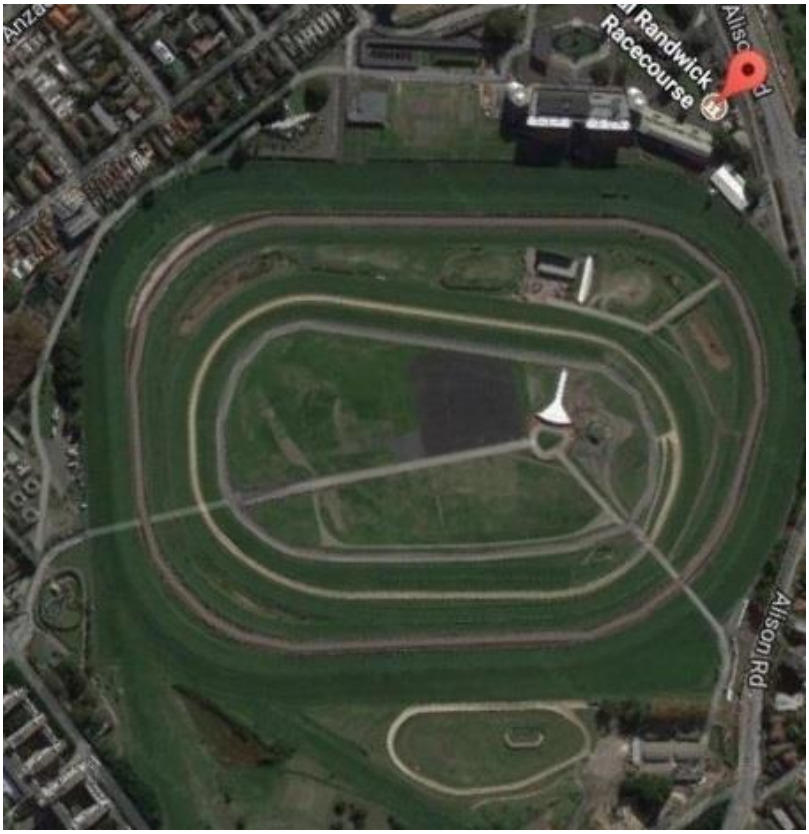


# AUSTRALIAN TURF CLUB
## Royal Randwick Racecourse

# Non-Race Day Events
# Infrastructure Assessment

Job Number: EN – N21_046
June 2024

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# Document Control

| Version | Date | Author | | Reviewer | |
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# Table of Contents

# 1. GLOSSARY

Please find following a table of acronyms and technical terms that are not commonly used in everyday language which may be used within the body of this report.

| Acronym or Technical Term | Meaning/ Definition |
|---|---|
| A | Amperes |
| ATC | Australian Turf Club |
| FOH | Front of house |
| RRRC | Royal Randwick Racecourse |
| ST | Stage |
| ToTH | Theatre of the Horse |
| V | Volts |
| kVA | Kilo Volt Ampere |
| kW | Kilo Watts |
| | |

# 2. EXECUTIVE SUMMARY

## 2.1 Overview

This application seeks approval for the use of land and buildings within the Spectator Precinct and the Infield Precinct of the Royal Randwick Racecourse for various non-race day events.

The accommodation of non-race day events on the site is consistent with the historical use of the site as a *recreation facility (major)* and the broader event character of the site. The site has accommodated a number of non-race day events under previous approvals, and this application seeks to continue the ongoing use of the site for this purpose.

Table 1 Proposed scope

| Parameter | Proposal |
|---|---|
| **Location** | Events will be held in the Spectator Precinct (all events) with the Infield Precinct used as car parking (as per current practise). |
| **Number of events** | 10 per annum |
| **Patronage** | 5,000 – 15,000<br><br>Non-race day events of a patronage capacity of less than 5,000 patrons are permitted via Schedule 2 of the *Randwick Local Environmental Plan 2012* and development consent MP10_0097 MOD 2. |
| **Hours of operation** | Event hours:<br>• Monday – Thursday: 10am – 8pm<br>• Friday, Saturday, Sunday or public holiday: 10am – 10:30pm<br><br>Bump in and bump out may occur between 6am – 1am the following day for a maximum of 10 days prior to and following the event.<br><br>Works will only be undertaken outside of these hours if required in an emergency to avoid the loss of life, damage to property, prevent traffic conflicts and / or prevent environmental harm. |
| **Type of events** | Non-race day events may include a range of community events, private and corporate events/functions, festivals, cultural / art events, markets, and consumer roadshows. |
| **Event duration** | The duration of events will be between 1 – 3 days (consecutive days). No event will continue for more than a consecutive 3-day period (excluding bump-in and bump-out procedures). |

## 2.2 Event location

Events will be accommodated within the land and buildings of the Spectator Precinct (all events). The nominated event locations are illustrated in the Site Activation Plans prepared by MI Consultants.

The detailed layout and site design within these precincts will vary depending upon the type of event and the individual event operator.

Events will not be permitted within the Stables Precinct on the south-eastern corner of the site adjacent to High Street and Wansey Road. However, pedestrian and vehicular access routes to activated areas may be provided through this precinct from High Street.

## 2.3 Temporary Structures

The proposal involves the erection of ancillary temporary structures including stages, marquees, screens, amenities, and lighting to support the non-race day events. The proposed temporary structures will be:

- erected in the days preceding the events and dismantled and removed from the site within 10 days following the event,
- positioned on a level stable surface and sufficiently weighted to ensure stability at all times of use,
- monitored throughout the duration of the event to ensure any potential safety concerns (such as during adverse weather conditions) are mitigated by the applicant,
- erected in accordance with the relevant provision of the Building Code of Australia (**BCA**) and Australian Standards to ensure the structures can adequately support the proposed loads,
- managed to ensure the number and width of exits and maximum number of people permitted in the temporary structures is in accordance with the provisions of the BCA,
- wholly located within either the Spectator Precinct or the Infield Precinct, and
- carried out to ensure that there is no damage to the site, including existing structures and landscaping elements.

A potential layout of temporary structures to support a non-race day event on the site is illustrated in the Technical Layout Plan prepared by MI Event Consultants. This is for **information purposes only** and represents a 'worst case' scenario. The specific layout and type of temporary structures will be determined by the event type and operator.

Temporary structures that could be erected on the site to support a non-race day event includes:

- Stages located in the Spectator Precinct, in addition to the main spectator zone adjacent to the QE II Stand and Winx Stand.
- Market tents within the ground floor of the multi-deck car park building.
- Food, bar, amenities and supporting merchandise and administration stalls within the Spectator Precinct.

- Artist back of house in the Spectator Precinct.
- Staff, security and safety marshalling areas within the Spectator Precinct.

## 2.4 Site Access and Parking

Existing drop-off facilities will be utilised for events, in accordance with a standard race-day operation. This includes:

- Taxi Rank via Ascot Street, Gate 18
- Public Bus layby via Alison Road
- Shuttle drop-off via Alison Road, Gate 1
- Limousine, and large shuttle/coach drop off
- A managed pedestrian exit will be provided from Gate 18 (Ascot Street) after 8pm

On-site parking will be available within the multi-deck car park and the infield car park. Patrons will be encouraged to utilise public transport and active transport for access to and from events.

## 2.5 Event Management

A draft Operational Management Plan (OMP) has been prepared to outline the intended management and operation of the non-race day events on the site. The draft OMP will be supplemented by the following:

- Traffic Management Plan,
- Waste Management Plan,
- Noise Management Plan;
- Alcohol Management Plan,
- Security Management Plan,
- Consultation Plan, and
- Draft Emergency Evacuation Plan.

These management plans have been appended to the Environmental Impact Statement.


Figure 1 – Site Plan

# 3. PURPOSE OF REPORT

The Australian Turf Club has commissioned IGS to produce an Infrastructure Report for the Non-Race Events. This report is limited to the temporary power, sewer, and water requirements of the events and how these are to be catered for.

Temporary power will be mainly provided using mobile diesel generators and associated temporary switchboards around the various stages and temporary amenities. These are not permanent in nature and will be subject to the 'bump-in' and 'bump-out' procedures.

# 4. DESIGN CRITERIA – TEMPORARY POWER

## 4.1 Applicable Australian Standards

The applicable standards are:

- AS/NZS 3000:2018 - Electrical Installations (known as the Wiring Rules)
- AS 2676.2-2009 - Emergency and standby power systems - Diesel engines
- AS 1940:2017 - The storage and handling of flammable and combustible liquids
- AS/NSZ 3010:2017: Electrical Installations - Generating Sets:

The standard does not make specific reference to temporary installations.

## 4.2 Power Requirements

| | |
|---|---|
| Stage 1 (ToTH) | Permanent (mains) power supply from existing 4 x 32-amp, 3-phase outlets. No Generator required. |
| Stage 2 | 4 x 32-amp, 3-phase outlets to be supplied from generator(s). |
| Stage 3 | 4 x 32-amp, 3-phase outlets to be supplied from generator(s). |
| Marquee | 4 x 32-amp, 3-phase outlets to be supplied from generator(s). |

Power requirements for Food Trucks, Bars and Catering areas in the Spectator Precinct are either self-contained i.e. mini portable generators provided by each supplier or to be run off house power and therefore no central temporary generator is required.

## 4.3 Generator Specifications

In the realm of selecting and deploying portable generators to meet diverse operational demands, the restriction on generator size, often capped at less than 60 kVA for trailer-mounted units, emerges as a pivotal factor. Even though portable generators are easy to move around and set up, it's important to make sure they can provide enough power for what you need.

Confronted with this constraint, an alternative avenue entails the utilization of skid-mounted generators to effectively address the power requirements. This strategic approach affords flexibility in achieving the desired power output without succumbing to the size constraints associated with trailer-mounted units.

These generators will be sufficient to power the temporary amenities as outlined in the plan in Appendix A. Final location of temporary Generators and temporary distribution boards to be confirmed with client.


Image: 34kVA & 60kVA Generator – Trailer mounted

<u>Option 1 (Generators per Stage):</u>

To support a minimum load of 92kVA per stage using temporary generators, the strategy is to split the load between two or more generators.

Stage 1: No temporary power required.
Stage 2: Minimum load of 92kVA.
Stage 3: Minimum load of 92kVA.
Marquee: Minimum load of 92kVA.


Image: 100kVA Generator – Skid Mounted

Option 2 (Single Skid Generator):

One (1) skid temporary generator required with a minimum size of 276 kVA.
This generator will supply power to both Stage 2, Stage 3 and Marquee.


Image: 300kVA Generator – Skid Mounted

## 4.4 Temporary Distribution Boards

Adjacent temporary distribution boards are to be mounted for connection of the 4 x 32A outlets at each stage and Marquee.
Ensure proper grounding and insulation of temporary distribution boards to prevent electrical hazards.


Image: Typical Temporary Generator Boards

## 4.5 Generator Placement and Accessibility

Generators are to be strategically positioned for easy access and maintenance.

Consideration should be given to noise levels and exhaust fumes to prevent interference with the theatrical performances.

### 4.6 Electrical Safety Measures:

Implement appropriate safety measures such as circuit protection, overload protection, and ground fault protection.

Regular inspections and testing of electrical systems should be carried out to ensure compliance with safety standards.

### 4.7 Fuel Requirements

Estimate fuel consumption based on generator size, expected runtime, and load demand.
Ensure an adequate fuel supply for the duration of the event, considering potential delays or extensions.

The generators will have integral fuel (skid) tanks so no separate bulk tanks will be required.
Preferably Biodiesel powered.

### 4.8 Backup and Redundancy

Have contingency plans in place in case of generator failure or unforeseen power interruptions.
Consider backup generators or alternative power sources for critical systems such as emergency lighting and essential equipment.

### 4.9 Compliance and Regulations

Ensure compliance with local regulations, codes, and standards governing electrical installations and temporary power systems.
Obtain necessary permits and approvals from relevant authorities before installation and operation.

### 4.10 Documentation and Reporting

Maintain detailed documentation of the electrical design, installation, and testing procedures.
Keep records of generator maintenance, fuel consumption, and operational parameters for future reference and analysis.

# 5. DESIGN CRITERIA – SEWER AND WATER

## 5.1 Applicable Australian Standards

There are no applicable standards as the provision of portable toilets are temporary only to service the necessary event.

## 5.2 Temporary Sewer Requirements

Portable Toilets: Given the expected attendance and duration of the event, the installation of a sufficient number of portable toilets is essential to augment the existing permanent facilities already available on-site. These units would be strategically placed across the event venue to ensure easy access for attendees.

The final number of units required will be determined based on anticipated attendance figures and recommended ratios for public events.

Sewage Holding Tanks: To facilitate the proper disposal of waste from the portable toilets, sewage holding tanks will be deployed on-site. These tanks will be regularly serviced and emptied by licensed waste management professionals throughout the duration of the event to maintain hygienic conditions and prevent any environmental hazards.

Alternatively, the Portable Toilets could have tanks built into units and pumped out via truck either during the event or taken off-site and emptied post event.

Food Truck Grease Holding Tanks: The temporary food trucks will cater for their own storage and disposal of grease waste. These internal grease tanks will be either pumped out during events or disposed of off-site after the events have finished.

## 5.3 Temporary Water Requirements

Provisions will be made for water usage in other aspects of the event, such as food preparation, sanitation, and emergency firefighting measures.

Food Preparation: Water requirements for Food Trucks are self-contained and therefore do not require connection to any permanent on-site facilities.

Sanitation: Water requirements for sanitation purposes will be required for the Portable Toilets. This will be achieved by connecting the associated temporary toilet units/blocks to existing hose-cocks located throughout the site using polypropylene pipe.

The location of the event within the precinct will drive the location of the Portable Toilets.

Emergency Fire Fighting: Water requirements for emergency firefighting measures are no different to the existing facilities and therefore remain unchanged.

# 6. DESIGN CRITERIA – TELECOMMUNICATIONS

## 6.1 General Requirements

Patrons would be using their mobile phones and therefore relying on the existing mobile terrestrial carrier networks.

From other large-scale events held on-site e.g. Everest Day Raceday, there has been no onus on the ATC to provide any additional telecommunications infrastructure.

# 7. CONCLUSION

The technical guidelines laid out above create a solid foundation for ensuring that power, sewer, water and telecommunications is reliably and safely supplied to each stage during the Non-Race Day Events.

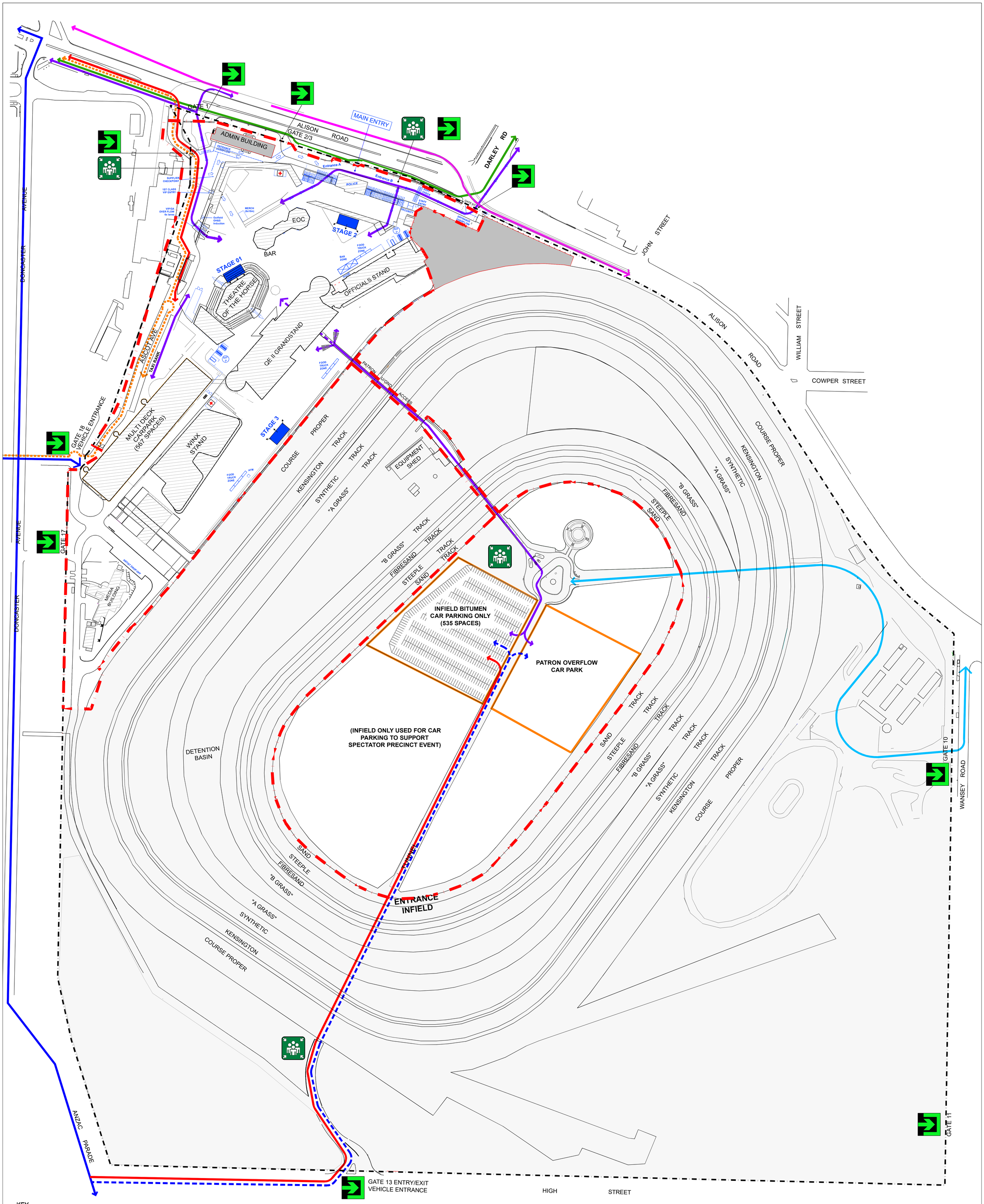
The options presented give flexibility in how generators are set up, allowing for customized solutions based on factors like space, budget, and expected power needs. Whether you choose separate generators for each stage (Option 1) or a single generator for both Stage 2 and Stage 3 (Option 2), careful planning and execution are crucial for smooth operations during performances.

Moreover, the focus on electrical safety, compliance with regulations, and thorough documentation shows a commitment to maintaining high performance standards and accountability. By following these guidelines, it ensures uninterrupted performances, reduces risks linked to power outages, and creates a safe environment for everyone involved in the events.

Finally, the successful execution of any events hinges on the effective management of temporary sewer and water requirements. By implementing the measures outlined in this report, we aim to ensure the provision of adequate sewer and water facilities for all attendees. Regular monitoring and maintenance of these facilities will be carried out throughout the event to uphold the highest standards of hygiene and safety.

# 8. APPENDICES

## 8.1 Appendix A – Stage Layout




KEY

- RESTRICTED AREA
- EXISTING BUILDING
- AT-GRADE CAR PARKING
- STAGE & SOUND ARRAY DIRECTION
- MARQUEE TENTS
- TOILET BLOCKS
- FIRST AID
- ASSEMBLY AREA
- SITE ENTRY GATE

- PEDESTRIAN ACCESS
- TAXI / RIDESHARE ACCESS
- PRIMARY CAR ACCESS
- SECONDARY CAR ACCESS
- EMERGENCY VEHICLE/PEDESTRIAN ACCESS
- BUMP-IN/OUT & EMERGENCY VEHICLE ACCESS
- LIGHTRAIL ACCESS/EGRESS
- BUSWAY ACCESS/EGRESS
- ROYAL RANDWICK RECECOURSE SITE BOUNDARY
- PROJECT BOUNDARY

NOTES:

FOR INFORMATION ONLY

INDICATIVE LOCATION OF TEMPORARY STRUCTURES

| REV. | DATE | AMENDMENTS |
|---|---|---|
| A | 10/06/2024 | REVISED FOR FINAL ATC ENDORSEMENT |



SCALE 1:1250 @ A0

0 10M 20M 30M 40M 50M 60M 70M 80M 90M 100M 120M 130M

0 50' 100' 150' 200' 250' 300' 35' 400'

THIS TITLE BLOCK AND NOTES FORM AN INTEGRAL PART OF THE PLAN AND MUST BE REPRODUCED IN ANY USE, DUPLICATION OR AMENDMENT.

DATUM : AUSTRALIAN HEIGHT DATUM
CONTOUR INTERVAL : N/A
ORIGIN OF LEVELS : P.M.59514 R.L.26.912

MI GLOBAL PARTNERS
Level 10, 99 Mount Street, North Sydney, NSW 2060
Tel: 02 9954 7555
Web: www.mi.com.au

CLIENT

AUSTRALIAN TURF CLUB

LOCALITY
RANDWICK

L.G.A.
RANDWICK

# Royal Randwick SPECTATOR PRECINCT - TEMPORARY STRUCTURES PLAN 5,000-15,000 Capacity

SITE PLAN # 2

| DRAWING NUMBER: | DATE | SHEET No. 2 |
|---|---|---|
| P_ATC_100624_FINAL | 10/06/2024 | OF 2 SHEETS |

## 8.2 Appendix B – Generator & Distribution Board Data Sheets


# 37kVA

## Silenced Trailer Mounted Diesel Generator

| | Item | | Units/Mode | Specifications |
|---|---|---|---|---|
| Electrical | Frequency | | HZ | 50 |
| | Output | Prime | kVA | **37kVA** (51.8Amp) |
| | | Standby | kVA | 40.7 |
| | Voltage (*1) | | V | Single & 3 Phase Voltage |
| | No. of Poles | | | 4 |
| | Power Factor | | | 80% Lagging |
| | Type & No. of Phase | | | Brushless Alternator, 3 Phase, 4 Wire |
| | Battery | | | 80D26L x 1 |
| | Power Outlets | | | 4 *(2 x 15Amp & 2 x 32Amp)* |
| | Cable Size | | | 16mm |
| Engine | Engine Model | | | Nissan 2A-BD30T |
| | Type | | | Direct Injection Type with Turbo Charger |
| | Cylinders Bore x Stroke | | mm | 4-96x102 |
| | Total Displacement | | Litres | 2.953 |
| | Rated Output | | kW | 34.5 |
| | | | PS | 47.5 |
| | Speed | | RPM | 1500 |
| | Fuel Consumption | 100% Load | L/H | 8.50 |
| | | 75% Load | L/H | 6.3 |
| | Engine Oil Volume | | L | 11 |
| | Engine Oil Type & Oil Filter | | | (Oil - 15W/40) (Oil Filter - C-5101) |
| | Air Filter | | | Mann - C14179 |
| Fuel | Fuel Tank Capacity | | L | 100 |
| | Fuel | | | Diesel Fuel |
| | Fuel Filter | | | Baldwin - BF954 |
| Dimensions& Weight | Height | | mm | |
| | Length (*2) | | mm | |
| | Width | | mm | |
| | Dry Weight | | kg | |
| | Mass in Working Order (Full of Fuel) | | kg | |
| Sound Pressure Level (*4) | | | dB | 62 |

(*1) Rated Voltage Classification (*2) Exclude the Rain Cover Dimension (*3) 60Hz/No Load (LwA) (*4) 60Hz/No Load at 7m

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PremiAir Hire Technical Data Sheet


# 200kVA

## Super Silenced Skid Mounted Diesel Generator

| | Item | | Units/Mode | Specifications |
|---|---|---|---|---|
| Electrical | Frequency | | HZ | 50 |
| | Output | Prime | kVA | **200kVA** (280Amps/phase) |
| | | Standby | kVA | 220 |
| | Voltage | | V | Single & 3 Phase Voltage |
| | No. of Poles | | | 4 |
| | Power Factor | | | 0.8 |
| | Type & No. of Phase | | | Brushless Alternator, 3 Phase, 4 Wire |
| | Battery | | | 1 x 185AH |
| | Power Outlets | | | Buzz Bar |
| | Cable Size | | | 95mm sq |
| Engine | Engine Model | | | NE67 TE2A |
| | Type | | | Direct Injection Type with Turbo & Cooler |
| | Cylinders Bore x Stroke | | mm | 6 cylinder 104 x 132 |
| | Total Displacement | | Litres | 6.7 |
| | Rated Output | | kW | 175 |
| | | | PS | |
| | Speed | | RPM | 1500 |
| | Fuel Consumption | 100% Load | L/H | 42.34 |
| | | 75% Load | L/H | 31.76 |
| | Engine Oil Volume | | L | 17 |
| | Engine Oil Type & Oil Filter | | | API 15W 40 - 2992242 |
| | Air Filter | | | 8041419 |
| Fuel | Fuel Tank Capacity | | L | 900 |
| | Fuel | | | Diesel Fuel |
| | Fuel Filter | | | 2992241 |
| Dimensions& Weight | Height | | mm | 2143 |
| | Length | | mm | 3450 |
| | Width | | mm | 1103 |
| | Dry Weight | | kg | 3500 |
| | Mass in Working Order (Full of Fuel) | | kg | 4400 |
| | Sound Pressure Level | | dB | 56 |

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PremiAir Hire

*Technical Data Sheet*


# Life Guard 17 – 63 Amp Temporary Distribution Board

| | |
|---|---|
| SUPPLY INPUT POWER | 63A 3 phase + N +E 415VAC |
| RCD | 2 x 4 pole 30mA 230 - 415VAC |
| SOCKET OUTLETS | 12 x 15a Auto switched outlets |
| | 3 x 32A three phase 3P + E 415VAC |
| | 1 x LG16 Take-off |
| | 1 x 16A single phase 2P + E |
| INTERCONNECTION | 63A 3 phase + N + E 415VAC, BS4343, CEE17, IEC309, watertight |
| WEIGHT | 20kg average |
| ENCLOSURE | Polyethylene |
| COLOUR | Safety Yellow |