



THE GARDENS STARTING BOX ALIGNMENT ANALYSIS

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THE GARDENS - STARTING BOX ALIGNMENT ANALYSIS

Figure 1 shows the existing alignment and proposed realignments for the 400 m starting box.



Figure 1 400m starting boxes alignments

TECHNIQUE

The following data is retrieved from the computer simulation of a single greyhound for the starting box closest to the lure running rail. The simulation result in this document is solely based on the mapping of the Figure 1 as provided by GRNSW to the actual survey plotting of The Gardens track.

FINDINGS

From the starting boxes to the immediate sharp turn there is no significant difference in greyhounds run distance among the existing and proposed starting boxes alignments as shown in the table below.

Greyhounds boxes to immediate bend run distance in meters

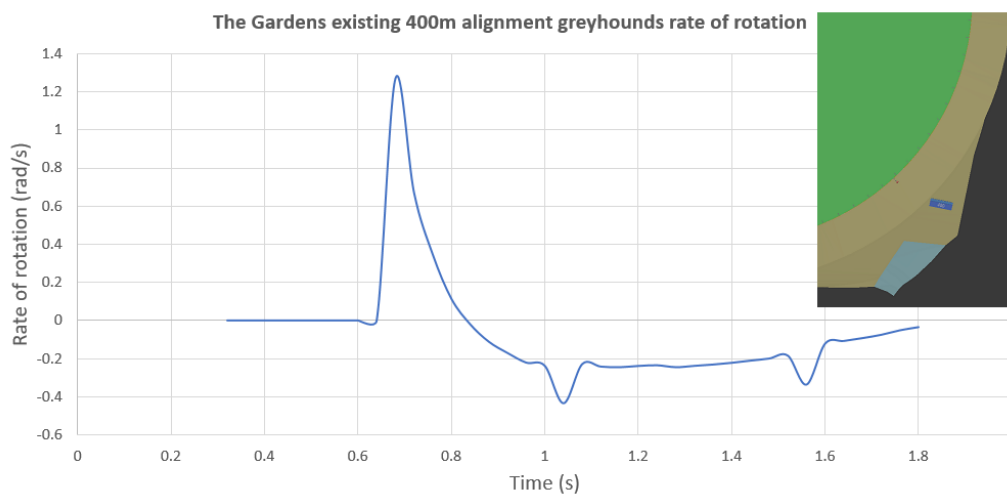
Existing 400 m starting boxes alignment	19.36 m
Proposed 400 m starting boxes realignment Option A	21.69 m
Proposed 400 m starting boxes realignment Option B	20.77 m

Rate of rotation measures how quickly a greyhound is turning during a race. As a greyhound navigates from starting boxes to the track it experiences significant rate of rotation. The following table shows maximum rate of rotation of a greyhound while transitioning from starting boxes to the track. The existing starting boxes alignment exposes greyhounds a higher turning than proposed starting boxes alignments while transitioning from starting boxes to the track as shown in the table below. Proposed realignment option A eases transitioning from starting boxes to the track as it requires least rate of rotations for the greyhounds.

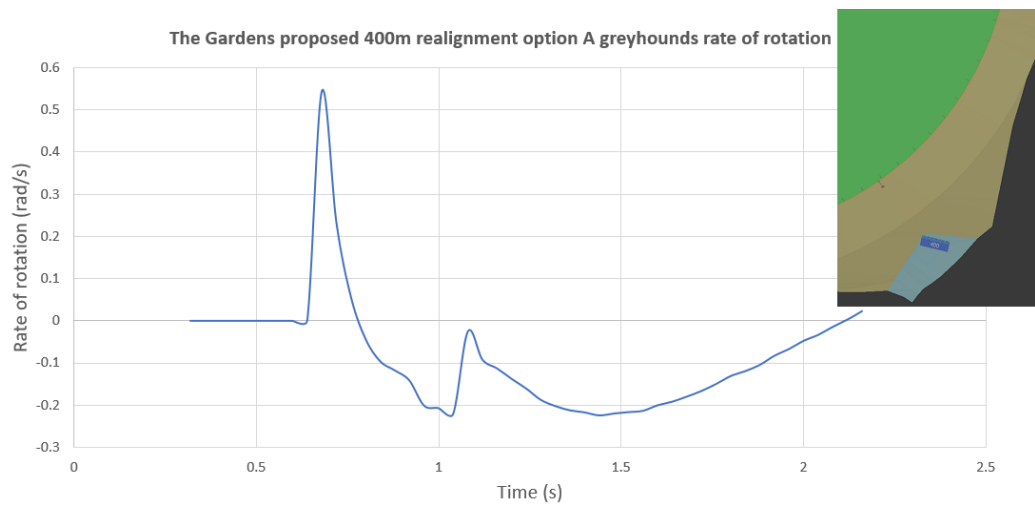
Maximum transition rate of rotation in radians per second

Existing 400 m starting boxes alignment	1.27 rad/s
Proposed 400 m starting boxes realignment Option A	0.54 rad/s
Proposed 400m starting boxes realignment Option B	0.79 rad/s

The following graphs show rate of rotations for the data above. For existing 400 m starting boxes alignment there is no major fluctuations in rate of rotations for greyhounds' out of box turning. Proposed 400 m realignment



option A also has no major fluctuations in the rate of rotations for out of box turning. The rate of rotation for proposed 400 m realignment option B fluctuates for greyhounds out of box turning, which implies jerks happen earlier for proposed realignment option B than proposed realignment option A and existing 400 m starting boxes alignment.



IMPRESSION

Based on the transitional rate of rotation analysis above of a single greyhound it can be said that the lateral jerks in the proposed realignment Option A is least when compared to proposed realignment Option B and existing 400 m starting boxes alignment.