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CAULFIELD RACECOURSE
WP3+4 Town Planning Submission
Part 1: Administration Building
Part 2: Public Realm
WASTE MANAGEMENT PLAN

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CAULFIELD RACECOURSE
WP3 Town Planning Submission
Waste Management Plan

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REV	DATE	DETAILS
A	19/04/2021	Waste Management Plan WP3
B	18/05/2021	Final for Issue

	NAME	DATE	SIGNATURE
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Reviewed by:	Laurence Gamble	18/05/2021	
Approved by:	Maree Marshall	18/05/2021	

The following Waste Management Plans contains two separate reports as follows:
Part 1: Administration Building
Part 2: Public Realm

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APRIL 2021

CAULFIELD RACECOURSE
Administration Building
WASTE MANAGEMENT PLAN

Document Control

Project Title: Caulfield Racecourse: MRC Administrative Building

Project No: PS116758

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			Prepared	Checked	Approved
		Initial	LG	LG	MM
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- The report may only be used by the client for the purpose for which it was commissioned.
- The report may only be reproduced in full.
- The report shall not be considered as relieving any other party of their responsibilities, liabilities or contractual obligations.
- The report addresses the engineering disciplines noted within only.
- The report does not address the presence of asbestos or other contaminative materials.

1 Summary

The below is a summary of the waste management strategy proposed for the subject site. The complete report must be read in detail prior to implementing the operational waste management plan.

The subject development proposes the construction of a new administrative (office) building for Melbourne Racing Club (MRC) within Caulfield Racecourse, provided as part of the wider precinct master plan works.

The following waste systems are proposed for the development. These systems will be incorporated into the wider Caulfield Racecourse waste management strategy. These systems have been assessed by WSP and are considered to have adequate capacity to accommodate the waste generated by the subject site.

Table 1 Waste Collection Summary

Waste Stream	No. Bins	Collection Frequency	Collection Operator
Garbage	1 x 1100L	Once per week	Private Contractor
Recycling	1 x 1100L	Once per week	Private Contractor
Paper / Cardboard	1 x 1100L	Once per week	Private Contractor
Food Organics	2 x 120L	Once per week	Private Contractor

Collections will be undertaken from the existing waste collection locations of the Caulfield Racecourse site. Facilities staff / cleaners (3rd party contractor), will transfer all waste to these locations in accordance with existing procedure.

Bins will not be stored outside of the Caulfield Racecourse site or presented to kerb for collection at any time.

Facilities management will ensure sufficient access is provided for collection vehicle operators during collection times.

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2 Introduction

The following Waste Management Plan has been prepared for the proposed administration building within Caulfield Racecourse.

As the subject development is part of the wider Caulfield Racecourse precinct, the waste generated will be stored and collected in accordance with the existing precinct operations. This waste management plan documents the anticipated waste to be generated and the proposed increased to storage within the precinct, however this may be varied in accordance with Caulfield Racecourse operations (i.e. commingled recyclables may be integrated with the onsite compactor) within the constraints of this report (i.e. no bins may be presented to the kerb at any time).

This Waste Management Plan (WMP) and the waste generation rates therein have been prepared based on the Sustainability Victoria document *Better Practice Guide for Waste Management and Recycling* (2019) and current best practice waste management methodology and technologies commonly available in Australia.

3 Land Use

Client:	Melbourne Racing Club
Planning Permit No.	Commercial (Office)
No. Storeys	3 levels

Table 2 Indicative Development Summary

Development Summary	
Use	**Area**
Lobby (*Reception, Arrival Lounge, Sign In, etc.)*	133m^2
Meeting Rooms	465m^2
Open Workspaces	763m^2
Utility Spaces	66m^2
Hub	226m^2

4 Waste Management Plan

4.1 Waste Generation

Waste generation rates per week are shown in Table 3. A waste generation assessment prepared in accordance with these rates is shown in Table 4. Calculations are based on a 5 day per week operation for all uses.

Waste generation rates have been derived based on the results of a waste audit commissioned for a similar administrative building within Melbourne, the results of which are held by WSP.

Each of the active uses of the site previously listed in Table 2 (Lobby, Meeting Rooms, Open Workspaces, Utility Spaces and Hub) are anticipated to generate waste at a uniform rate akin to a standard office development, and as such have been treated as a single use in the below assessment.

Any areas considered ancillary to the active uses of the site (plant, foyer, toilets, kitchen, etc.) are not considered to generate additional waste. Waste generated by these areas is created in service of the active uses of the site and is therefore incorporated into the rates shown below.

Table 3 Waste Generation Rates

Use	Garbage (L/100m^2/week)	Recycling (L/100m^2/week)	Paper / Cardboard (L/100m^2/week)	Food Organics (L/100m^2/week)
Office (or equivalent)	60	50	40	5

Table 4 Waste Generation Assessment

Use	Area	Garbage (L/week)	Recycling (L/week)	Paper / Card (L/week)	Food Organics (L/week)
Office (or equivalent)	1,653m^2	992	827	661	83
TOTAL		**992**	**827**	**661**	**83**

4.2 Waste Systems

Waste shall be sorted on-site by cleaners and/or tenants as appropriate into the following streams:

- Garbage (General Waste)
- Commingled Recycling
- Paper / Cardboard
- Food Organics
- Secure Paper
- Hard Waste / Electronic Waste

Throughout the development it will be ensured that it is as easy to dispose of recyclable materials as it is garbage. This will be achieved by ensuring the development is appropriately furnished with bin stations throughout the various work spaces, ancillary spaces and communal areas. The bin stations are to be clearly signed such that waste stream separation is easily identifiable and correct use of the bins is upheld.

Bin stations encourage the separation of recyclable materials. This system incorporates the provision of multiple bins for different waste streams at central locations and common areas for ease of disposal. This system is beneficial, as users are required to make a conscious decision as to which bin they place their items. This typically results in a reduced volume of garbage (landfill). In addition, the use of bin stations minimises the number of locations cleaners are required to service throughout the development.

Figure 1 Example Bin Station Application

Brand: *Ecobins*

Brand: *Method Bins*

4.2.1 Garbage, Commingled Recycling and Paper / Cardboard

Each commercial space shall have provision for plastic lined garbage and commingled recycling bins for the temporary holding of waste, to have minimum cumulative capacities as shown within Table 5.

The "Transfer Rate" refers to the frequency at which waste should be transferred by cleaners/staff from site to the primary Caulfield Racecourse waste management locations.

Table 5 Garbage & Commingled Recycling – Temporary Waste Storage Requirements

Waste Stream	Capacity	Transfer Rate
Garbage	10L/100m^2	Once per day
Commingled Recycling	10L/100m^2	Once per day
Paper / Cardboard	10L/100m^2	Once per day

Garbage is to be disposed of bagged. Commingled recyclables and paper/cardboard are to be disposed of loosely, with any plastic liners to be disposed of within the garbage bins.

4.2.2 Food Organics

To assist in the transfer of organic waste, spaces in which food is either prepared or eaten shall have provision for "kitchen caddys" (i.e. small plastic receptacles typically up to 6L in size) for the temporary holding of food organics. Kitchen caddys may be lined with paper (i.e. newspaper) if desired.

Cleaning staff will manually empty organic waste from these kitchen caddys directly into the 120L organics bins provided on a daily basis. Organic waste is to be disposed of loosely or within approved degradable bags

4.2.3 Secure Paper

Office areas may be furnished with secure paper bins (locked bins) as deemed appropriate. Typically, collection contractors will enter the building, collect and exchange the secure paper bins directly from the secure paper bin locations. Alternatively, secure paper bins can be temporarily stored within the waste room at ground level prior to collection and returned to their appropriate locations immediately upon emptying.

Secure paper collections will be coordinated by building management. Collections will be undertaken on an as required basis.

4.2.4 Hard Waste and Electronic Waste (E-Waste)

Any hard waste and/or electronic waste generated across the development will be temporarily held within the back of house stores provided and transferred to the primary Caulfield Racecourse holding areas.

Hard waste and electronic waste will be collected as separate streams by a private collection contractor on an as required basis.

4.3 Bin Quantity, Size and Collection Frequency

Table 6 and Table 7 contain information regarding bin quantity, size and frequency of collection.

Table 6 Bin Information and Capacity

Bin Information and Capacity				
Waste Stream	**No. Bins**	**Collections Per Week**	**Weekly Capacity**	**Weekly Volume**
Garbage	1 x 1100L	1	1,100L	992L
Recycling	1 x 1100L	1	1,100L	827L
Paper / Cardboard	1 x 1100L	1	1,100L	661L
Food Organics	2 x 120L	1	240L	83L

Table 7 Typical Bin Dimensions

Typical Bin Dimensions (mm)			
Capacity	**Width**	**Depth**	**Height**
120 litre	480	545	960
1100 litre	1,240	1,070	1,330

Please refer to refer to the accompanying architectural drawings.

4.4 Bin Colour and Supplier

All bins will be provided by private supplier. The below bin colours are specified by Australian Standard AS4123.7 2006, however due the private nature of the collection these are only recommendations and are not mandatory:

- Garbage (general waste) bins shall have red lids with dark green or black body.
- Recycle bins shall have yellow lids with dark green or black body.
- Paper/Cardboard bins shall have blue lids with dark green or black body.
- Food Organics bins shall have burgundy lids with dark green or black body.

Private collection contractors often supply their own bins for collection.

4.5 Signage

Waste storage areas and bins will be clearly marked and signed with the industry standard signage approved by Sustainability Victoria (such as that illustrated in Figure 2 below) or equivalent.

Users will be instructed by building management to adhere to these requirements.

Figure 2 Sustainability Victoria Waste Signage

4.6 Waste Collection Methodology

Storage and collection will be integrated into the wider Caulfield Racecourse waste management system. These systems have been assessed by WSP and are considered to have adequate capacity to accommodate the waste generated by the subject site.

Table 8 provides an indicative summary of the requirements for the subject site. The storage and collection frequency may vary with the operations of Caulfield Racecourse. Collections will be undertaken by a private contractor.

Table 8 Waste Collection Summary

Waste Stream	No. Bins	Collection Frequency	Collection Operator
Garbage	1 x 1100L	Once per week	Private Contractor
Recycling	1 x 1100L	Once per week	Private Contractor
Paper / Cardboard	1 x 1100L	Once per week	Private Contractor
Food Organics	2 x 120L	Once per week	Private Contractor

Collections will be undertaken from the existing waste collection locations of the Caulfield Racecourse site. Facilities staff / cleaners (nominated 3rd party contractor) will transfer all waste to these locations in accordance with existing procedure.

Bins will not be stored outside of the Caulfield Racecourse site or presented to kerb for collection at any time.

Facilities management will ensure sufficient access is provided for collection vehicle operators during collection times.

5 Standards & Compliance

5.1 Ventilation

Ventilation will be provided in accordance with Australian Standard AS1668.

5.2 Washing and Vermin Protection

A bin wash down is provided as part of the wider precinct and will be used for all bin washing.

5.3 Noise Reduction

All waste areas shall meet BCA and AS2107 acoustic requirements as appropriate with operational hours and collection times assigned to minimise acoustic impact on surrounding premises.

6 Supplier Contact Information

A complimentary listing of contractors and equipment suppliers is provided in Table 9 below for your reference. You are not obligated to procure goods/services from these companies. This is not, nor is it intended to be, a complete list of available suppliers. WSP does not warrant (or make representations for) the goods/services provided by these suppliers.

Table 9 Supplier Contact List

Service Type	Contractor / Supplier Name	Phone	Website
Private Waste Collectors	Citywide Service Solutions Pty Ltd	(03) 9261 5000	www.citywide.com.au
	SUEZ Environment	13 13 35	www.sita.com.au
	Cleanaway	13 13 39	www.cleanaway.com.au
	Veolia	132 955	www.veolia.com
Equipment Suppliers	Sulo Australia *(Bins)*	1300 364 388	www.sulo.com.au
Bin Washing Services	The Bin Butlers	1300 788 123	www.thebinbutlers.com.au
	Kerbside Clean-A-Bin	(03) 9830 7381	www.kerbsidecleanabin-srp.com.au
	Calcorp Services	1800 225 267	www.calcorpservices.com.au
	WBCM Environmental Australia	1300 800 621	www.wbcm-aust.com.au
E-waste Collection Services	TechCollect	1300 229 837	www.techcollect.com.au
	Mobile Muster *(Mobile Phones)*	1800 249 113	www.mobilemuster.com.au
	ToxFree *(Secure E-waste Destruction)*	1300 869 373	www.toxfree.com.au

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CAULFIELD RACECOURSE
PUBLIC REALM REDEVELOPMENT
WASTE MANAGEMENT PLAN

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CAULFIELD RACECOURSE: PUBLIC REALM REDEVELOPMENT
Waste Management Plan

WSP
Level 15, 28 Freshwater Place
Southbank VIC 3006

Tel: +61 3 9861 1111
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REV	DATE	DETAILS
A	11/11/2020	Waste Management Plan – Public Realm
B	19/04/2021	Updated Plans
C	14/05/2021	Final

	NAME	DATE	SIGNATURE
Prepared by:	Tim Cramp	13/05/2021	
Reviewed by:	Laurence Gamble	18/04/2021	
Approved by:	Maree Marshall	18/04/2021	

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EXECUTIVE SUMMARY

The below is a summary of the waste management strategy proposed for the subject site. The complete report must be read in detail prior to implementing the waste management plan.

Table 1 below outlines the waste equipment and collection frequencies required for the for event days. Waste collection will occur via a private collection contractor. Facilities management (or equivalent) will be responsible for engaging a private contractor to perform this service.

Table 1 Waste Collection Summary

Waste Equipment		Quantity	Collections Per Event	Vehicle Length
Bins	1100 Litre Bins	Various	1	8.8m
Compactors	(Up to) 23m^3	Up To 3	1	9.8m

Collections will occur directly from the waste storage enclosure provided within the site via an 8.8 metre long MRV collection vehicle or a 9.8m hooklift vehicle.

Collection vehicles will enter the site after events to collect waste. Bins will not be stored outside of the title boundary or presented to kerb for collection at any time.

Facilities management (or equivalent) will ensure sufficient access is provided for operators during collection times.

1 INTRODUCTION

The following Waste Management Plan has been prepared for waste provisions and collection arrangements for the proposed Public Realm Redevelopment at Caulfield Racecourse

This Waste Management Plan (WMP) has been prepared based on current best practice waste management methodology and technologies commonly available in Australia. This Waste Management Plan (WMP) and the waste generation rates therein have been prepared based on the Sustainability Victoria document *Better Practice Guide for Waste Management and Recycling in Multi-Unit Developments* (2019) and current best practice waste management methodology and technologies commonly available in Australia.

The waste services proposed throughout this Waste Management Plan will be reviewed with respect to any change in the operational requirements of the subject development over time.

1.1 LAND USE

Client:	Melbourne Racing Club
Land Use Type:	Public Land
Town Planning Application No.	To be allocated
Municipality	Glen Eira

2 DEVELOPMENT CONTEXT

The Caulfield Racecourse Public Realm at 31 Station Street, Caulfield East is positioned in the northern end of the site, generally providing open patron and event space (inclusive of event marquees during event periods), the clubhouse building and some horse areas (including mounting yard, underground jockey's & industry area, day stalls & integrity building).

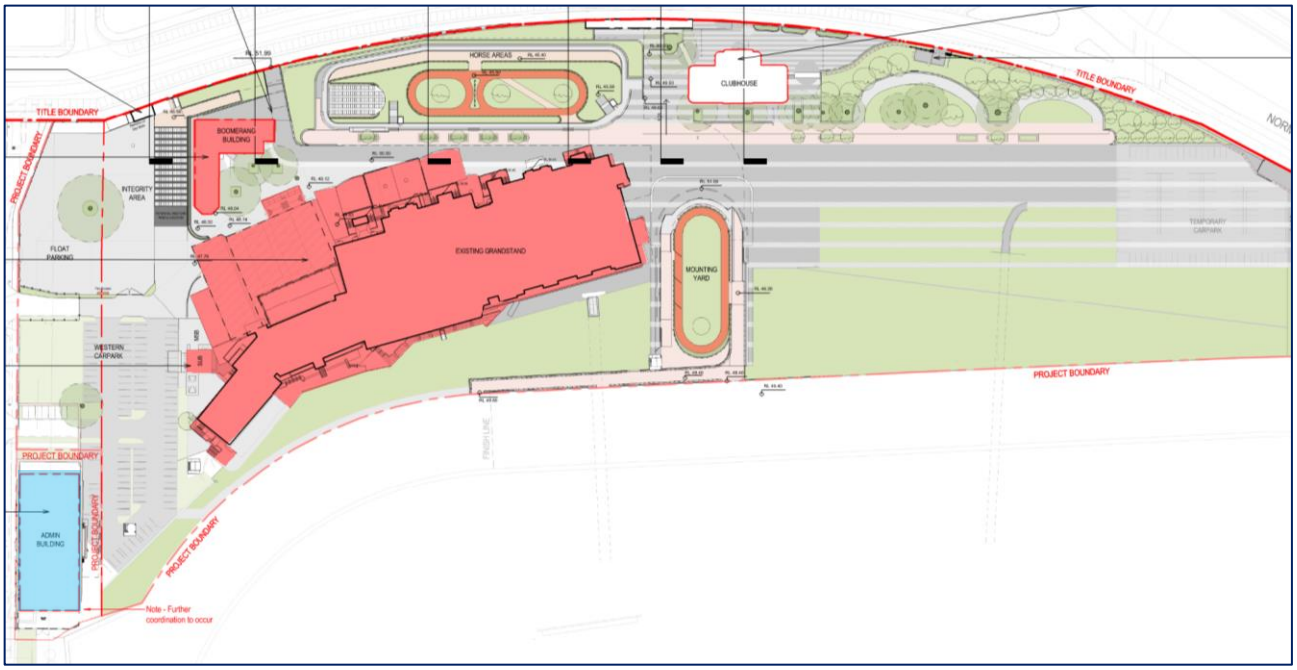
The public realm area will primarily be used during event periods, ranging from small (10,000 patrons), medium (30,000 patrons) and large (50,000 patrons) event capacity per day, noting that concurrent events may be held per day depending on scheduling.

Waste volumes generated throughout each racecourse building (excluding the clubhouse) are expected to generally be managed separately to those of the public realm (i.e. separate waste stores, cleaning operations, etc.). This report does **not** address any future development onsite **or** any existing buildings / areas located outside the designated envelope detailed in red below.

The below plan view shows the scope of works covered by this submission. Note WP3 does **not** include the Boomerang Building and the existing grandstand (marked in **red** in the below).

Whilst the waste system of new Admin Building (marked in **blue** below) **is** included in WP3, this building is **not** addressed under this Public Realm WMP. A separate WMP addressing the Admin Building is provided as attached.

Figure 1 Indicative Site Layout



Boomerang Building and existing grandstand marked (as marked in red) excluded from WP3 works and this WMP. Admin Building (marked in blue) included under WP3 works but addressed under a separate WMP (refer attached).

3 WASTE MANAGEMENT PLAN

3.1 WASTE GENERATION

Waste generation rates per event are shown in Table 2. A waste generation assessment prepared in accordance with these rates is shown in Table 3.

The site will host functions varying in capacity and will largely consist of be public events (including horse racing days). The below assessment considers three event scenarios, large, medium and small, that best summaries the potential capacity for race days and private events:

- Large event (venue at near capacity) for up to 50,000 patrons; i.e. Caulfield Cup
- Medium event for 30,000 patrons; i.e. Manikato Stakes or Caulfield Guineas Day
- Small event of 10,000 patrons; i.e. Saturday Race day.

Waste generation rates associated with the major events represent those from past major race events in the past. Rates associated with the Medium and Small events were derived through case study data of similar racecourse venues in Melbourne, the results of which are held by WSP.

Note that any horse waste from all horse areas (mounting yard, underground jockey's & industry area, day stalls & integrity building) will be managed by the existing centralised horse waste facilities. Waste volumes from these areas are not included in the below.

Any areas considered ancillary to the active uses of the site (foyer, storage, back of house, etc.) are not considered to generate additional waste, and as such are not included in the areas shown below. Waste generated by these areas is created in service of the active uses of the site and is therefore incorporated into the rates shown below.

Table 2 Waste Generation Rates (per day)

Use	Waste Generation Rates (L/1000pax)				
	Garbage (L/1000pax)	Organics (L/1000pax)	Recycling (L/1000pax)	Cardboard (L/1000pax)	Glass (L/1000pax)
Large Event	976	320	1340	1300	330
Medium Event	976	320	1340	1300	330
Small Event	878	288	1206	1170	297

Table 3 Waste Generation Assessment – by event type

Use	Patrons per Event	Waste Generation Assessment (L/event)					
		Garbage (L/event)	Organics (L/event)	Recycled (L/event	Cardboard (L/event)	Glass (L/event)	TOTAL (L/event)
Large Event	50,000pax	48,800	16,000	67,000	65,000	16,500	213,300
Medium Event	30,000pax	29,280	9,600	40,200	39,000	9,900	127,980
Small Event	10,000pax	8,784	2,880	12,060	11,700	2,970	38,394

Table 4 below divides the waste generation into the facilities in use on event days. The percentage of waste generated is a high-level assumptions determined by WSP.

Table 4 Waste Generation Assessment – by facility

Location	Site	% of Total Event Waste	Waste Generation Assessment (L/event)		
			Small Event (10,000pax)	Medium Event (30,000pax)	Large Event (50,000pax)
Existing	Clubhouse	10%	3,839	12,798	21,330
Public Realm	Public Space	40%	15,358	51,192	85,320
	Event Marquees	50%	19,197	63,990	106,650
Total			**38,394**	**127,980**	**213,300**

3.2 WASTE SYSTEMS

Waste shall be sorted on-site by cleaners as appropriate into the following streams:

- Garbage (General Waste)
- Commingled Recycling
- Paper / Cardboard
- Food Organics
- Glass
- Hard Waste / Electronic Waste

Throughout the development it will be ensured that it is as easy to dispose of recyclable materials as it is garbage. This will be achieved by ensuring the development is appropriately furnished with bin stations throughout the various work spaces, ancillary spaces and communal areas. The bin stations are to be clearly signed such that waste stream separation is easily identifiable and correct use of the bins is upheld.

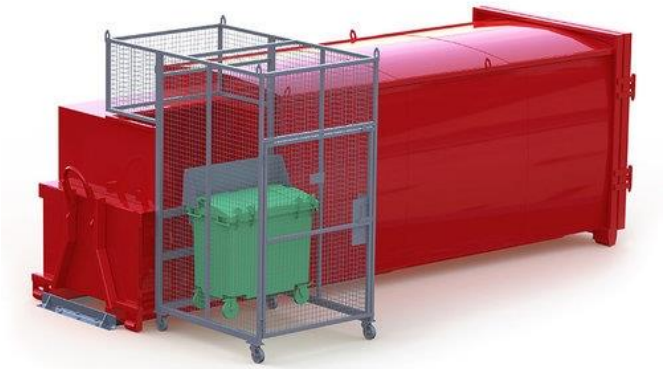
Bin stations encourage the separation of recyclable materials. This system incorporates the provision of multiple bins for different waste streams at central locations and common areas for ease of disposal. This system is beneficial, as users are required to make a conscious decision as to which bin they place their items. This typically results in a reduced volume of garbage (landfill). In addition, the use of bin stations minimises the number of locations cleaners are required to service throughout the development.

During high-profile events quality waste receptacles are recommended. These receptacles can be removed and stored between events. Common public event receptacles which are easier to distribute and can be utilised during less high-profile events. Bins used in Back of House (BOH) areas should be standard 1100L four-wheeled bins which are easy to manoeuvre. The figure below are illustrations of suitable receptacles.

Figure 2 Typical Bin Types

Public Space Bins (High Profile Events)

Public Space Bins (Low Profile Events)



Bins and Compactor (Suitable for BoH areas)

Each site component (public realm, event marquees) shall have provision for the temporary holding bins to enable immediate waste disposal. Bins located the back of house (BoH) areas (i.e. event marquees) should be sized at (up to) 1100L and public place bins sized at 240L.

A bin lifter will be available in the waste enclosure to safely transfer contents from any 240L bins into the larger 1100L bins.

3.2.1 GARBAGE, COMMINGLED RECYCLING AND PAPER / CARDBOARD

Each space shall have provision for plastic lined garbage and commingled recycling bins for the temporary holding of waste, to have minimum cumulative capacities as shown within Table 5.

Building BoH areas (clubhouse, event marquees) will incorporate temporary waste holding in the form of 1100L bins (primarily used by the staff and cleaners) and the outside areas (public realm) will be furnished with 240L bins for public use.

The "Transfer Rate" refers to the frequency at which waste should be transferred by cleaners/staff from site to the primary Caulfield Racecourse waste management locations. All bins located within the BoH will not be transferred to the main waste enclosure during event times.

Table 5 Temporary Holding Bins – Recommended Size

Site	Storage Location	Transfer Rate	Waste Stream			
			Garbage	Recycling	Paper/Card	Glass
Clubhouse	Internal (BoH)	Twice per event	1100L	1100L	1100L	1100L
Public Space	External Space	Twice per event	240L	240L	-	-
Event Marquees	Internal (BoH)	Twice per event	1100L	1100L	1100L	1100L

Garbage is to be disposed of bagged. Commingled recyclables, paper/cardboard, organics and glass are to be disposed of loosely, with any plastic liners to be disposed of within the garbage bins.

All public bins are to be lined for ease of handling by cleaners.

3.2.2 FOOD ORGANICS

To assist in the transfer of organic waste, spaces in which food is either prepared or eaten shall have provision for "kitchen caddys" or "organics tubs" (i.e. small plastic receptacles typically up to 20L in size) for the temporary holding of food organics.

Cleaning staff will manually empty organic waste from these kitchen caddys/tubs directly into the organics bins provided. Organic waste is to be disposed of loosely or within approved degradable bags

3.2.3 HARD WASTE AND ELECTRONIC WASTE (E-WASTE)

Any hard waste and/or electronic waste generated across the development will be temporarily held within the back of house stores provided and transferred to the primary Caulfield Racecourse holding areas, as per existing site operations.

Hard waste and electronic waste will be collected as separate streams by a private collection contractor on an as required basis.

3.3 INTERNAL WASTE TRANSFER & HANDLING

Waste is to be transferred from the building BoH areas and/or public realm by buggy to the waste enclosure for end disposal. Typical buggy operations will require:

- Bins are to be loaded onto the buggy;
- Transferred to the waste enclosure via internal service roads or public realm; and
- Bins are to be transferred as required (estimated twice per event).

All waste transfer paths are to be exclusively within the site title boundary and do not require cleaners to exit title to perform operations. Transfer routes for waste collections do not include stairs or gradients greater than 1:14.

Bins / bin stations throughout any offices (or equivalent) spaces are anticipated to be cleared by cleaning staff in accordance with building management operations. Cleaners will typically empty these bins utilising cleaners' trolleys, with material then decanted into the larger bins within the waste enclosure intended for collection.

Garbage is to be disposed of bagged. Recyclables are to be disposed of loosely, with all plastic liners to be appropriately disposed of within the 1100 litre garbage bins.

Figure 3 Typical Waste Buggy + Trailer

3.4 BIN QUANTITY, SIZE AND COLLECTION FREQUENCY

Table 6 through Table 8 contain information regarding bin quantity and size.

Table 6 Large Event: Bin Information and Capacity

Large Event (50,000pax): Bin Information and Capacity			
Waste Stream	**Equipment**	**Event Capacity**	**Event Volume**
Garbage	1 x 16m^3 Compactor	48,000L	48,800L
Recycling	1 x 23m^3 Compactor	69,000L	67,000L
Paper / Cardboard	1 x 23m^3 Compactor	69,000L	65,000L
Food Organics	15 x 1100L Bins	16,500L	16,000L
Glass	15 x 1100L Bins	16,500L	16,500L

Table 7 Medium Event: Bin Information and Capacity

Medium Event (30,000pax): Bin Information and Capacity			
Waste Stream	**Equipment**	**Event Capacity**	**Event Volume**
Garbage	1 x 10m^3 Compactor	30,000L	29,280L
Recycling	1 x 15m^3 Compactor	45,000L	40,200L
Paper / Cardboard	1 x 13m^3 Compactor	39,000L	39,000L
Food Organics	9 x 1100L Bins	9,900L	9,600L
Glass	9 x 1100L Bins	9,900L	9,900L

Table 8 Small Event: Bin Information and Capacity

Small Event (10,000pax): Bin Information and Capacity			
Waste Stream	**Equipment**	**Weekly Capacity**	**Weekly Volume**
Garbage	8 x 1100L Bins	8,800L	8,784L
Recycling	11 x 1100L Bins	12,100L	12,060L
Paper / Cardboard	12 x 1100L Bins	13,200L	11,700L
Food Organics	3 x 1100L Bins	3,300L	2,880L
Glass	3 x 1100L Bins	3,300L	2,970L

3.5 BIN STORAGE AREA & LOCATION

Table 9 demonstrates the cumulative area requirements (excluding circulation) and provision of waste areas. All waste will be stored and managed within the wider Caulfield Racecourse waste management system, with cleaning/facilities staff to transfer waste from the subject site to the racecourse waste collection hub.

Table 9 Waste Storage Area Requirements (Compound)

Waste Streams	Waste Area Required		
	Large Event	Medium Event	Small Event
Garbage	23.4m^2	23.4m^2	10.4m^2
Recycling	18.2m^2	10.4m^2	2.6m^2
Cardboard	23.4m^2	23.4m^2	15.6m^2
Organics	23.4m^2	23.4m^2	15.6m^2
Glass	19.5m^2	13m^2	3.9m^2
Total	**107.9m^2**	**93.6m^2**	**48.1m^2**

The size and number of bins required to manage waste per location is demonstrated below. The total space can be reduced if waste is transferred to the waste compound during events, however, transfers should be avoided or reduced on significant or high-profile events days.

Table 10 Equipment Required per Event per Location

Location + Site		Storage	Bin Size	Waste Bins Required		
				Small Event	Medium Event	Large Event
Existing	Clubhouse	internal	1100L	4	6	10
Public Realm	Public Space	external	240L	32	107	178
	Event Marquees	internal	1100L	9	30	49

Table 11 Area Required per Event per Location

Location + Site		Storage	Bin Size	Waste Area Required Per Event		
				Small	Medium	Large
Existing	Clubhouse	internal	1100L	6m^2	8m^2	14m^2
Public Realm	Public Space	external	240L	14m^2	47m^2	77m^2
	Event Marquees	internal	1100L	12m^2	40m^2	66m^2

3.6 BIN COLOUR AND SUPPLIER

All bins will be provided by private supplier. The below bin colours are specified by Australian Standard AS4123.7 2006, however due the private nature of the collection these are only recommendations and are not mandatory:

- Garbage (general waste) bins shall have red lids with dark green or black body.
- Recycle bins shall have yellow lids with dark green or black body.
- Paper/Cardboard bins shall have blue lids with dark green or black body.
- Food Organics bins shall have burgundy lids with dark green or black body.
- Glass bins shall have yellow lids with nature green body.

Private collection contractors often supply their own bins for collection.

3.7 SIGNAGE

Waste storage areas and bins will be clearly marked and signed with the industry standard signage approved by Sustainability Victoria (such as that illustrated in Figure 4 below) or equivalent.

Users will be instructed by building management to adhere to these requirements.

Figure 4 Sustainability Victoria Waste Signage

3.8 WASTE COLLECTION METHODOLOGY

Table 12 provides an indicative summary of the requirements for the subject site. The storage and collection frequency may vary with event size. Collections will be undertaken by a private contractor and will occur after each event.

Table 12 Waste Collection Summary

Waste Stream	Large Event	Medium Event	Small Event
Garbage	1 x 16m^3 Compactor	1 x 10m^3 Compactor	8 x 1100L Bins
Recycling	1 x 23m^3 Compactor	1 x 15m^3 Compactor	11 x 1100L Bins
Cardboard	1 x 23m^3 Compactor	1 x 13m^3 Compactor	12 x 1100L Bins
Food Organics	14 x 1100L Bins	9 x 1100L Bins	3 x 1100L Bins
Glass	15 x 1100L Bins	9 x 1100L Bins	3 x 1100L Bins

Collections will be undertaken from a dedicated waste compound within the Caulfield Racecourse site. Facilities staff / cleaners (nominated 3rd party contractor) will transfer all waste to these locations in accordance with existing procedure.

Bins will not be stored outside of the Caulfield Racecourse site or presented to kerb for collection at any time.

Facilities management will ensure sufficient access is provided for collection vehicle operators during collection times.

4 ADDITIONAL INFORMATION

4.1 STANDARDS & COMPLIANCE

4.2 VENTILATION

Ventilation will be provided in accordance with Australian Standard AS1668.

4.3 WASHING AND VERMIN PROTECTION

A bin wash down is provided as part of the wider precinct and will be used for all bin washing.

4.4 NOISE REDUCTION

All waste areas shall meet BCA and AS2107 acoustic requirements as appropriate with operational hours and collection times assigned to minimise acoustic impact on surrounding premises.

4.5 HIGH LEVEL PURCHASING SCHEDULE

Table 13 and Table 14 list the waste equipment required for both the waste enclosure and individual site fitout (clubhouse, public realm, event marquees) under the conditions proposed within this report.

A complimentary list of suppliers is further provided for convenience.

Table 13 Waste Enclosure Equipment Supply Schedule

Item	Supplier*	Service Requirements	Waste Enclosure Requirements		
			Small Event	Medium Event	Large Event
Compactor	Private Supplier	Lease	0	3	3
1100L Bin	Private Supplier	Lease	37	18	30
Bin Lifter	Private Supplier	Lease	1	1	1

** Private waste collection contractors often supply their own bins for collection.*

Table 14 Fitout Equipment Supply Schedule

Item	Supplier*	Service Requirements	Waste Enclosure Requirements		
			Small Event	Medium Event	Large Event
1100L Bins *(Event Marquees, Clubhouse)*	Private Supplier	Lease	11	36	59
240L Bin *(Public Realm)*	Private Supplier	Lease	32	107	178

** Private waste collection contractors often supply their own bins for collection.*

4.6 SUPPLIER CONTACT INFORMATION

A complimentary listing of contractors and equipment suppliers is provided in Table 15 below for your reference. You are not obligated to procure goods/services from these companies. This is not, nor is it intended to be, a complete list of available suppliers. WSP does not warrant (or make representations for) the goods/services provided by these suppliers.

Table 15 Supplier Contact List

Service Type	Contractor / Supplier Name	Phone	Website
Private Waste Collectors	Citywide Service Solutions Pty Ltd	(03) 9261 5000	www.citywide.com.au
	SUEZ Environment	13 13 35	www.sita.com.au
	Cleanaway	13 13 39	www.cleanaway.com.au
	Veolia	132 955	www.veolia.com
Equipment Suppliers	Sulo Australia *(Bins)*	1300 364 388	www.sulo.com.au
Bin Washing Services	The Bin Butlers	1300 788 123	www.thebinbutlers.com.au
	Kerbside Clean-A-Bin	(03) 9830 7381	www.kerbsidecleanabin-srp.com.au
	Calcorp Services	1800 225 267	www.calcorpservices.com.au
	WBCM Environmental Australia	1300 800 621	www.wbcm-aust.com.au
E-waste Collection Services	TechCollect	1300 229 837	www.techcollect.com.au
	Mobile Muster *(Mobile Phones)*	1800 249 113	www.mobilemuster.com.au
	ToxFree *(Secure E-waste Destruction)*	1300 869 373	www.toxfree.com.au

APPENDIX A

SCALED WASTE ROOM DRAWINGS

712600

33310 | 492280 | 187010

36500 | 27880 | 23240 | 1794012690 | 119260 | 13690 | 45620 | 15190 | 54000 | 37880 | 73620 | 18480

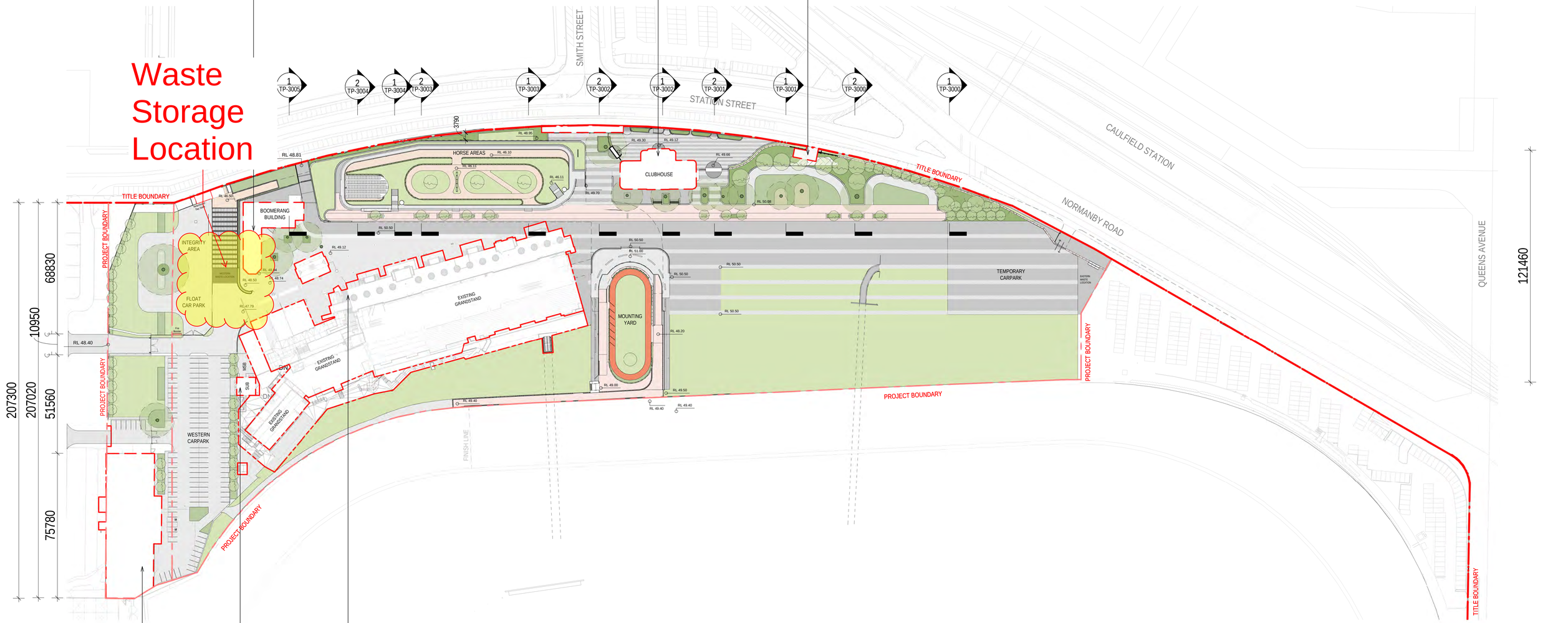
Refer to WP2B - MRC Boomerang Building Town Planning Documentation

Refer

Clubhouse TP Documentation

Refer to Eastern Substation Documentation (as per WP2 Early Works TP0050)

Waste Storage Location



Refer to MRC Administration Building Town Planning Documentation (WP3 TP5000 Series)

Refer to Western Substation Documentation (WP2 Early Works TP0060)

Refer to Grandstand Ramp Documentation (WP2 Early Works TP0080)

1 WP3_PROPOSED SITE PLAN - UPPER

1 : 1000

CONSULTANT

Hassell

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61 Little Collins Street
Melbourne Vic 3000 Australia
T +61 3 8102 3000
F +61 3 9654 1422
melbourne@hassellstudio.com
Architect Directors VIC:
Mark Loughnan 15032
Peter Lee 13798

REFERENCE

NORTH

0m 1m 2m 3m 4m

NOTES

1. Do not scale drawing. Written dimensions govern
2. All dimensions are in millimeters unless noted otherwise
3. All dimensions shall be verified on site before proceeding with the work. Hassell shall be notified in writing of any discrepancies.
4. This drawing must be read in conjunction with all relevant contracts, specifications and drawings

This drawing is an uncontrolled copy. Unless noted otherwise

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REV	DESCRIPTION	DATE
01	Issued for Comment	30/11/2020
02	Issued for Comment	11/12/2020
03	SD Issued for Review	18/12/2020
04	SD Issued for Review	25/01/2021
05	For Town Planning	05/02/2021
06	For Town Planning	12/03/2021
07	For Town Planning	07/04/2021
08	For Town Planning	12/04/2021

CLIENT

MELBOURNE RACING CLUB

PROJECT

MRC NORTHERN PRECINCT_TP

STATION STREET, CAULFIELD EAST
VIC
3145

STATUS

DRAWING TITLE

Site Plan - Upper

REVIEWED DH

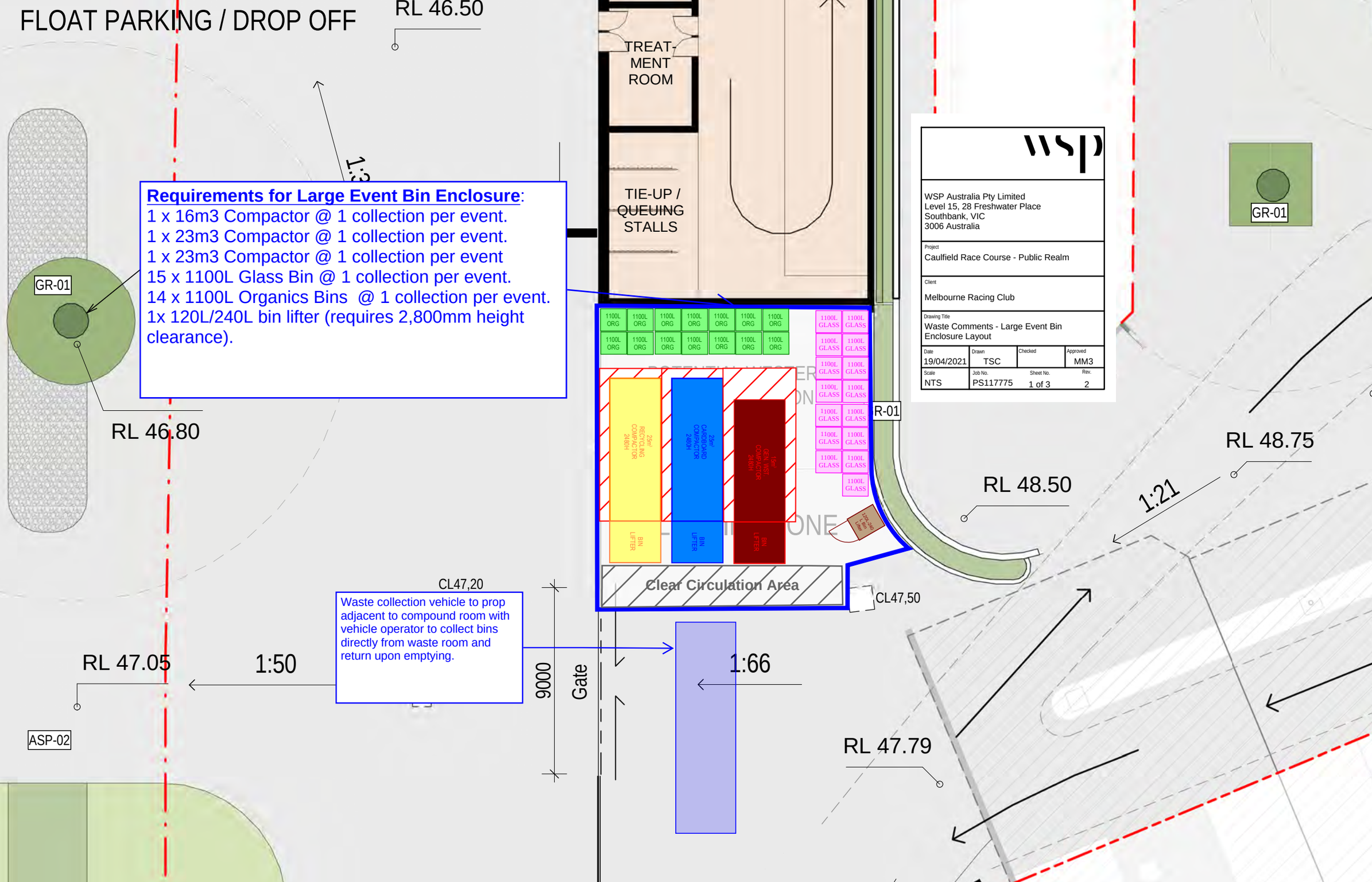
APPROVED EM

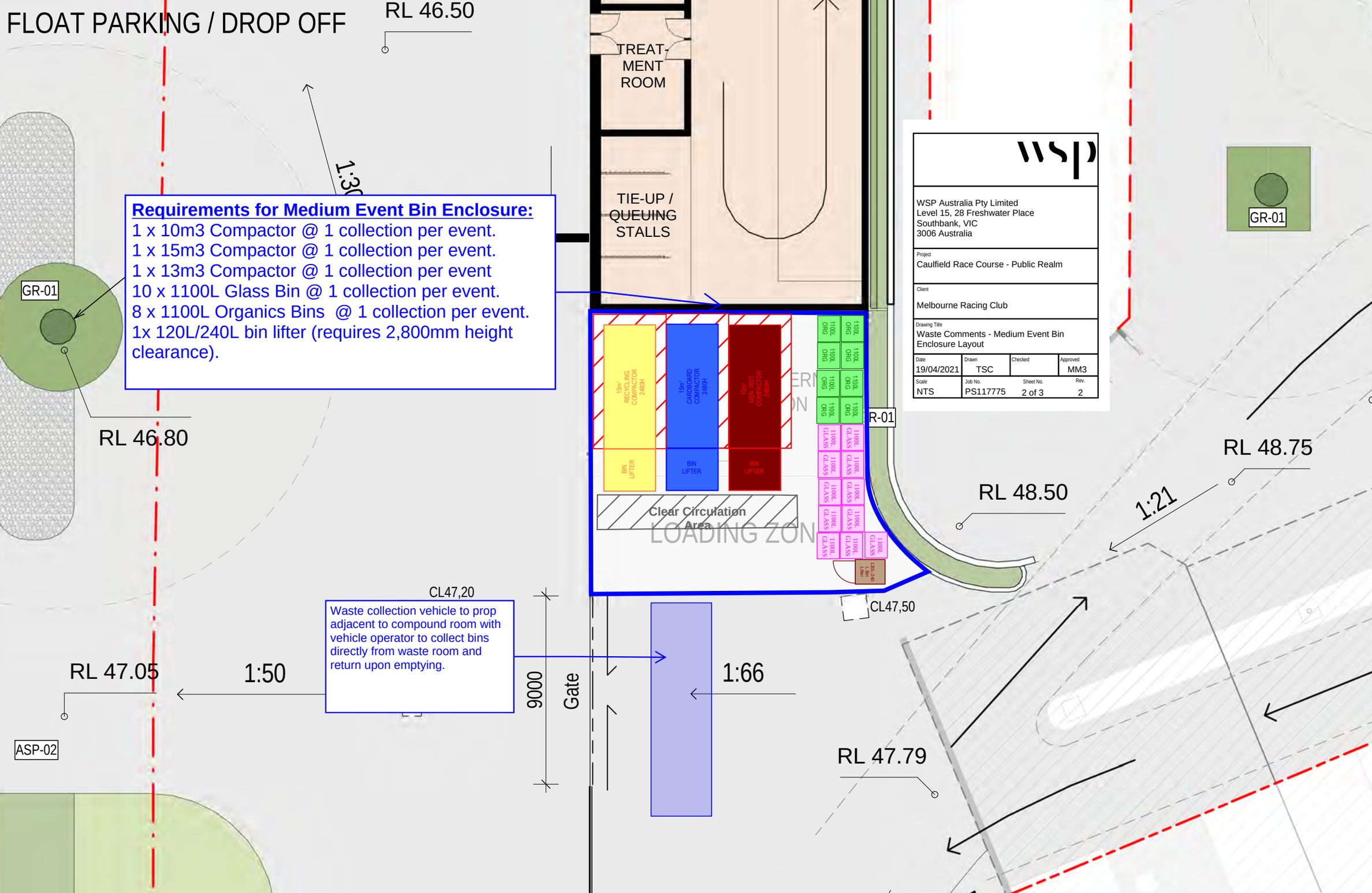
DRAWING NO. TP-1200

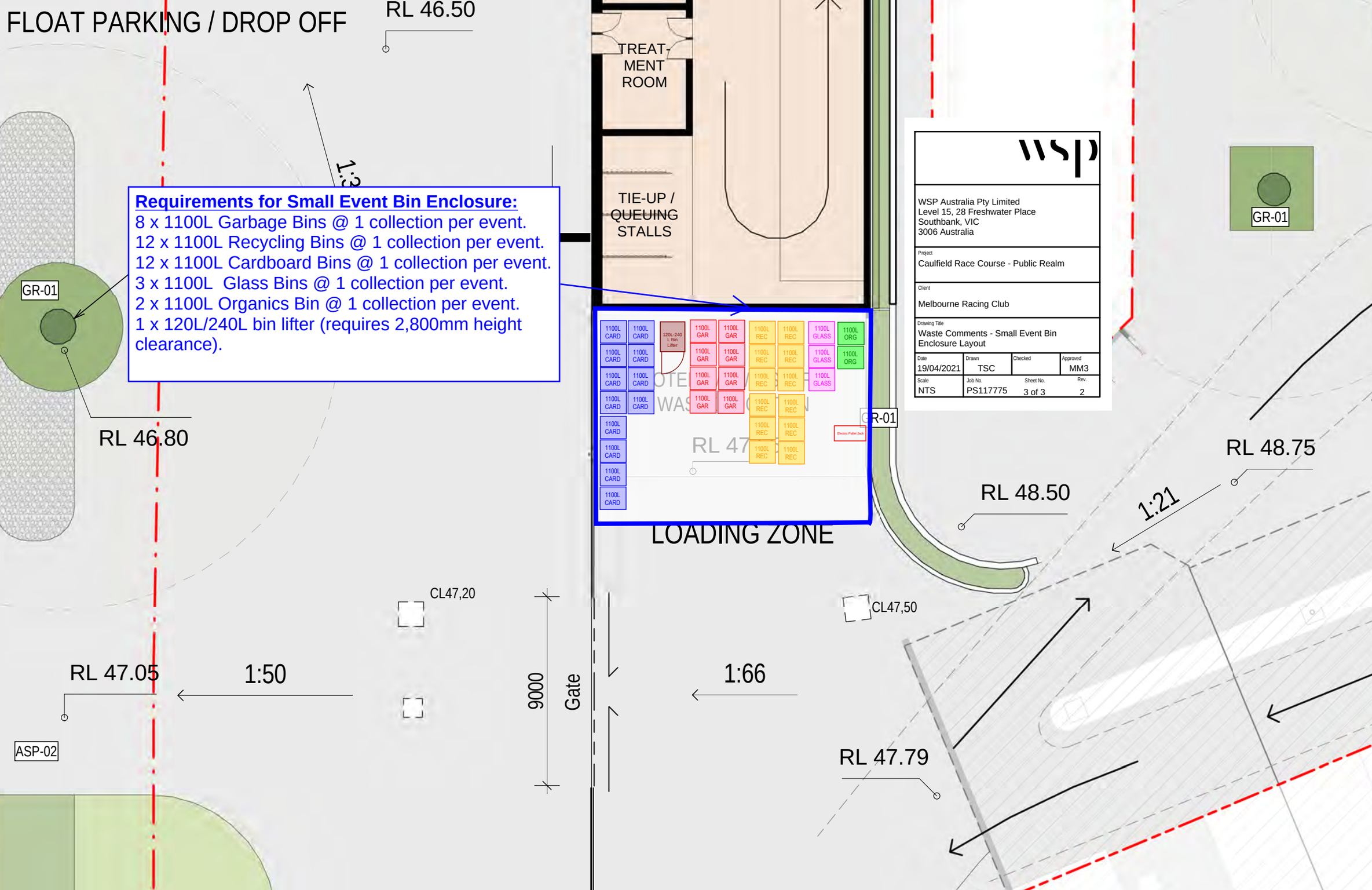
SCALE @ A1 1 : 1000

PROJECT NO. 014264

REV NO. 08

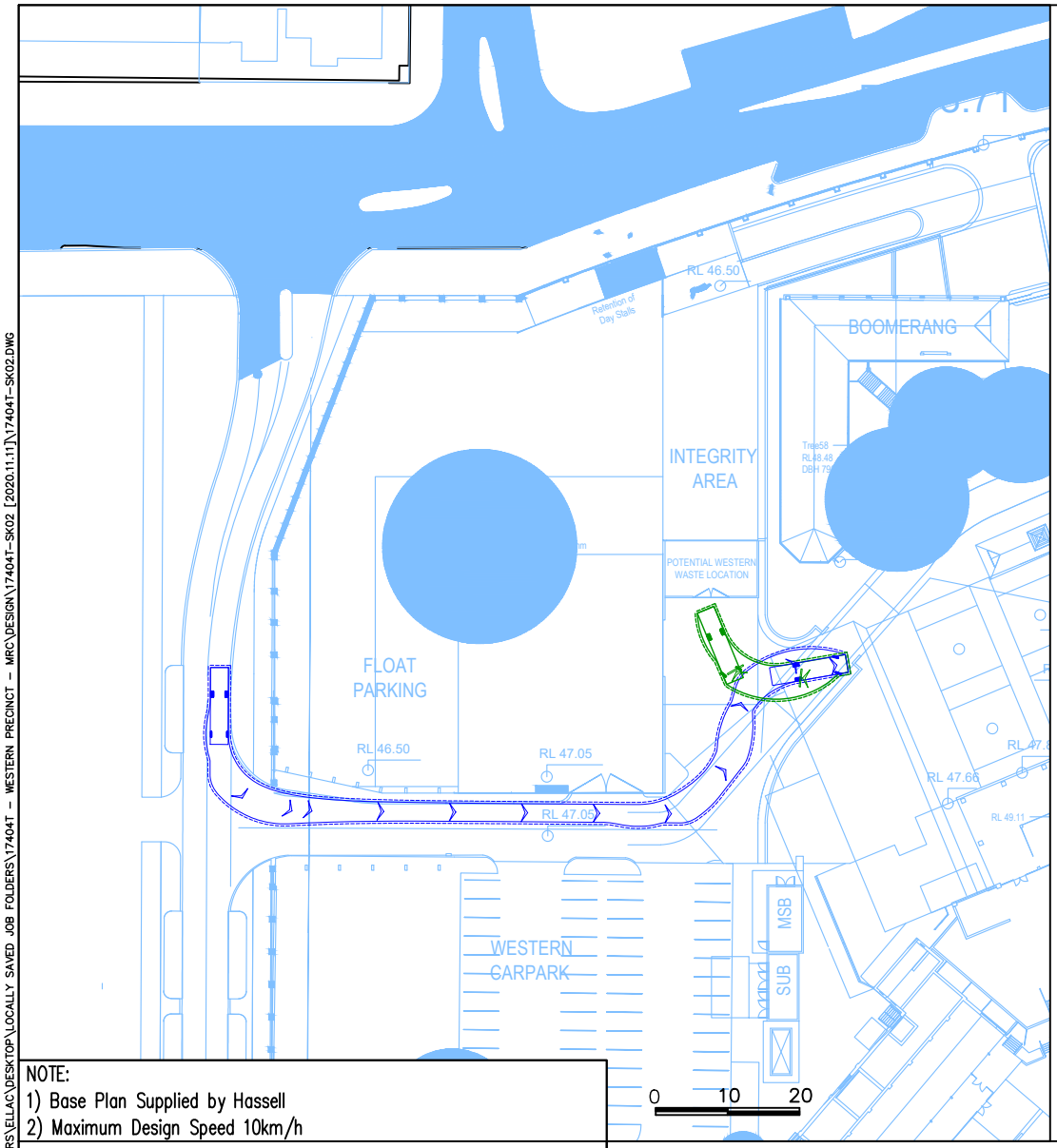

FLOAT PARKING / DROP OFF
RL 46.50
TREAT-
MENT
ROOM
TIE-UP /
QUEUING
STALLS
1:3
GR-01
GR-01
Requirements for Large Event Bin Enclosure:
1 x 16m3 Compactor @ 1 collection per event.
1 x 23m3 Compactor @ 1 collection per event.
1 x 23m3 Compactor @ 1 collection per event
15 x 1100L Glass Bin @ 1 collection per event.
14 x 1100L Organics Bins @ 1 collection per event.
1x 120L/240L bin lifter (requires 2,800mm height clearance).
RL 46.80
1100L ORG
1100L GLASS
25m³ RECYCLING COMPACTOR 240lt
25m³ CARDBOARD COMPACTOR 240lt
15m³ GEN. WST. COMPACTOR 240lt
BIN LIFTER
1100L Bin Lifter
R-01
RL 48.75
RL 48.50
1:21
Clear Circulation Area
CL47,50
CL47,20
Waste collection vehicle to prop adjacent to compound room with vehicle operator to collect bins directly from waste room and return upon emptying.
RL 47.05
1:50
9000
Gate
1:66
RL 47.79
ASP-02
WSP Australia Pty Limited
Level 15, 28 Freshwater Place
Southbank, VIC
3006 Australia
Project
Caulfield Race Course - Public Realm
Client
Melbourne Racing Club
Drawing Title
Waste Comments - Large Event Bin Enclosure Layout
Date 19/04/2021
Drawn TSC
Checked
Approved MM3
Scale NTS
Job No. PS117775
Sheet No. 1 of 3
Rev. 2

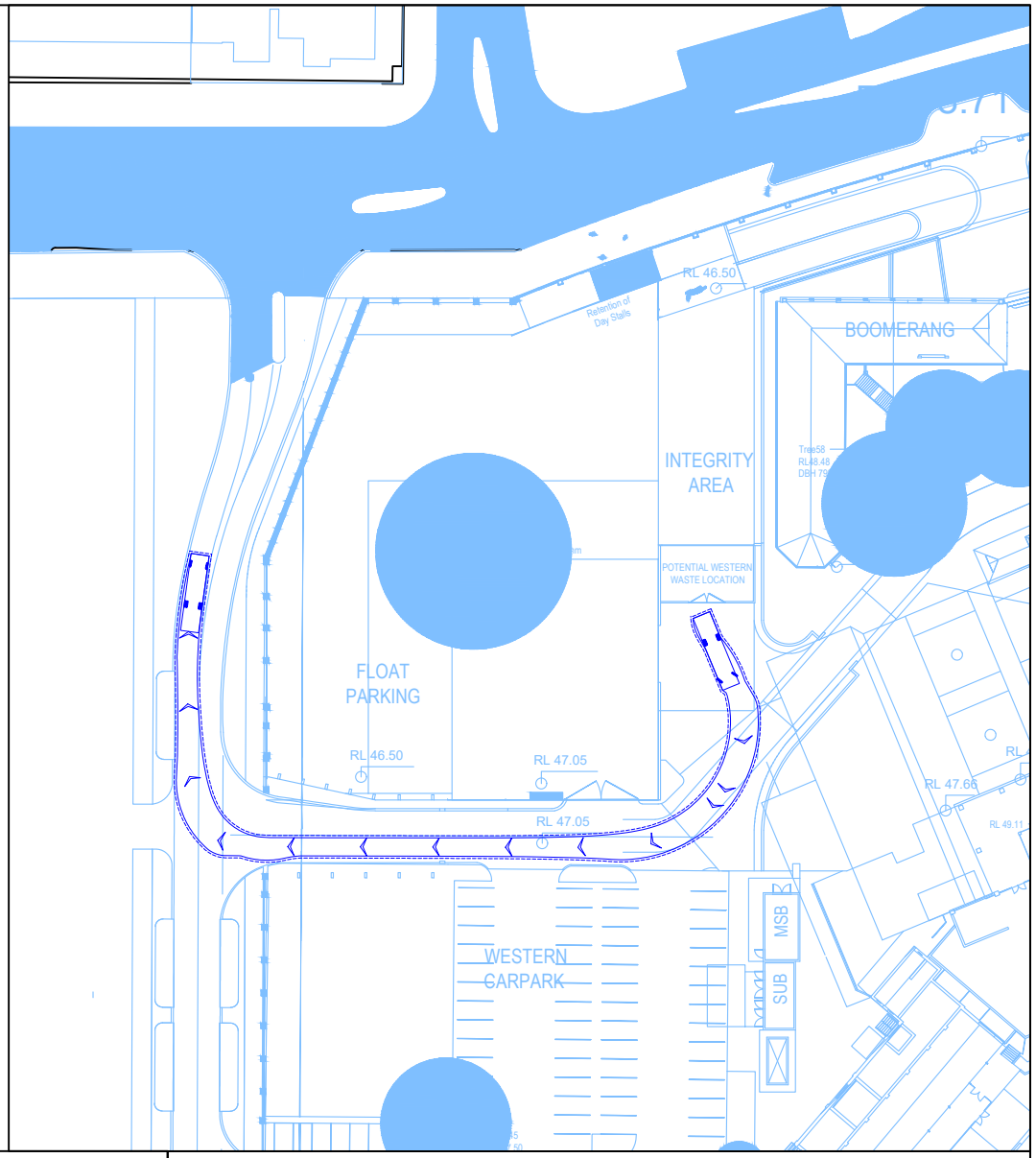

FLOAT PARKING / DROP OFF
RL 46.50
TREAT-
MENT
ROOM
TIE-UP /
QUEUING
STALLS
1:30
GR-01
RL 46.80
Requirements for Medium Event Bin Enclosure:
1 x 10m3 Compactor @ 1 collection per event.
1 x 15m3 Compactor @ 1 collection per event.
1 x 13m3 Compactor @ 1 collection per event
10 x 1100L Glass Bin @ 1 collection per event.
8 x 1100L Organics Bins @ 1 collection per event.
1x 120L/240L bin lifter (requires 2,800mm height clearance).
15m³ RECYCLING COMPACTOR 2460H
15m³ CARDBOARD COMPACTOR 2460H
15m³ GEN. WST. COMPACTOR 2460H
BIN LIFTER
BIN LIFTER
BIN LIFTER
1100L ORG
1100L GLASS
Clear Circulation Area
LOADING ZON
R-01
CL47,50
RL 48.50
RL 48.75
1:21
CL47,20
Waste collection vehicle to prop adjacent to compound room with vehicle operator to collect bins directly from waste room and return upon emptying.
RL 47.05
1:50
9000
Gate
1:66
RL 47.79
ASP-02
GR-01
WSP Australia Pty Limited
Level 15, 28 Freshwater Place
Southbank, VIC
3006 Australia
Project
Caulfield Race Course - Public Realm
Client
Melbourne Racing Club
Drawing Title
Waste Comments - Medium Event Bin Enclosure Layout
Date 19/04/2021
Drawn TSC
Checked
Approved MM3
Scale NTS
Job No. PS117775
Sheet No. 2 of 3
Rev. 2


FLOAT PARKING / DROP OFF
RL 46.50
TREAT-
MENT
ROOM
TIE-UP /
QUEUING
STALLS
1:3
Requirements for Small Event Bin Enclosure:
8 x 1100L Garbage Bins @ 1 collection per event.
12 x 1100L Recycling Bins @ 1 collection per event.
12 x 1100L Cardboard Bins @ 1 collection per event.
3 x 1100L Glass Bins @ 1 collection per event.
2 x 1100L Organics Bin @ 1 collection per event.
1 x 120L/240L bin lifter (requires 2,800mm height clearance).
GR-01
RL 46.80
1100L CARD
1100L GAR
1100L REC
1100L GLASS
1100L ORG
120L-240 L Bin Lifter
Electric Pallet Jack
RL 47
GR-01
LOADING ZONE
RL 48.50
RL 48.75
1:21
CL47,20
CL47,50
RL 47.05
1:50
9000
Gate
1:66
RL 47.79
ASP-02
GR-01
wsp
WSP Australia Pty Limited
Level 15, 28 Freshwater Place
Southbank, VIC
3006 Australia
Project
Caulfield Race Course - Public Realm
Client
Melbourne Racing Club
Drawing Title
Waste Comments - Small Event Bin Enclosure Layout
Date 19/04/2021
Drawn TSC
Checked
Approved MM3
Scale NTS
Job No. PS117775
Sheet No. 3 of 3
Rev. 2

APPENDIX B

SWEPT PATH DIAGRAMS





NOTE:
1) Base Plan Supplied by Hassell
2) Maximum Design Speed 10km/h

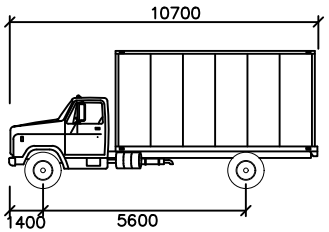
ratio:
RATIO CONSULTANTS PTY LTD
ABN 005 422 104
8 GWYNNE STREET
CREMORNE, VICTORIA 3121
TELEPHONE (03)9429 3111
FACSIMILE (03)9429 3011

10.7m TRUCK

VEHICLE ENVELOPE

300mm CLEARANCE

Width	: 2500
Track	: 2500
Lock to Lock Time	: 3.0
Steering Angle	: 35.2



Caulfield Racecourse
Northern Precinct Masterplan
Waste Area Vehicle Access

RATIO REFERENCE	SHEET No.	SCALE	DATE
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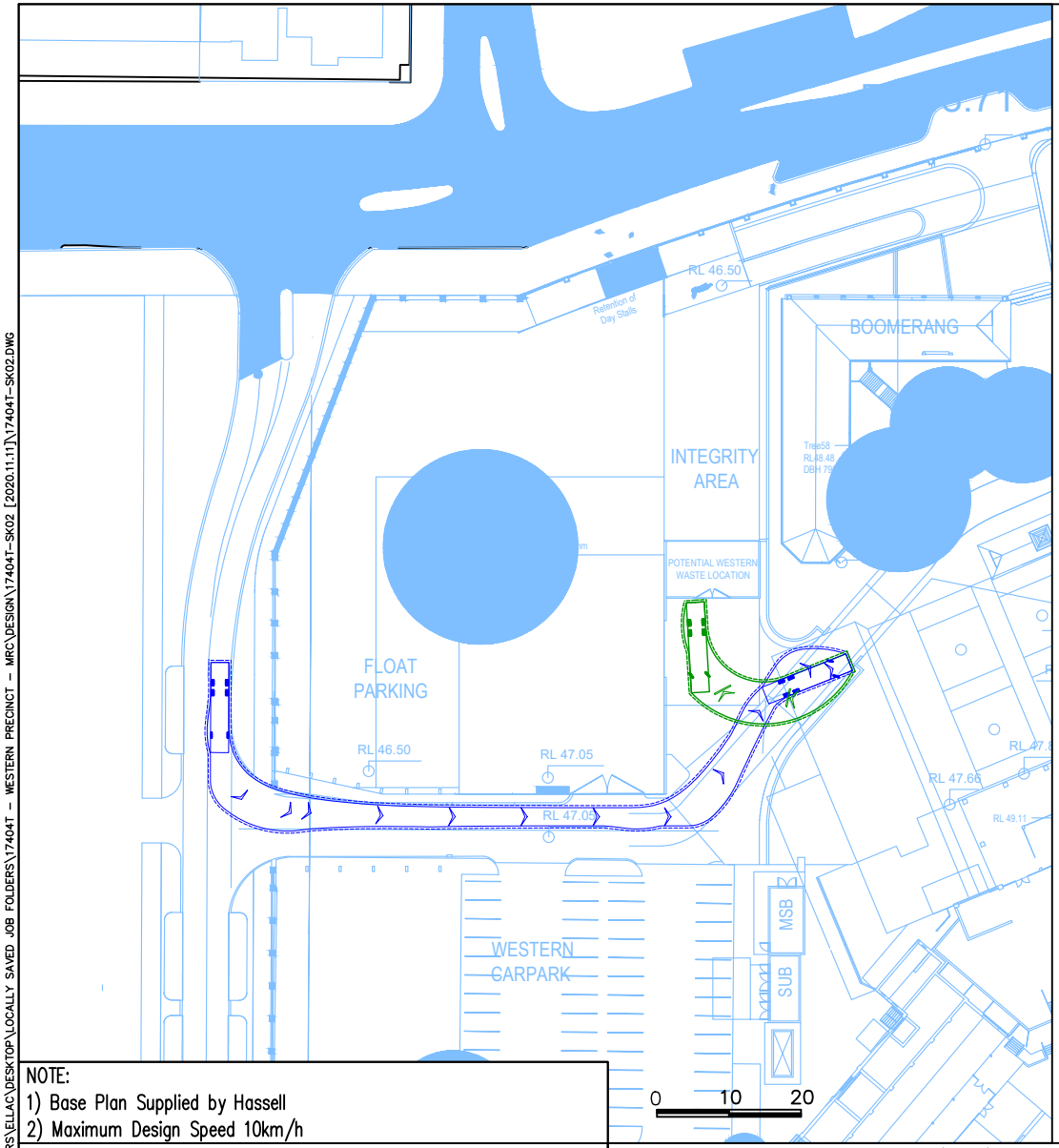
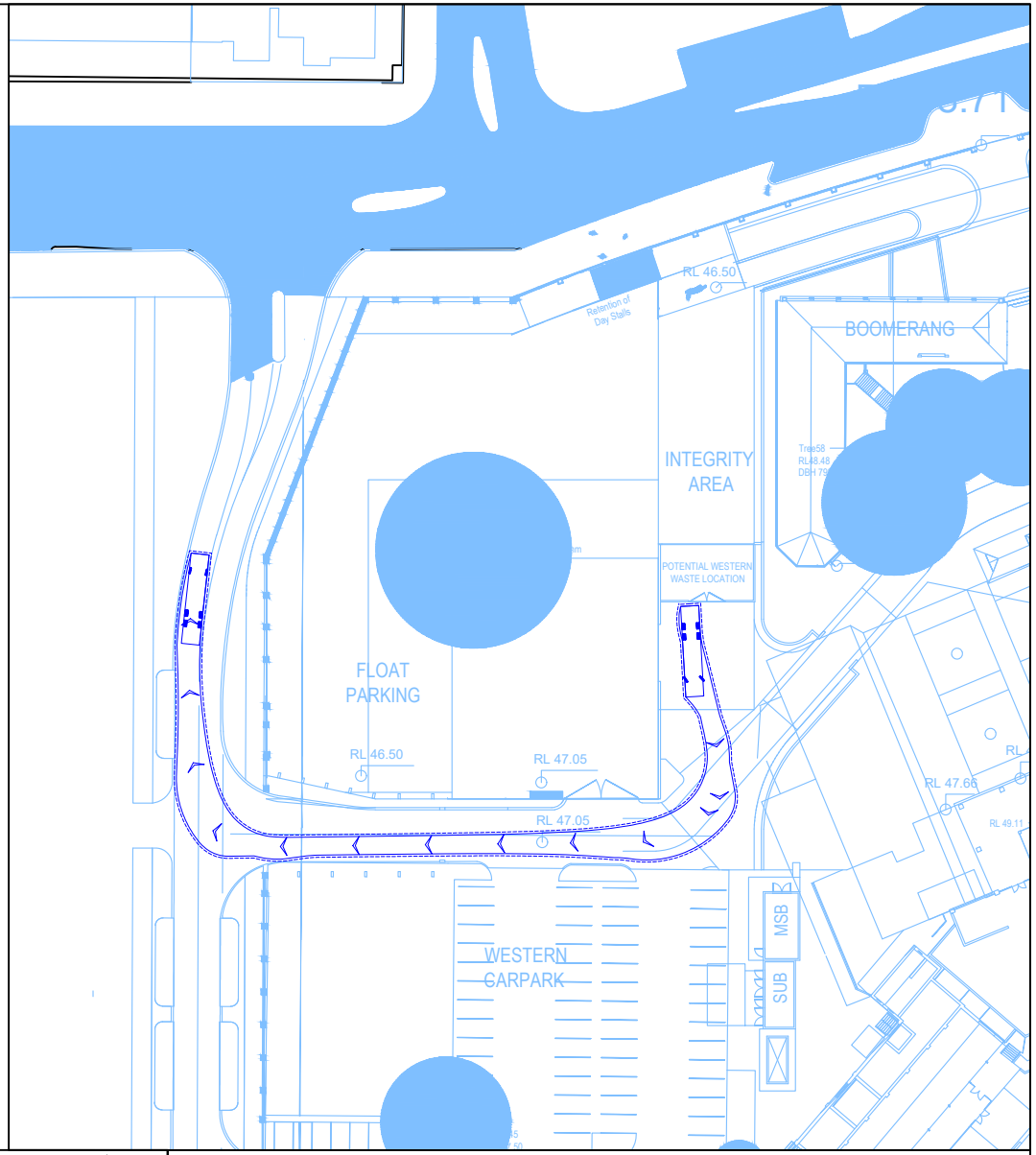
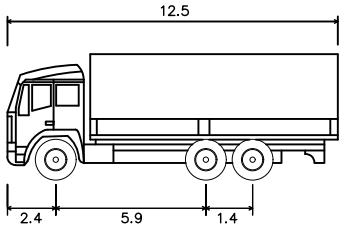
11/11/2020 5:36:22 PM C:\USERS\ELLAC\DESKTOP\LOCALLY SAVED JOB FOLDERS\17404T - WESTERN PRECINCT - MRC\DESIGN\17404T-SK02 [2020.11.11]\17404T-SK02.DWG





NOTE:
1) Base Plan Supplied by Hassell
2) Maximum Design Speed 10km/h

HRV – Heavy Rigid Vehicle (AS/NZS2890.2:2002)



VEHICLE ENVELOPE (FORWARD)
500mm CLEARANCE (FORWARD)
VEHICLE ENVELOPE (REVERSE)
500mm CLEARANCE (REVERSE)

Overall Length	12.500m
Overall Width	2.500m
Track Width	2.500m
Lock to Lock Time	6.00 sec
Curb to Curb Turning Radius	12.500m

ratio:
RATIO CONSULTANTS PTY LTD
ABN 005 422 104
8 GWYNNE STREET
CREMORNE, VICTORIA 3121
TELEPHONE (03)9429 3111
FACSIMILE (03)9429 3011

Caulfield Racecourse
Northern Precinct Masterplan
Waste Area Vehicle Access – Check Vehicle

RATIO REFERENCE	SHEET No.	SCALE	DATE
17404T-SK02/EC	4 of 5	1:1000 @ A4	11/11/2020

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