



Dr Richard Dluzniak Consulting Pty Ltd
537 High Street, Kew Victoria 3101
Mobile s 9(2)(a)
Email s 9(2)(a)

MEMORANDUM

To Steve Pittman
From Richard Dluzniak
Date 2 March 2026
Subject Track Lighting Overview
Waikato Greenfields Track lighting

Dear Steve

As requested, a concise summary of the track lighting requirements is required at this stage as opposed to the detailed schematic/concept design for the complete lighting and electrical system, as previously submitted.

The main lighting parameters for each track to be lit are summarised below.

A HARNESS TRACKS

Main track Lighting for CTV broadcast night racing
Training track Lighting for early morning/evening training, non CTV broadcast

Main track lighting summary

Lighting levels

Illuminance at track level	1000 lux
Illuminance towards CTV camera	1200 lux
Finish line illuminance	2000 lux

Lighting system

Mast heights	18m infield, 24m front straight
Mast quantities	20 masts infield, 8 masts front straight
Lighting technology	1400-1500W LED
Floodlight quantity	200 floodlights (Approx)

Essential lighting

Diesel generator rating	100kVA (Approx) - the Essential Supply
Floodlights on Essential Supply	25% (approx) of total floodlights

Light dimming

	All lights dimmable
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Training track lighting summary

Illuminance at track level	40 lux
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Lighting system

Masts	lighting from main harness track masts and front straight masts
Floodlight quantity	14 floodlights (approx)

B GALLOPS TRAINING TRACKS

No 1 and No 2 grass tracks	Lighting for early morning training
Synthetic track	Lighting for early morning training
Sand and plough tracks	Lighting for early morning training (Lighting on all training tracks non CTV broadcast)

Training track lighting summary

Lighting level	
Illuminance at track level	20 lux
Lighting system	
Mast heights	30m
Mast quantities	8 masts
Mast locations	All mast located in infield of main track
Floodlight quantity	48 floodlights (Approx)
Essential lighting	
Diesel generator rating	50kVA genset (approx) to provide the Essential Supply
Floodlights on Essential Supply	33% (approx.) of total floodlights

C BACKTRACK TRAINING TRACKS

Grass, sand and plough	Lighting for early morning training (non CTV broadcast)
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Training track lighting summary

Lighting level	
Illuminance at track level	20 lux
Lighting system	
Mast heights	25m
Mast quantities	6 masts
Mast locations	All mast located in infield of back track
Floodlight quantity	24 floodlights (Approx)
Essential lighting	
Diesel generator rating	40kVA genset (approx.) to provide the Essential Supply
Floodlights on Essential Supply	33% (approx.) of total floodlights

D OBTRUSIVE LIGHT

The Australian/New Zealand obtrusive light code would apply to the spill light and glare emanating from the racecourse. The obtrusive light and glare are governed by AS/NZS 4282:2019 – Control of the obtrusive effects of outdoor lighting.

The code limits the spill light and glare on residential property boundaries and/or dwellings. For spill light the code specifies the following limits:

For CTV broadcast sports lighting (harness track lighting)	the max spill light allowable is 12% of track level
For non CTV broadcast sports lighting (training lighting)	the max spill light allowable is 10 lux.

For the proposed location of the various tracks at the site, the following is noted:

Harness track spill light There should be no problem in achieving 12% spill light in adjoining properties.
However, achieving 10 lux (if local Council demands this lower value) will be challenge because of the close proximity of the harness track to Pencarrow Road.
A variety of measures (external floodlight hoods and louvres, use of tighter floodlight beam optics, reduced mast spacing, etc) can be taken to meet the lower spill level if required.

Training tracks spill light There should be no problem in achieving 10 lux spill light in adjoining properties.

Note: The obtrusive light code also specifies limits on discomfort and disability glare emanating from the site as well as sky glow limits. Generally, spill light is the main offender and of most concern to residents. Once spill light is satisfied, the other parameters are usually also satisfied.

E PUBLIC LIGHTING

In addition to the lighting of the horse tracks, public lighting will be required for the following areas:

- Local streets and paths
- Parking
- Commercial Development
- Equine Precinct
- Access Tunnels

Lighting level for each of these areas will be as per Australian and New Zealand Standards:

S/NZS 158.1.1 : 2005	Lighting for roads and public spaces. Vehicular traffic (Category V) lighting
S/NZS 158.1.1 : 1999	Road lighting. Pedestrian areas (Category P) lighting
S/NZS 1158.5 : 200	Lighting for roads and public places. Tunnels and underpasses

F SUMMARY

The main lighting parameters for the lighting of the tracks for night racing and training at this new greenfield site have been presented.

The lighting proposed is comparable to the harness night racing lighting at Melton Park (Victoria) and the gallops training lighting at Cranbourne Training Complex (Victoria).

The issue of spill light and glare should not be a problem with this site, and measures will be taken to ensure complete compliance with the obtrusive light code and Council requirements.

Yours sincerely



Dr Richard Dluzniak
Consulting Engineer

Dr Richard Dluzniak Consulting Pty Ltd
537 High Street, Kew 3101, Victoria Australia
Mobile s 9(2)(a) : Email s 9(2)(a)