

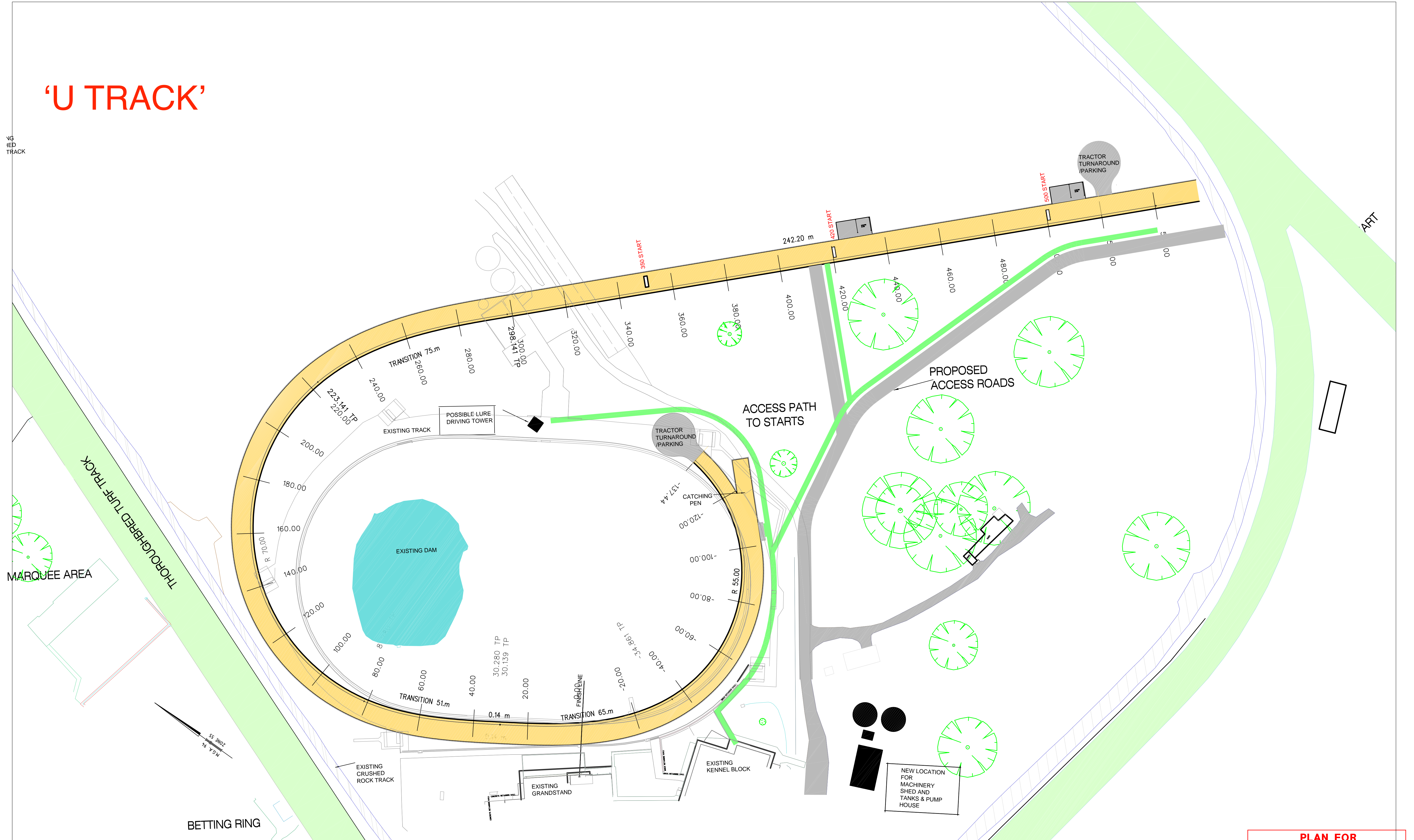
'J TRACK'



DESIGNED DA		David Allan Consulting Engineer Pty Ltd 5 Kismet Road Sunbury, 3429 Victoria, Australia Telephone 0417 314 479	CLIENT	GREYHOUND RACING VICTORIA		
CHECKED DA			PROJECT	TRARALGON GREYHOUND TRACK		
APPROVED			PLAN	LAYOUT PLAN- "J" TRACK		
MELWAY REF.			SCALE	1:650	DWG No	5152
DATE	14/12/2018		SHEET 1 OF 1			

'U TRACK'

NG
IED
TRACK



PLAN FOR DISCUSSION PURPOSES

REV	DATE	REVISION	APP'D
A	06/06/2019	FOR DISCUSSION PURPOSES	

DESIGNED	DA
CHECKED	DJA
APPROVED	
MELWAY REF.	
DATE	12/02/2019

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Telephone 0417 314 479

A.C.N. 100 522 236

CLIENT	GREYHOUND RACING VICTORIA
PROJECT	TRARALGON GREYHOUND TRACK LAYOUT PLAN- "U" TURN TRACK
PLAN	LAYOUT PLAN

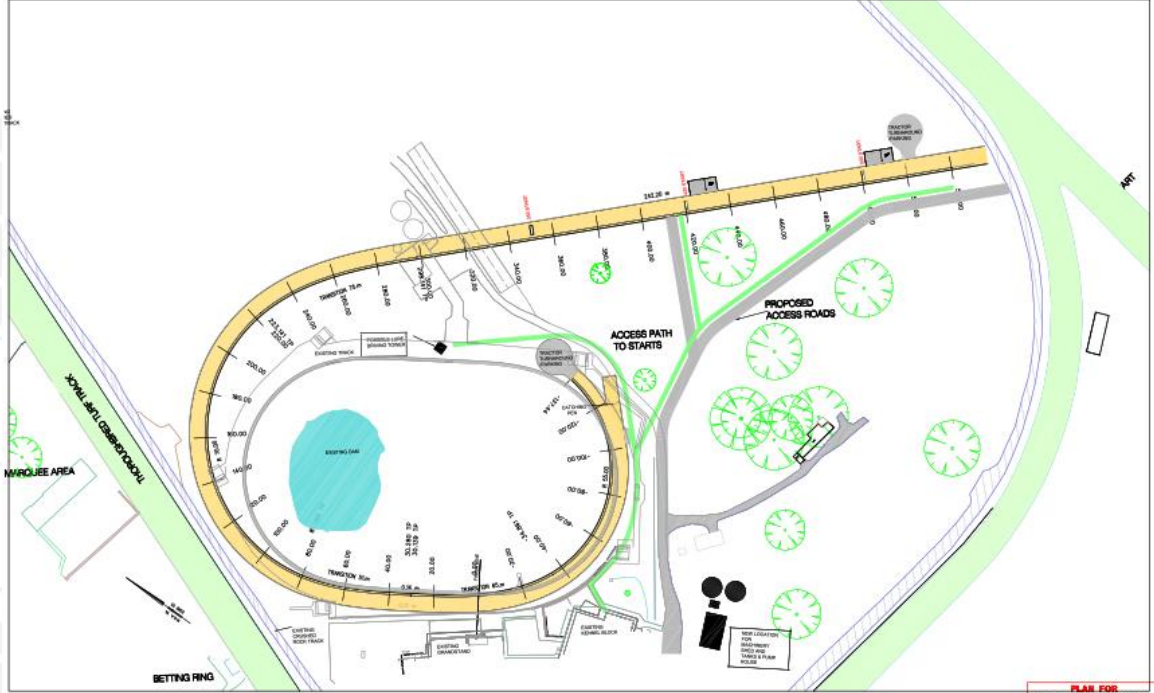
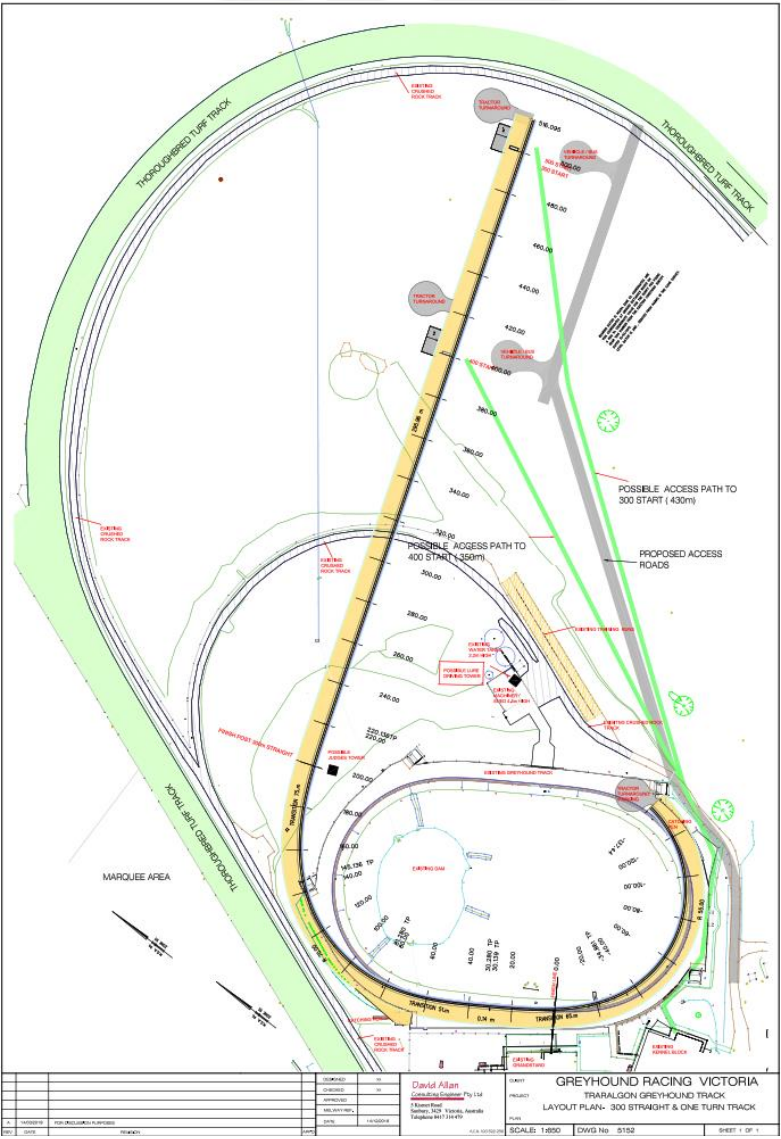
SCALE: 1:650	DWG No 5152	SHEET 1 OF 1
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**TRARALGON TRACK
REDESIGN**
Prepared for Consultation

18 June 2019

Traralgon Track Redesign:- Current Proposed Designs



PLAN FOR DISCUSSION PURPOSES

PROJECT NO.	01202027	PROJECT NAME	TRARALGON GREYHOUND TRACK
DATE	10/04/2020	SCALE	1:500
DRAWN BY	DAVID ALLAN	CHECKED BY	DAVID ALLAN
DATE	10/04/2020	SCALE	1:500
<p>GREYHOUND RACING VICTORIA TRARALGON GREYHOUND TRACK LAYOUT PLAN- 300 STRAIGHT & ONE TURN TRACK</p> <p>David Allan Civil & Building Engineer 12/141 Street Traralgon VIC 3840 Tel: 03 5123 4567 Fax: 03 5123 4568 www.davidallan.com.au</p> <p>SCALE: 1:500 DWG No: 0152 SHEET 1 OF 1</p>			

PROJECT NO.	01202027	PROJECT NAME	TRARALGON GREYHOUND TRACK
DATE	10/04/2020	SCALE	1:500
DRAWN BY	DAVID ALLAN	CHECKED BY	DAVID ALLAN
DATE	10/04/2020	SCALE	1:500
<p>GREYHOUND RACING VICTORIA TRARALGON GREYHOUND TRACK LAYOUT PLAN- 1/2 TURN TRACK</p> <p>David Allan Civil & Building Engineer 12/141 Street Traralgon VIC 3840 Tel: 03 5123 4567 Fax: 03 5123 4568 www.davidallan.com.au</p> <p>SCALE: 1:500 DWG No: 0152 SHEET 1 OF 1</p>			



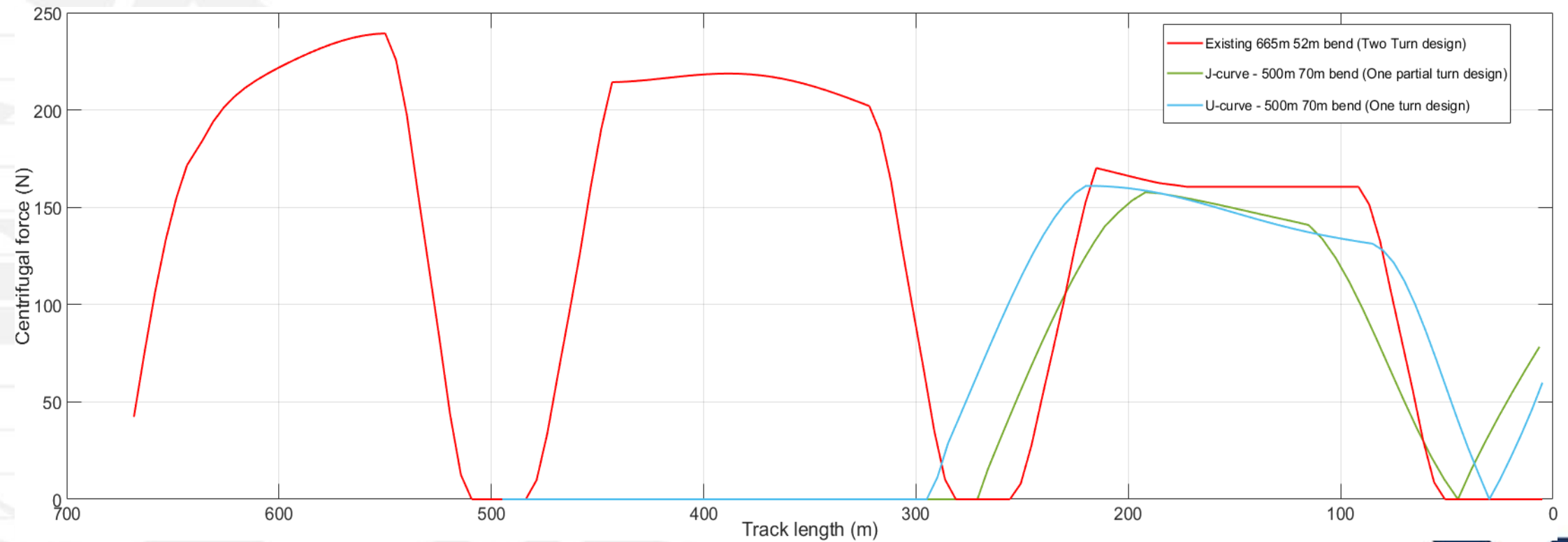
Traralgon Track Redesign:-

- Designed with **RACING SAFETY** as the priority
 - 75 metres transition turn
 - 70m radius
 - Reduced forces and pressure on racing greyhounds
 - Low levels of SNAP and JERK
- Utilising existing infrastructure:
 - Kennel Block
 - Grandstand
 - Home Straight
 - Timing Systems
 - Build to fit within limitations of site including thoroughbred track.



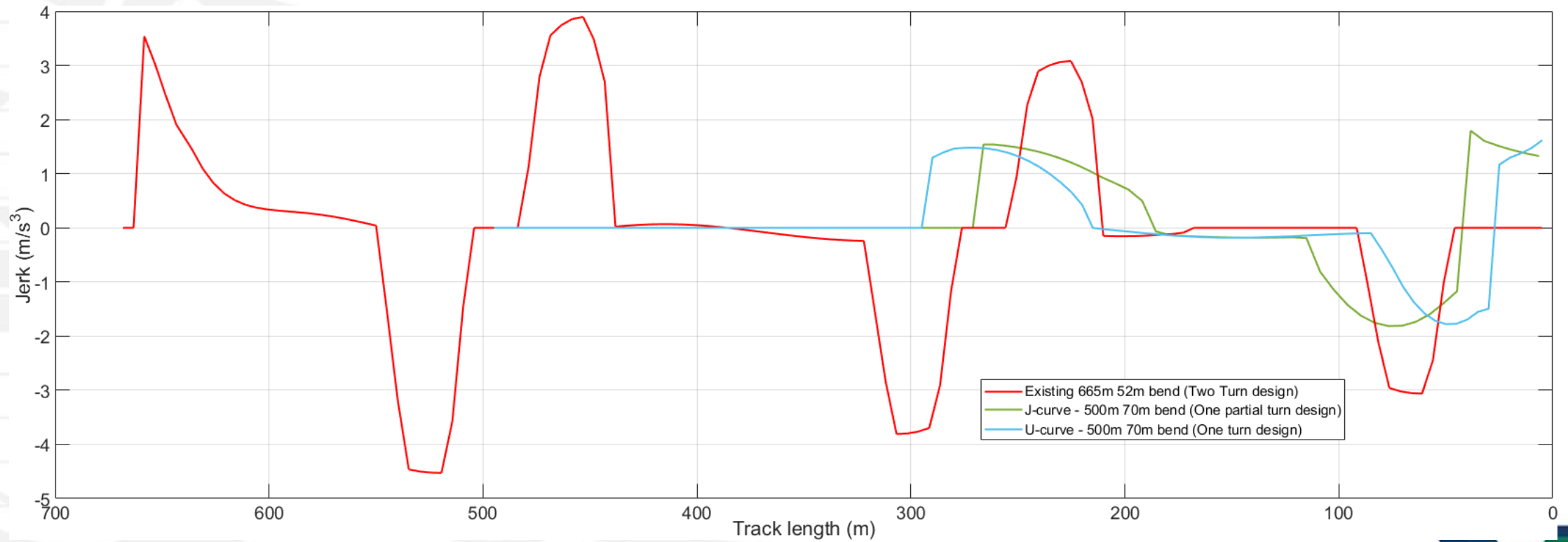
Centrifugal force comparison

For the proposed U-shaped track, the greyhounds are subjected to centrifugal force for slightly extended period compared to J-shaped track where the peak centrifugal force is gradually stable for the entire race period. *UTS Report June 2019



Jerk comparison

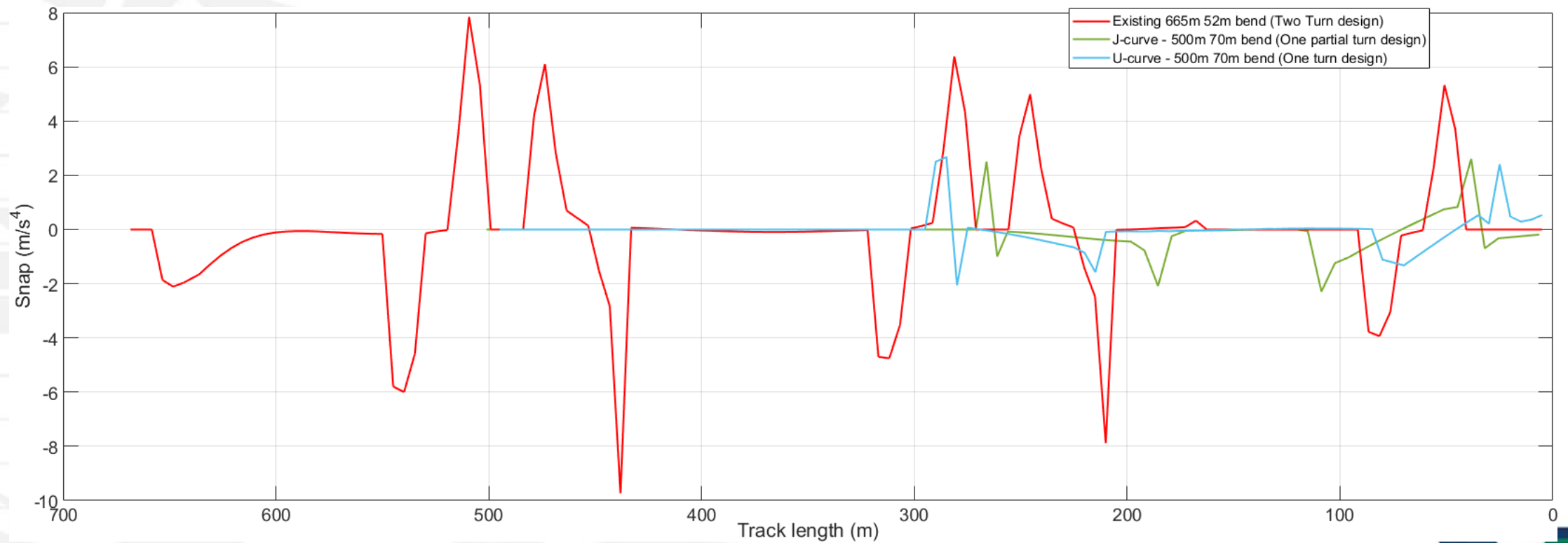
Compared to existing track both J-shaped and U-shaped tracks designs have significantly lower centrifugal acceleration jerk. Furthermore, the jerk in both J-shaped and U-shaped tracks designs are gradually stable for the entire race period. *UTS Report, April 2019



Snap comparison

Compared to existing track both J-shaped and U-shaped tracks designs have significantly lower centrifugal acceleration snap. Furthermore, the snap in both J-shaped and U-shaped tracks designs are gradually stable for the entire race period.

UTS Report, April 2019



Glossary

- **Velocity** is the rate of change of displacement. It is a vector and is measured in m/s. Greyhounds experience velocity when they move and acceleration when they change the velocity at which they move. Their body does not feel velocity, but only the change of velocity i.e. acceleration, brought about by the force exerted by an object on their body.
- **Centrifugal force** is the *apparent* inertial force that is felt by the greyhound galloping around a bend or curved track. It acts outwardly away from the centre of rotation and is the reason why they lean into the rail as they traverse the bend. It is a vector and is measured in Newtons (N). Because it is a force the magnitude is proportional to the mass of the greyhound. This is why the lighter female greyhound can handle a tight 2-turn tracks better than a heavier male greyhound. When a bend is banked the elevation of the bank reduces the reactionary force and tends to stabilise the greyhound. Should the greyhound loss traction the equilibrium of forces between the greyhound and the track surface will be broken and the greyhound will loss stability and control of its circular direction and move tangentially. This can result in the greyhound disrupting the orderly flow of others greyhounds or in certain situations in this greyhound impacting the outer fence of the track.
- **Jerk** is the rate of change of acceleration. It is a vector and is measured in m/s^3 . It is commonly associated with a short sudden movement such as yanking or snatching an object. It is important when evaluating the destructive effect of motion or at lower magnitudes discomfort caused to passenger in a vehicle or lift. In greyhound track design it is associated with a sudden change in the track shape that causes the greyhound to change its trajectory from a smooth to a least then smooth path. This behaviour is particularly problematic if it is combined with other destabilising dynamisms such as centrifugal force.
- **Snap** is rate of change of jerk. It is a vector and is measured in m/s^4 . It is a good indicator that the change in acceleration is excessive. In a simple way that velocity is the first derivative of displacement, acceleration is the second derivative of displacement, jerk is the third derivative of displacement, snap is the fourth derivative of displacement. Displacement, velocity, acceleration, jerk and snap are different and give a greater insight into that understanding of the effect of changes in motion.
- For more information on velocity, acceleration, jerk and snap visit European Journal of Physics article: <https://iopscience.iop.org/article/10.1088/0143-0807/37/6/065008/pdf>



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