

ATTACHMENTS

Development Assessment Committee Meeting Under Separate Cover Wednesday, 19 June 2024

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TOWN PLANNING

PROPOSED RETAIL DEVELOPMENT 102-104 Hallets Way BACCHUS MARSH, VIC 3340 LOTS 125 & 126

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Sheet Number	Sheet Name	Rev.
TP00	COVER PAGE	С
TP01	SITE PHOTOS	С
TP02	CONTEXT PLAN	С
TP03	EXISTING CONDITION SITE PLAN	С
TP04	PROPOSED SITE PLAN	С
TP05	PROPOSED BUILDING ELEVATIONS	С
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TP09	PERSPECTIVE 2 - AERIAL VIEW	С
TP10	PERSPECTIVE 3 - SOUTHWEST VIEW	С
TP11	PERSPECTIVE 4 - NORTHWEST VIEW	С
TP12	CPTED DESIGN DETAILS	С



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1 SITE PHOTOS KEY PLAN



SITE PHOTO PH1



SITE PHOTO PH2



SITE PHOTO PH3



SITE PHOTO PH4



SITE PHOTO PH5



SITE PHOTO PH6



SITE PHOTO PH7



SITE PHOTO PH8

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BACCHUS MARSH VIC SITE PHOTOS

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PROPOSED RETAIL DEVELOPMENT

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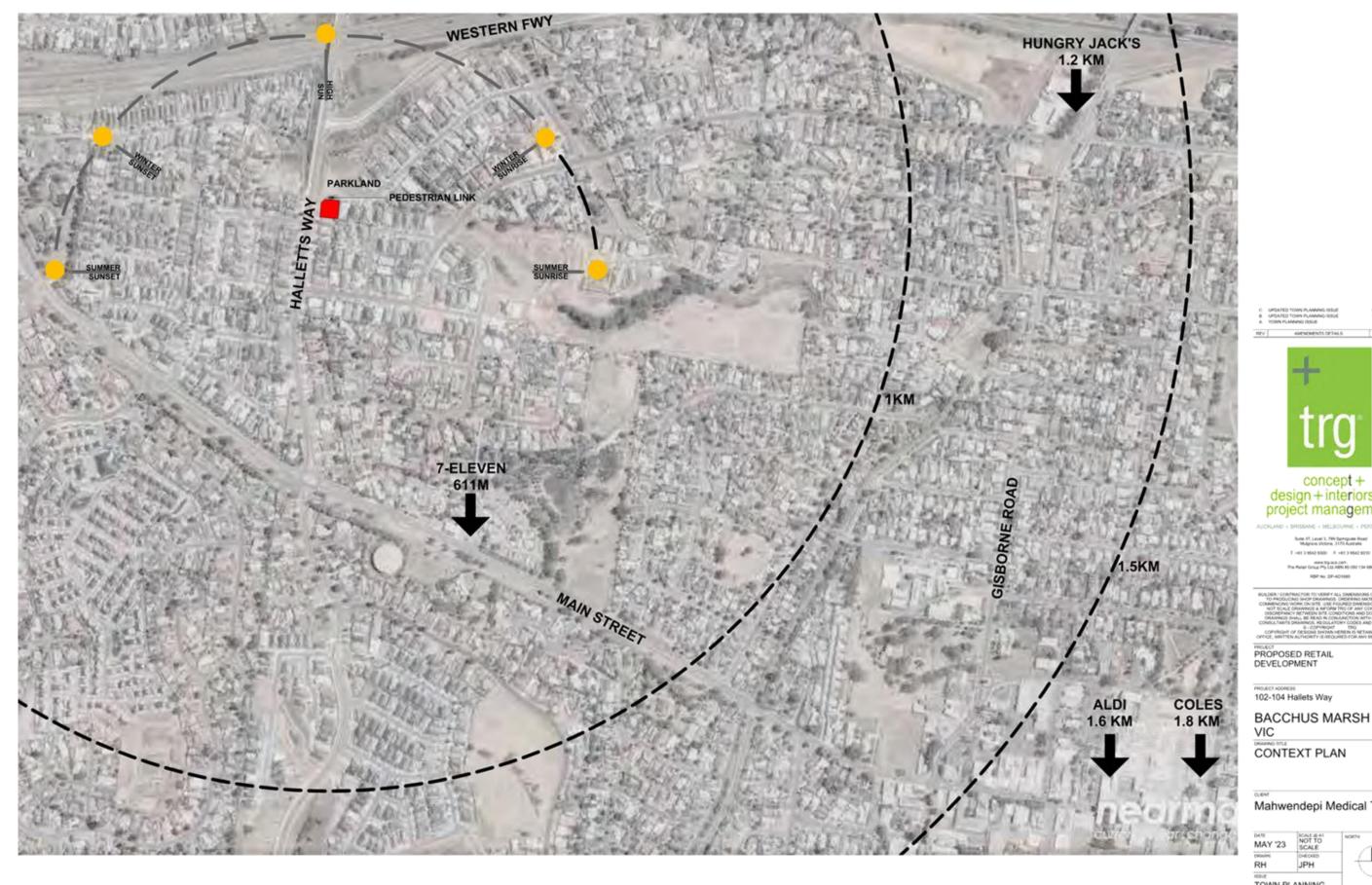


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VIC 3340 CONTEXT PLAN

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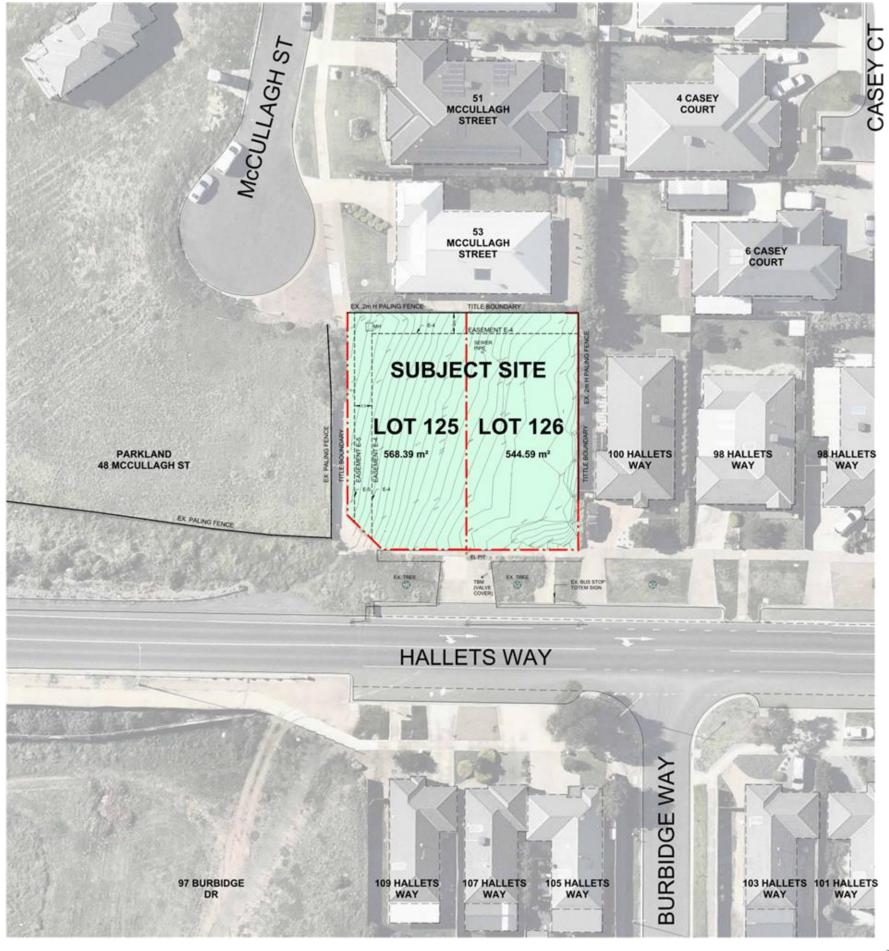
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(1) EXISTING CONDITION/ CONTEXT PLAN

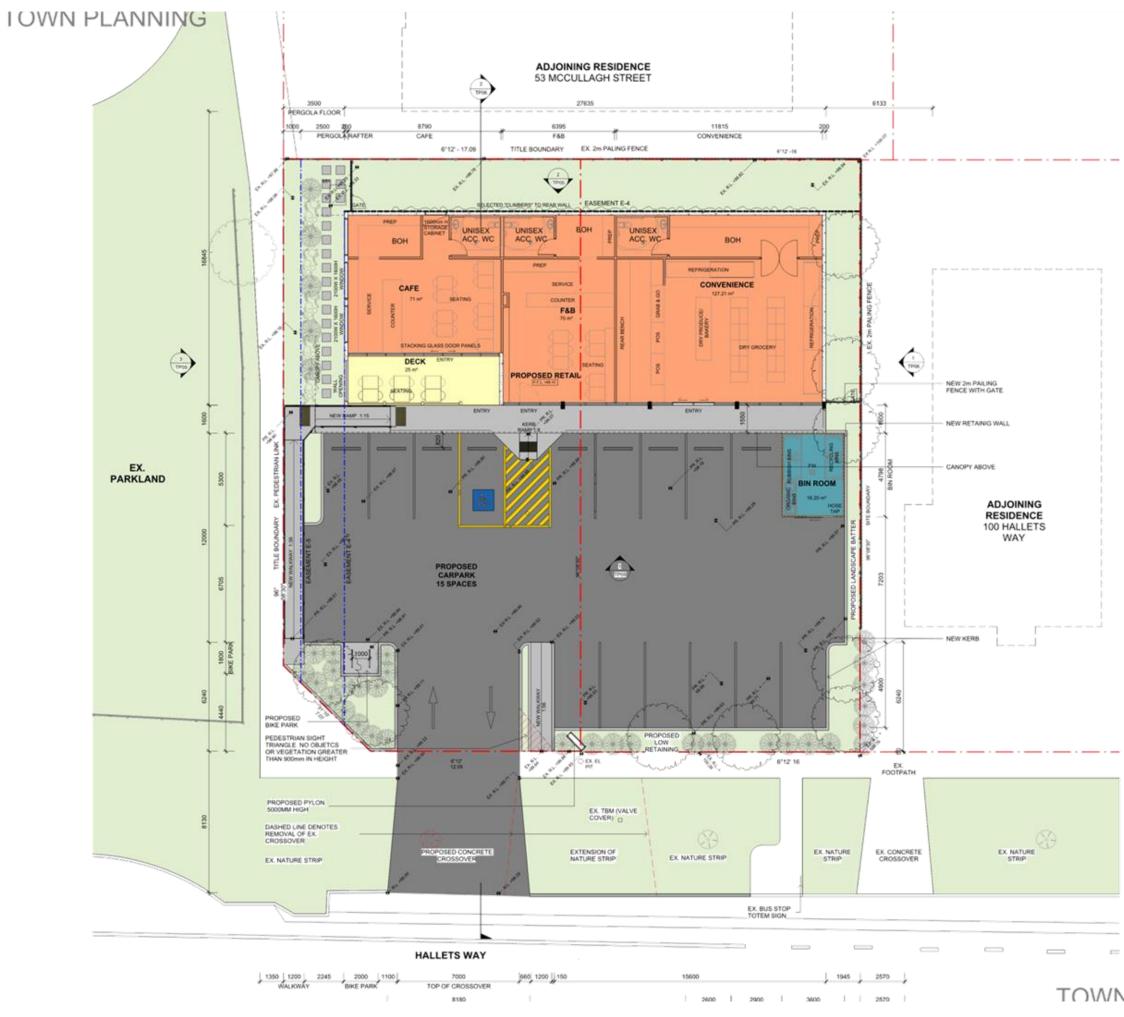
EASEMENT REFERENCE	PURPOSE	LAND BENEFITED/ IN FAVOUR OF
E-4, E-5	SEWERAGE	WESTERN REGION WATER CORPORA
E-4, E-5	DRAINAGE	LOTS ON THIS PLAN

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TOWN PLANNING 22289 TROAT

6



1	TOTAL SITE AREA	1,113m ²		PROPOSED RETAIL DEVELOPMEN
	AREAS.			PROPOSED LANDSCAPE
	CARPARK	449.36m²		CARPARKDRIVEWAY
	GROUND FLOOR: CAFE FAB	71 m² 70 m²		
	CONVENIENCE DECK	127.65m² 25 m²		FOOTPATH/WALKINGY
	BIN ROOM	16.20m²		PROPOSED BIN ROOM
	TOTAL LETTABLE AREA	293.65 m²		PROPOSED OUTDOOR AREA
	TOTAL CAR SPACES	15 cars 4.8		TITLE BOUNDARY
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PROPOSED RETAIL DEVELOPMENT

molect xconess 102-104 Hallets Way

BACCHUS MARSH VIC 3340 PROPOSED SITE PLAN

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1- REFER TO SHEET TP06



TP05

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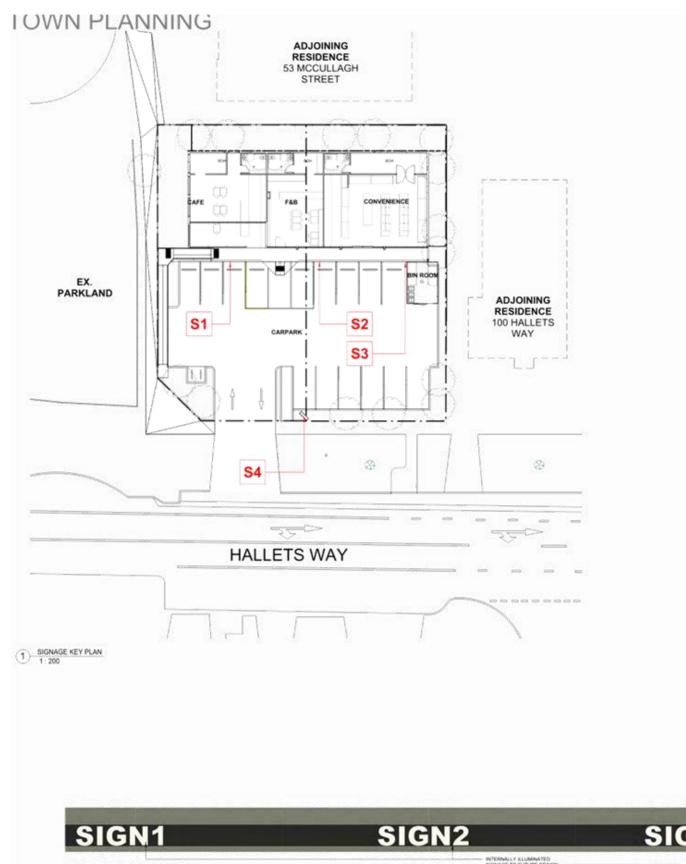
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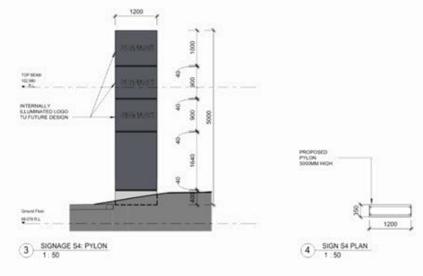
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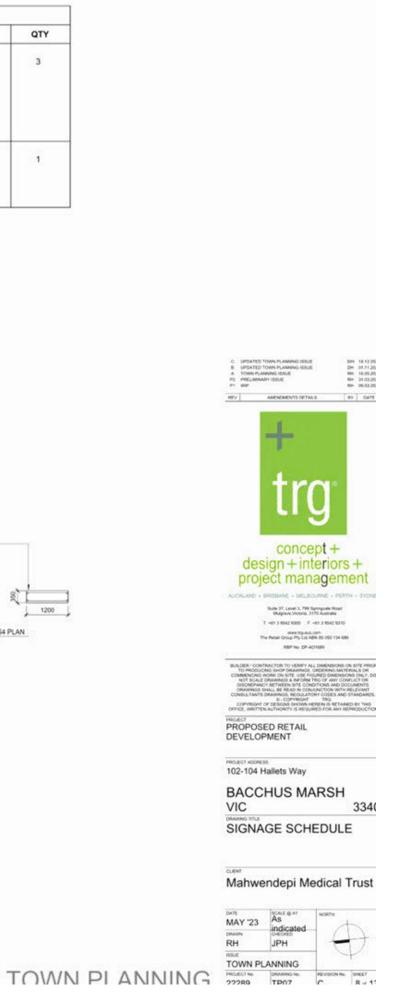


SIGN NO.	DESCRIPTION	LOCATION	SIZE	AREA	QTY
S1 S2 S3	INTERNALLY ILLUMINATED SIGN TO SHOPFRONT AT 3770MM AFFL. DESIGN TBC.	SHOPFRONT FACING HALLETS WAY	H: 550mm		3
S4	ILLUMINATED PYLON SIGN	WEST SIDE OF CARPARK FACING HALLETS WAY	W: 1200mm H: 5000mm	6.00 m²	1



SIGN1	SIGN2	SIGN3
	WTERNALLY ELIMINATED SIGNAGE TO FUTURE DESIGN	

2 SIGNAGE \$1, \$2, \$3



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VIEW

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BACCHUS MARSH

PERSPECTIVE 1 - FRONT

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3340 VIC PERSPECTIVE 2 - AERIAL VIEW

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PERSPECTIVE 3 -SOUTHWEST VIEW CLENT

BACCHUS MARSH

PROPOSED RETAIL DEVELOPMENT

PROJECT ADDRESS 102-104 Hallets Way

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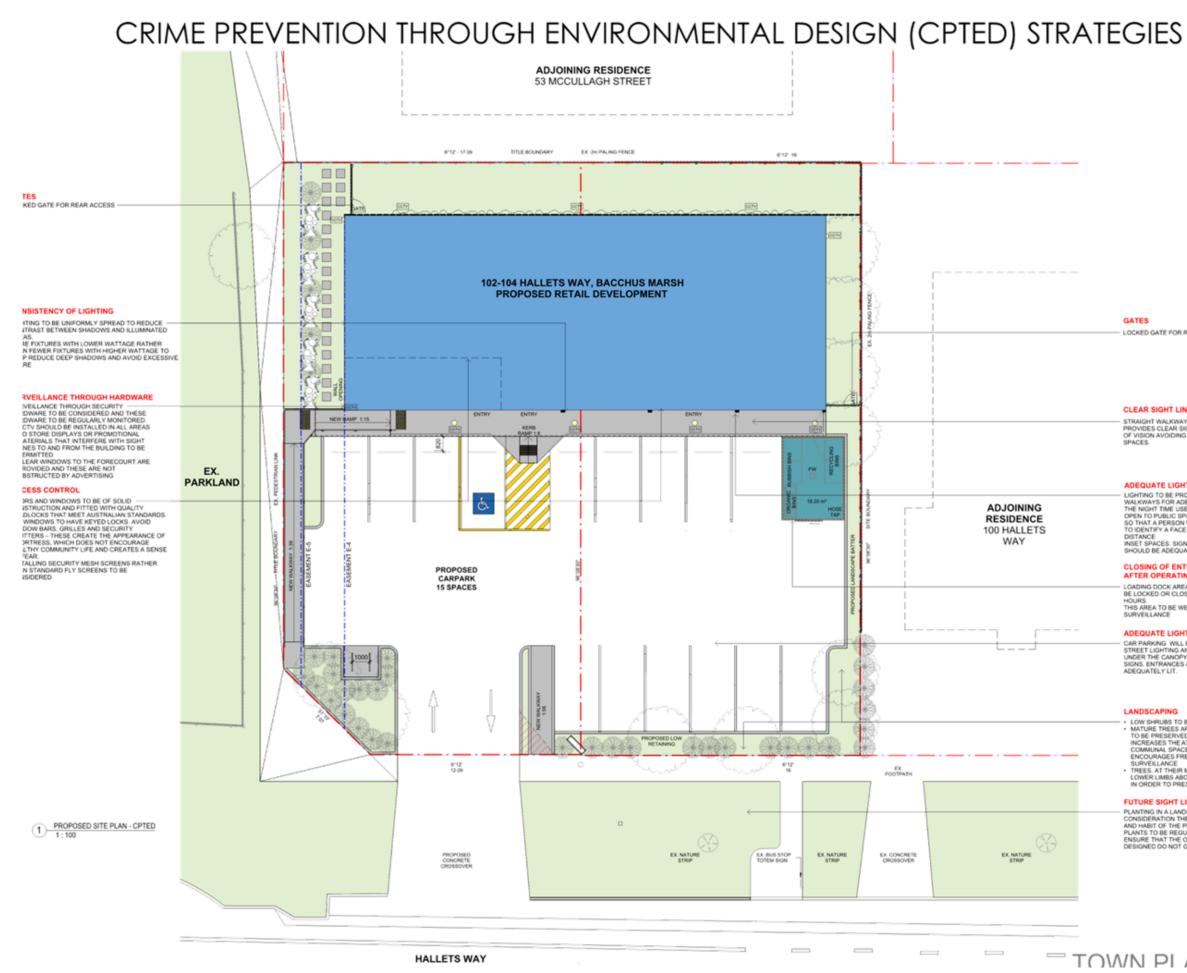
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CLEAR SIGHT LINES

STRAIGHT WALKWAYS ALONG THE BUILDING PROVIDES CLEAR SIGHT LINES & DESIRED LINES OF VISION AVOIDING ISOLATED OR HIDDEN

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CLOSING OF ENTRAPMENT AREA AFTER OPERATING HOURS

LOADING DOCK AREA BEHIND THE FUEL SHOP TO BE LOCKED OR CLOSED AFTER OPERATING HOURS. THIS AREA TO BE WELL LIT WITH FORMAL SURVEILLANCE

ADEQUATE LIGHTING

ADEQUATE LIGHTING CAR PARKING WILL BE LIT FROM THE EXISTING STREET LIGHTING AND THE PROVIDED LIGHTING UNDER THE CANOPY. SIGNS. ENTRANCES AND EXITS SHOULD BE ADEQUATELY LIT.

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SURVEILLANCE TREES. AT THEIR MATURE HEIGHT. TO HAVE LOWER LIMBS ABOVE AVERAGE HEAD HEIGH IN ORDER TO PRESERVE SIGHTLINES

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TOWN PLANNING



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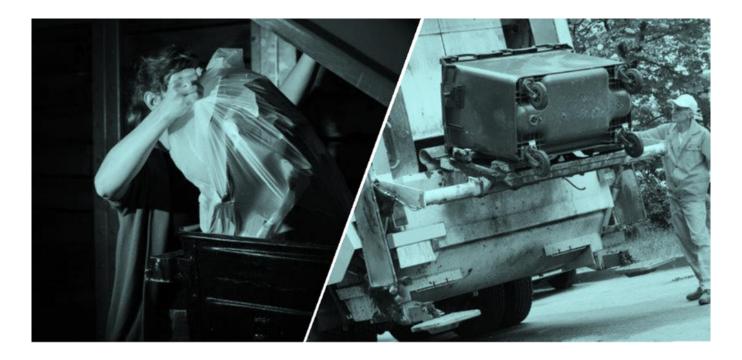
DEVELOPMENT

102-104 Hallets Way

BACCHUS MARSH 3340 VIC CPTED DESIGN DETAILS

Mahwendepi Medical Trust





PROPOSED MIXED-USE DEVELOPMENT 102-104 HALLETS WAY, BACCHUS MARSH

WASTE MANAGEMENT PLAN



PROPOSED MIXED-USE DEVELOPMENT, 102-104 HALLETS WAY, BACCHUS MARSH

Client: Mahwendepi Property Trust Report Reference: 22561TW File Path: Y:\2022\22561TW - 102-104 Halletts Way, Bacchus Marsh\08 Reports\22561WREP01F03.docx

Friday, January 19, 2024

Document Control

Version:	Prepared By:	Position:	Date:	Reviewed By:	Position:	Date:
F01	Tom Bloomfield	Associate Director – Waste & Environment	6 April 2023	Jarrod Wicks	Director	6 April 2023
F02	Jasreena Kaur	Senior Environmental Consultant	2 November 2023	Tom Bloomfield	Associate Director – Waste & Environment	2 November 2023
F03				Tom Bloomfield	Associate Director – Waste & Environment	11 November 2023
F04				Jarrod Wicks	Director	19 November 2023

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EXECUTIVE SUMMARY

SALT has been engaged by Mahwendepi Property Trust to prepare a Waste Management Plan (WMP) for a proposed commercial development located at 102–104 Hallets Way, Bacchus Marsh.

SALT understands that the proposal involves the development of a café, convenience store and food and drink premises.

Commercial waste would be stored on-site in the bin storage area located at within the carpark.

Commercial waste would be collected by private contractor, with:

- 2 x 1,100L garbage bins collected two times per week;
- 2 x 1.100L commingled recycling bins collected two times per week:
- 3 x 240L organics bins collected three times per week;

Waste vehicles would prop legally within the car park to perform collections. Vehicle operators would ferry waste bins from the waste store to the collection vehicle and return upon emptying.

In the opinion of SALT, the enclosed Waste Management Plan provides efficient waste management for the proposed development.



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1 RESPONSES TO OBJECTOR STATEMENTS

It is noted that the subject site has received several objector statements in relation to the proposed waste management strategy for the site. SALT have reviewed these statements and provide our responses accordingly in Table 1 below.

Table 1 Objector Statements and Responses

Obj	ector Statement	SALT's responses
(a)	What types of trucks would be used and when?	The proposed type and size of the waste collection vehicle that would be utilised have been specified in Section 5.6 of the enclosed Waste Management Plan.
(b)	In both situations there will be additional noise generated in the area from 5am to midnight in the form of voices, waste collection, deliveries, etc I chose to live in a residential area not a business or mixed use zoned area, therefore I do not understand why businesses like these would be considered in an area like this.	The proposed waste collection timings have also been specified in Section 5.6 and are in accordance with the EPA Victoria <i>Noise Control Guidelines</i> 2021 requirements for commercial/industrial waste collections that are impacting residential areas. It should be noted that the specific waste collection timing would be dependent on the waste contractor's schedule.
 (c) Waste bins around the site should be marked (if applicable) – allegedly the site is windy and waste bins peed to be wind proof. 		The bins can be purchased with foot pedals on the front wheels which would lock the bin in position. Please refer to an example bin with the lock referred to available here: https://sulo.com.au/product/1100-litre-commercial-bin/
bins need to be wind proof.	The bins will also be stored within a fenced enclosure and would be placed directly adjacent to each other thus there would be a low chance of bins tipping from the wind.	
(d)	Need bins for the public to dispose of waste? (could we say that bins will be located inside each tenancy rather than outside, where it would be a body corporate issue to manage it)	It is proposed for public bin stations to be provided within the respective commercial tenancies for disposal of litter. Please refer to Section 5.2.1 for further information.
(e)	Potential waste storage behind the buildings and along the right-hand side of the premises. With the 3-metre easement along the rear of the proposed buildings and no internal access to this space from the shops, the concern for potential storage of materials, rubbish and waste is worrying. This could lead to fire hazards, rodents and unwelcome foot traffic.	It is recommended that gates are installed to prevent public access to the rear of the site. This would minimise any risk of littering and dumping of rubbish from occurring in this area. Additionally, the property owner would have access to the rear of the building to clear any dumped rubbish and/or litter if present.
Ver	min and Noise Concerns:	Three organic waste collections per week have been
(f)	While this last point should not affect me directly, I am concerned about the impact on neighbouring residents of large 1,100 litre bins with rotting food, particularly in summer.	proposed to minimise potential vermin and odour issues on-site. The option to purchase an organics bin bio-filter has also been included in Section 11.1.2 to minimise odour issues.
(g)	Personally, if I were the direct neighbour on Halletts Way, I would be extremely angry to have the Bins located adjacent to my property – effectively at my back door, not only for the smell	It should be noted that the estimated waste generation volumes enclosed within this report are based on standard waste generation rates which are typically found to be conservative. Therefore, the actual waste generation volumes may be slightly

they would create, but the vermin they may attract and the noise associated with rubbish pick up 8 times a week

- (h) Vermin & Rodents, the bin/waste area is adjoining a residential property, this will increase
- (i) vermin & rodents, unpleasant smells will also be noticeable to neighbouring houses

(j) Waste collection to be reviewed to assess if the

estimated collections (8 per week) are correct.

lower than that specified within this report and thus may allow for a further reduction in the collection frequencies.

As discussed above, the collection timings proposed in Section 5.6 are in accordance with the EPA Victoria *Noise Control Guidelines* 2021 requirements for industrial waste collections that are impacting residential areas. Waste collections for the site must only occur between these timings.

It is recommended that the site owner liaises with the waste contractor to determine a suitable collection timing to further minimise the impacts on the surrounding residents where possible.

The collection frequency for the garbage stream has been reduced from three to two times per week to reduce the total weekly collections to 7 times per week for all waste streams.

The collection frequency for the organic bins has not been reduced, to minimise potential vermin and odour issues on-site, as discussed above.

2 INTRODUCTION

Can this be reduced?

SALT has been requested by Mahwendepi Property Trust to prepare a Waste Management Plan for a proposed mixed-use development located at 102-104 Hallets Way, Bacchus Marsh.

This Waste Management Plan (WMP) has been prepared based on industry best practice and the Moorabool Shire council planning scheme requirements. In the circumstance that the development plans are amended or new legal requirements are introduced, a revision of the enclosed WMP may be required by the Responsible Authority. The developer would be responsible for engaging with a waste consultant or engineer to prepare the updated report accordingly.

Generation rates have been adopted based on commercial waste generation rates contained in the Sustainability Victoria *Better Practice Guide for Waste Management and Recycling in Multiunit Developments* 2019.

3 INCLUDED IN THIS REPORT

Enclosed is the Waste Management Plan for the proposed development at 102–104 Hallets Way. Bacchus Marsh. Included are details regarding:

- Land use;
- Waste generation;
- Waste systems:
- Bin quantity, size and colour;
- Collection frequency:
- Bin storage area;
- Signage;

- Waste collection;
- Responsibilities;
- Ventilation, washing and vermin-prevention;
- Noise reduction:
- DDA compliance;
- Supplier contact information; and
- Scaled waste management drawings.



4 LAND USE

Planning application number: to be allocated

Land Zone: General Residential Zone 2

Land use type: Commercial

Number of levels: 1

Commercial Space:

- 71.0 m² café (plus 25.0 m² of outdoor seating);
- 127.2 m² convenience store; and
- 70.0 m² food and drink premises.

5 WASTE MANAGEMENT PLAN

5.1 WASTE GENERATION

Commercial waste generation rates are shown in Table 2. Calculations are based on 7 days per week operation for all spaces.

Generation rates have been adopted based on commercial waste generation rates enclosed in the Sustainability Victoria *Better Practice Guide for Waste Management and Recycling in Multiunit Developments* 2019. These rates are considered appropriate for a commercial development located within the Moorabool Shire municipality.

Waste generation rates for food organics in restaurant and café spaces have been calculated based on the State of Victoria. Department of Health and Human Services *Victoria Food Organics Recycling: A guide for small-medium food services organisations* (2016) report which details that waste volumes generated by food and drink premises within Victoria has a general composition of at least 50% food waste. The garbage rate has been reduced accordingly to reflect the organics separation.

It is assumed that the convenience store would only generate minimal quantities of food waste, therefore organic waste from the store has been included in the general waste quantities.

Use	Garbage (L/100m²/week)	Commingled Recycling (L/100m ² /week)	Food Organics (L/100m²/week)
Cafe	1,050	1,400	1,050
Convenience Store	2.100	1,050	-
Food and drink premises	1,050	1,400	1.050

Table 2 Waste Generation Rates

A commercial waste generation assessment is provided in Table 3.

Table 3 Waste Generation Assessment

Use	4.500	Waste Per Week					
USE	Area	Garbage	Recycling	Food Organics			
Cafe	96m ²	1.008L	1.344L	1,008L			
Convenience Store	127.21m ²	2,671L	1,336L	-			
Food and drink premises	70m ²	735L	980L	735L			
Total Waste Generated per Week		4,414L	3,660L	1,743L			



5.2 WASTE SYSTEMS

Waste would be sorted on-site by staff and cleaners as appropriate into the following streams:

- Garbage (General Waste);
- Commingled Recycling;
- Food Organics

5.2.1 PUBLIC BIN STATIONS

Based on Method *Westpac NZ Case Study*, the use of bin stations throughout their office spaces have reduced waste to landfill by 40%. The case study discusses the significance of accountability in ensuring diversion of waste from landfill. It is therefore recommended that bin stations are provided within the food and beverage and convenience store spaces, for convenient access to the public.

Each bin station should be equipped with one bin for each waste stream. This would encourage the user to make a conscious decision before depositing their waste product into a specific bin and encourage appropriate segregation especially when bins are placed within an area open to public view.

An example bin station with vertical signage is shown in Figure 1. The vertical signage is recommended to be implemented at each bin station to educate the users on the appropriate separation methods. This would allow for maximum diversion of waste from landfill and recovery of the respective waste streams to be achieved.



Figure 1 Example Bin Station with vertical signage

5.2.2 GARBAGE (GENERAL WASTE)

The café and food and drink premises would be furnished with plastic lined bins for the temporary holding of garbage waste, to have minimum cumulative capacity of 150 litres per 100m² of floor area. The convenience store would be furnished with plastic lined bins for the temporary holding of garbage waste, to have minimum cumulative capacity of 300 litres per 100m² of floor area.

These capacities are based on the transfer of waste to the bin room occurring once per day.

Staff/cleaners would dispose of waste from these bins directly into the appropriate 1.100L bin provided within the bin storage area, accessed via the car park (refer to Appendix 1).

Garbage is to be disposed of bagged.



5.2.3 COMMINGLED RECYCLING

The café and food and drink premises would be furnished with plastic lined bins for the temporary holding of commingled recycling, to have minimum cumulative capacity of 200 litres per 100m² of floor area. The convenience store would be furnished with plastic lined bins for the temporary holding of commingled recycling, to have minimum cumulative capacity of 150 litres per 100m² of floor area.

These capacities are based on the transfer of recycling to the bin room occurring once per day.

Staff/cleaners would dispose of recycling from these bins directly into the appropriate 1,100L bin provided within the bin storage area, accessed via the car park (refer to Appendix 1).

Commingled recyclables would be disposed of loosely.

5.2.4 FOOD ORGANICS

The café and food and drink premises would be furnished with unlined bins for the temporary holding of food organics and garden organics. to have minimum cumulative capacity of 75 litres per 100m² of floor area. This capacity is based on the transfer of waste to the bin room occurring twice per day.

Staff/cleaners would dispose of waste from these bins into the appropriate 240L bin provided within the bin storage area, accessed via the car park (refer to Appendix 1).

Organics waste is to be disposed of loosely or in compostable bags that have been approved by the waste contractor.

These compostable bags should be marked with the Australian Standard compostable logo as shown in Figure 2 below. It should be noted that non-compostable bags should not be placed into the organics bins as it cannot be composted and thus will affect the quality of the organic product.

Figure 2 Australian Standard Compostable Logo



Green waste generated by the maintenance of communal landscaped areas would be disposed of via the engaged landscaper.

5.3 BIN QUANTITY, SIZE AND COLLECTION FREQUENCY

The bin quantity, size and the frequency of collection are shown below in Table 4 and Table 5. Note that the garbage volume exceeds the capacity by 0.3% (14L), however this is considered to be within acceptable tolerance given the conservative nature of the generation rates used.

Table 4 Bin Size and Collection Frequency

Waste Stream	Collections per Week	Bin Size	No. Bins	Weekly Capacity	Weekly Volume
Garbage	2	1,100L	2	4.400L	4,414L
Commingled Recycling	2	1,100L	2	4.400L	3,660L
Food Organics	3	240L	3	2.160L	1.743L

*It should be noted that some waste contractors provide a maximum bin size of 120L for organics due to the significant weight of this waste stream hence the available organic bin sizes should be clarified prior to engaging the contractor.

Table 5 Typical Waste Bin Dimensions

Capacity (L)	Width (mm)	Depth (mm)	Height (mm)	Area (m²)		
1,100	1240	1070	1330	1.33		
240	585	730	1060	0.43		
Note: The characteristic and here does OULO's the bid bin and it for the						

Note: The above dimensions are based on SULO's flat lid bin specifications



5.4 BIN COLOUR AND SUPPLIER

All bins would 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) shall have red lids with dark green or black body;
- Recycle shall have yellow lids with dark green or black body; and
- Organics shall have green lids with dark green or black body.

Note, private contractors often supply bins for collection.

5.5 WASTE STORAGE AREA

Table 6 demonstrates the cumulative space requirements and provision of waste areas in the proposed development.

Please refer to scaled drawing shown in Appendix 1.

Table 6 Waste Area Space Requirements

Stream	Space Required (excluding circulation)	Space Provided
General Waste	2.66m ²	
Commingled Recycling	2.66m ²	16.20m ²
Organics	1.29m ²	
TOTAL	6.61m²	16.20m ²

Waste management would be overseen by building management.

5.6 WASTE COLLECTION

Commercial waste would be collected by private contractor as follows:

- 2 x 1,100L garbage bins collected two times per week;
- 2 x 1,100L commingled recycling bins collected two times per week;
- 3 x 240L organics bins collected three times per week.

All waste bins would be stored on-site in the bin room provided adjacent to the car park.

Waste collections would occur between 7am to 8pm on Mondays to Saturdays and between 9am to 8pm on Sundays and public holidays, in accordance with EPA Victoria *Noise Control Guidelines* 2021. This is to ensure minimal noise impacts to the neighboring properties.

All waste collections would occur via a standard 8.8m medium rigid vehicle.

Waste collection vehicles would enter the subject site via a forward motion from Halletts Way.

Waste collection vehicles would prop safely next to the waste storage area.

Vehicle operators would ferry waste bins from the waste storage area and return upon emptying.

Waste collection vehicles would exit the site in a forward direction onto Halletts Way. Refer to swept path diagram in Appendix 2.

Building management would ensure that waste vehicle operators are able to access the bin room.

Commercial waste bins would not be presented to street kerb at any point.



6 **RESPONSIBILITIES**

Building management would be responsible for overseeing waste management within the development. Responsibilities would include:

- Provide commercial tenants with a waste management handbook which would include information on bin storage areas, transfer paths and waste management methods onsite;
- Ensure that all bins throughout the site and the bin room are equipped with appropriate signages to guide users on appropriate segregation methods for their waste and recyclables;
- Inspecting waste stores;
- Reviewing contamination within bins;
- Investigating incidents of inappropriate waste storage (or aggregation).

Building management would ensure anyone found responsible for inappropriate waste disposal would be appropriately educated and made aware of correct waste disposal techniques.

It is recommended that building management conducts a waste audit if waste is found to be inappropriately deposited by users or if the bin capacities need to be reviewed.

7 SIGNAGE

Waste storage areas and bins would be clearly marked and signed with the industry standard signage approved by Sustainability Victoria or equivalent. The typical Sustainability Victoria signage is illustrated in Figure 3.





8 SUSTAINABILITY ACTION PLAN AND INITIATIVES

The importance of restructuring the institutional waste management methods in developments is becoming more apparent as we experience the adverse impacts of increasing waste volumes and declining recycling rates. Developments such as the proposed subject site can contribute towards the prevention and reduction of nationwide waste generation volumes as well as to promote a local circular economy system.

Building management should encourage users by demonstrating a commitment towards waste avoidance and minimisation initiatives. The waste hierarchy as detailed in the *Environmental Protection Act* 2017 should be observed in order of preference (refer to Figure 4).



Figure 4 Waste Hierarchy



In addition to the waste management strategy detailed in the enclosed report, building management can establish landfill diversion and recycling targets and conduct periodic waste audits to monitor contamination levels in recycling and organics bins. The results of the audit could be shared with commercial tenants to encourage them to continue or to improve their waste separation efforts. The audit may also be beneficial from a cost perspective as it would inform building management of opportunities to reduce bin numbers or collection frequencies.

Commercial tenants should be inducted on on-site waste management practices and on the development's sustainability action plan via the provision of a handbook or in-person training, as deemed necessary. Commercial tenancies should be encouraged to minimise single use packaging and promote re-use by providing opportunities to consumers to utilise their own reusable containers or bags.

9 WASTE AREA DESIGN REQUIREMENTS

9.1 VENTILATION

Ventilation would be provided in accordance with Australian Standard AS1668.

The waste room will be equipped with tight fitting doors and impervious flooring. Any openings within the waste room will be fitted with vermin-proof mesh.

9.2 LITTER MANAGEMENT, WASHING AND STORMWATER POLLUTION PREVENTION

An appropriately drained washdown area would be provided within the bin room in which each bin is to be washed regularly by building management. Bin wash areas should not discharge into stormwater drainage.

Alternatively, a third-party bin washing service can be engaged to perform this service. Bin washing suppliers must retain all waste water to within their washing apparatus so as to not impact on the drainage provisions of the site.

Building management and cleaners would be responsible in ensuring the following to prevent or minimise the dispersion of litter throughout the site:

- Prevent overfilling of bins by ensuring bin lids are closed at all times:
- Require waste contractor to remove any spillage that may occur during waste collections; and
- Ensure anyone found responsible for inappropriate waste disposal or dumping would be appropriately
 educated and made aware of correct waste disposal techniques.

9.3 NOISE REDUCTION

All waste areas would meet EPA, BCA and AS2107 acoustic requirements as appropriate within operational hours assigned to minimise acoustic impact on surrounding premises.



Waste collection timings in accordance with EPA Victoria *Noise Control Guidelines* 2021 have been stipulated in the waste collection section above.

Waste contractors should also abide by the following regulations to ensure minimal noise impacts to the neighboring properties:

- Compaction only to be carried while on the move:
- Bottles should not be broken up at the point of collection
- Routes that service entirely residential areas should be altered to reduce early morning disturbances: and
- Noisy verbal communication between operators should be avoided where possible.

9.4 DDA COMPLIANCE

All waste areas to be accessed by commercial staff would comply with AS1428.1:2009.

10 RISK AND HAZARD ANALYSIS

Table 7 shows the potential risks, severity and suggested control methods that could be considered to avoid the risks from occurring during waste collections.

Note that this is a preliminary risk assessment and does not replace the need for the building management and collection contractors to complete their respective OHS assessment for waste collections.

The information provided below have been adopted from WorkSafe Victoria *Non-Hazardous Waste and Recyclable Materials* (2003). The severity of each risk has been determined based on the risk rating table enclosed in Department of the Environmental *Management Plan Guidelines* 2014.

Table 7 Potential Risks and Control Methods During Waste Collections

Area	Risk	Severity	Suggested controls
	Incidents during waste collection vehicle ingress or egress movements	Low	Vehicle operators would be trained in ensuring the following Tailgate is closed after clearing waste area Move vehicle slowly when tailgate or body is raised Clear waste from tailgate seal and from rear of machine before departure from the subject site Ensure tailgate is locked after unloading operation Vehicle operators should not exit the vehicle body unless engine is switched off, ignition key is removed, safety prop is in position and the vehicle body is well ventilated. Regular safety checks and inspection of vehicles should be conducted.
Waste collection	Incidents during manual handling of bins	High	Vehicle should meet relevant Australian Design Rules. Ensure that vehicles with low bowl height are used to avoid lifting of bins above shoulder height. Vehicle operator should be clear of the equipment before activation of packing or tipping controls.
	Slip and trip hazards in moving into and out of the vehicle	Medium	Maintain sufficient and frequent communication between driver and runner. The hose should not be used as handholds when mounting or dismounting.
	Slips and trips while transporting bins	Low	As the car parking area is at the same grade with that of the waste storage area, there are no hazards presented from the presence of slopes or steps. The car parking and waste storage area would also be well lit at all times to ensure good visibility to staff/vehicle operators. However, to ensure that any other potential risks are mitigated, frequent communication should be maintained between the driver and runner and the runner should only transfer one bin at a time.



Area	Risk	Severity	Suggested controls
Surrounding traffic	Conflict with other vehicle operators and commercial tenants within the car park during collection	Medium	Ensure that collection is to occur only at off-peak hours. The collection area should also be well-lit to allow for better visibility of oncoming traffic and pedestrians.
Waste bins	Type of wastes handled – risk associated in contact with unknown hazardous substances or sharp objects	Medium	Commercial tenants should be educated in the safe disposal of hazardous substances and sharp objects. Waste vehicle operators should be trained and informed on safe handling of unknown substances. Operators could be provided with PPE to avoid infections and to assist in handling of waste bins.
Waste Bins	Overflowing bins affecting the transport of bins to the waste collection vehicle or presenting as a trip hazard.	Low	The recommended number of bins enclosed in this WMP provides a larger capacity than the volume generated for all waste streams hence there would be a low likelihood of this occurring.

11 SUPPLIER CONTACT INFORMATION

Table 8 provides a list of equipment specified by this waste management plan.

Below is a complimentary listing of contractors and equipment suppliers. 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.

SALT does not warrant (or make representations for) the goods/services provided by these suppliers.

Table 8 High Level Purchasing Schedule

Item	Quantity	Supplier	Notes	
1,100L Commercial Bins	4	Private Supplier*	2 x 1,100L garbage bins 2 x 1,100L commingled recycling bins	
240L Bin	3	Private Supplier*	3 x 240L food organics bins	
*Private waste colle	ction contracto	ors often supply their own	h bins for collection.	

11.1 EQUIPMENT SUPPLIERS

11.1.1 BIN SUPPLIER

- Sulo MGB Australia (wheelie bin) 1300 364 388
- Method Recycling (bin stations) 0477 630 220 / 0412 001 686
- Source Separation System (wheelie bin and bin stations) 1300 739 913

11.1.2 ORGANICS BIN BIO-FILTER

The bio bin-filter may be purchased for odour and vermin prevention purposes.

Smart Biz Oz – 0488 865 574

11.2 WASTE COLLECTORS

11.2.1 GARBAGE, RECYCLING AND ORGANICS

- Cleanaway 13 13 39
- CSC Waste 1300 499 927
- JJ Richards 03 9794 5722 (Vic)
- SUEZ Environment 13 13 35



- VISY Waste Management 03 9369 7447
- Veolia Environmental Services 132 955
- WasteWise Environmental 1300 550 408
- Vicenvirowaste 1300 557 558

11.3 BIN WASHING SERVICES

- The Bin Butler 1300 788 123
- Calcorp Services 1888 225 267
- WBCM Environmental 1300 800 621

12 PURPOSE AND LIMITATIONS

This Waste Management Plan has been prepared to form a part of the town planning application. The report is prepared to:

- Demonstrate that an effective waste management system is compatible with the design of the development. An effective waste management system comprises of a system that is hygienic, clean, tidy, minimises waste being landfilled and maximises recycling and resource recovery;
- Ensure stakeholders are well informed of the design, roles and responsibilities required to implement the system;
- Provide supporting scaled drawings to confirm that the final design and construction is compliant with the report;
- Define the relevant stakeholders involved in ensuring the implementation of the waste management system; and
- Ensure tenants are not disadvantaged in access to recycling and other sustainable waste management options.

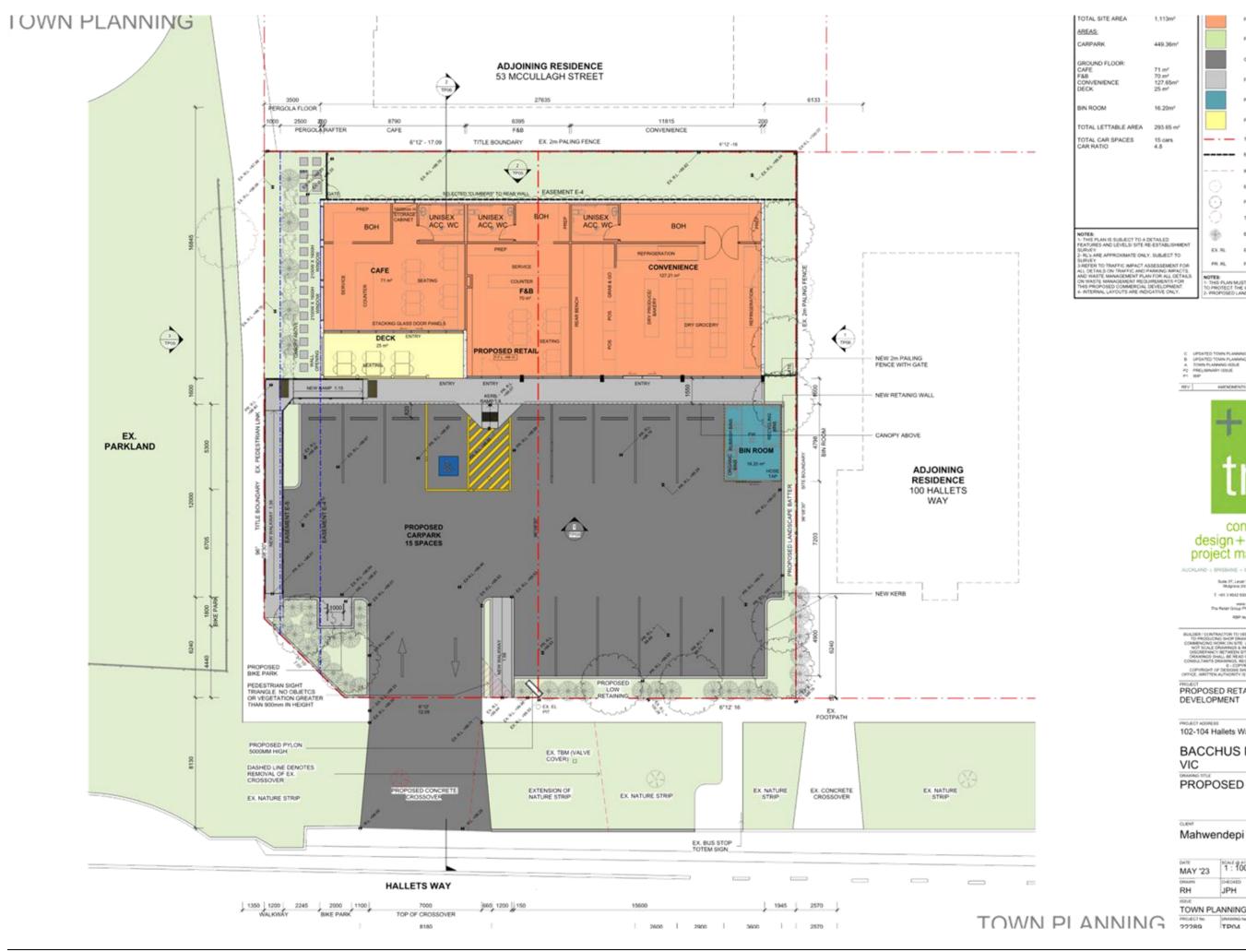
The following should be noted regarding the enclosed information:

- The waste generation volumes provided are estimates based on the best available waste generation rates. The actual waste volumes generated on-site may differ slightly from that estimated as it would depend on the occupancy rate of the development and tenant type;
- The report does not discuss management of construction and demolition waste for the proposed development hence a separate report discussing the management of these waste streams would be required;
- The equipment specifications and any information provided regarding the recommended equipment are
 provided for reference purposes only and should not be relied upon for procurement. SALT recommends
 that the developer attains the latest specifications of the required equipment and service provisions from
 the respective contractor(s) prior to engaging them or purchasing the relevant equipment; and
- The report should be updated if the development plans are amended or if new legal requirements are introduced.



APPENDIX 1 DESIGN DRAWINGS





OTAL SITE AREA	1,113m²		PROPOSED RETAIL DEVELOPMER
REAS			PROPOSED LANDSCAPE
CARPARK	449.36m²		
ROUND FLOOR:	71 m²		CARPARKDRIVEWAY
JAPE 588 CONVENIENCE DECK	70 m² 127.65m² 25 m²		FOOTPATH/WALKINGY
SIN ROOM	16.20m ²		PROPOSED IEN ROOM
OTAL LETTABLE AREA	293.65 m²		PROPOSED OUTDOOR AREA
OTAL CAR SPACES	15 cars 4.8		TITLE BOUNDARY
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			REMOVAL
		0	EXISTING TREES TO REMAIN
		0	PROPOSED THEES - INDIGATIVE (
		0	TREES TO BE REMOVED
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EATURES AND LEVELS/ SITE RE LIRVEY - RL'S ARE APPROXIMATE ONLY		6X.8L	EXISTING REDUCED LEVEL
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PROJECT PROPOSED RETAIL DEVELOPMENT

PROJECT ADDRESS 102-104 Hallets Way

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BACCHUS MARSH VIC 3340 PROPOSED SITE PLAN

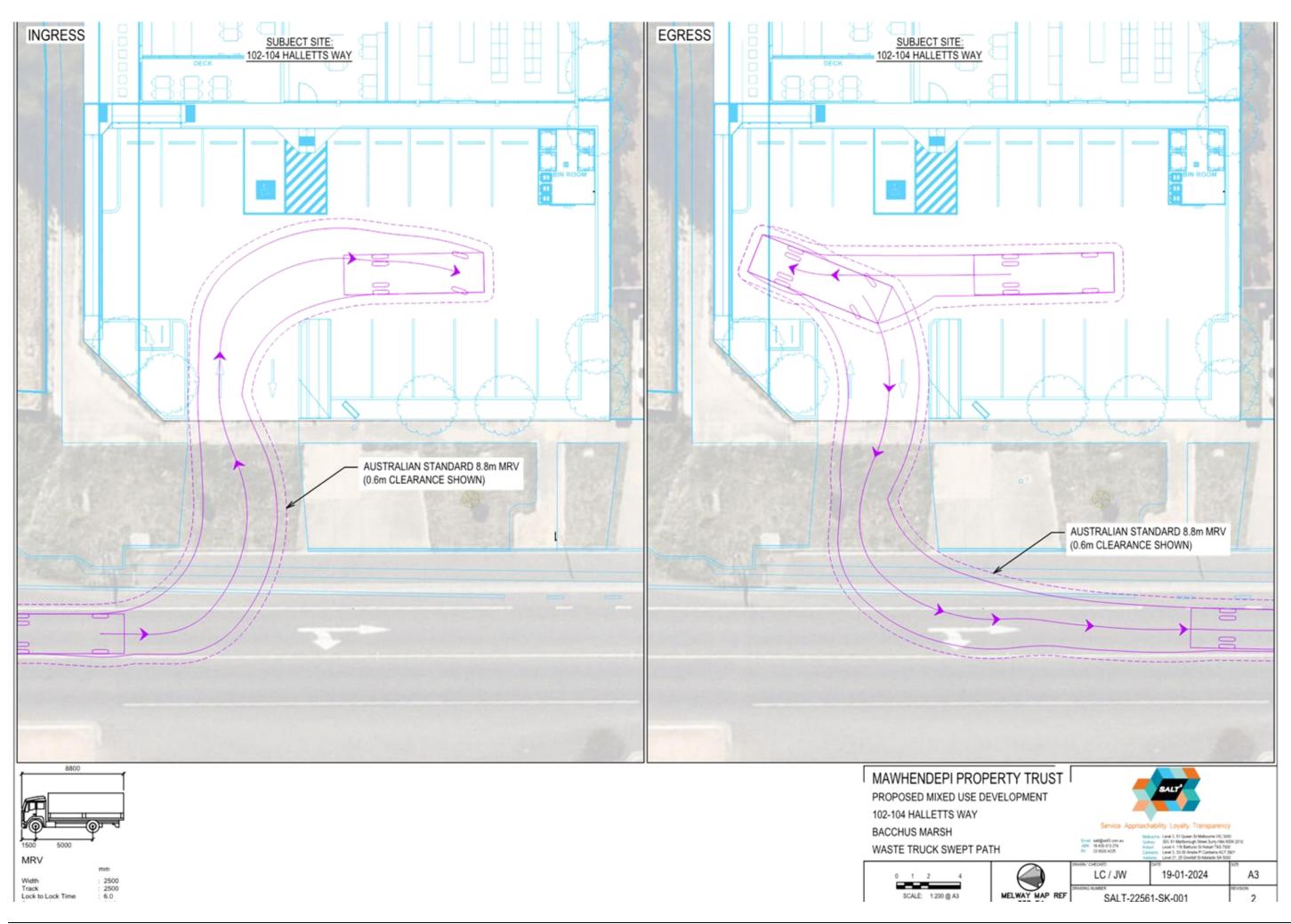
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APPENDIX 2 SWEPT PATH ANALYSIS







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102–104 HALLETTS WAY, BACCHUS MARSH MIXED-USE DEVELOPMENT

TRAFFIC IMPACT ASSESSMENT



102-104 HALLETTS WAY, BACCHUS MARSH MIXED-USE DEVELOPMENT

Client: Mawhendepi Property Trust Report Reference: 22561TW File Path: Y:\2022\22561TW - 102-104 Halletts Way, Bacchus Marsh\08 Reports\22561TREP01F05.docx

Friday, January 19, 2024

Document Control

Version:	Prepared By:	Position:	Date:	Reviewed By:	Position	Date:
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1 INTRODUCTION

SALT has been engaged by Mawhendepi Property Trust to undertake an assessment of the traffic and parking impacts associated with a proposed mixed-use development at 102-104 Halletts Way, Bacchus Marsh.

This report reflects an update of SALT's original report, following receipt of a Council RFI and objection statements, and attendance at a consultation meeting with Council and objectors, held 17 October 2023.

In the course of preparing this report, the following tasks have been undertaken:

- The subject site has been inspected;
- The Council RFI and objector responses have been reviewed;
- Development plans have been reviewed and design advice provided to the project architect;
- Traffic and parking data has been collected and analysed;
- The parking and traffic implications of the proposal have been assessed.

The following sets out SALT's findings with respect to the traffic engineering matters of the proposed development.

2 RFI AND OBJECTOR RESPONSES

2.1 COUNCIL RFI

The following table outlines SALT's response to the traffic engineering matters raised in the Moorabool Shire Council RFI dated 18 August 2023.

Table 1 RFI Response

Council Comment	Response		
Infrastructure would like to see an updated TIA report to address the following traffic concerns:			
Current traffic counts/data/survey on Halletts Way.	A tube count survey has been commissioned by SALT on Halletts Way outside the subject site from Saturday September 2 nd to Friday September 8 th , 2023. Results of the survey are provided in Section 3.5 of this report.		
How the traffic generated by the development would impact on the existing road	As outlined in Section 9.1, the development is expected to generate up to 33 vehicle movements within the peak hour. Halletts Way has an existing peak hourly volume of 1.257 vehicles (Thursday 8am-9am). As such, the proposed development will result in an increase of just 2.6% to the volumes on Halletts Way (conservatively assuming no passing trade) which will be virtually indiscernible.		
	Additionally, it is unlikely that the land uses will all peak at the same time. For instance, the café is more likely to peak during the morning whereas a take-away food premises is more likely to peak in the evening.		
	A SIDRA assessment has been undertaken for the intersection of the site access and Halletts Way. The results indicate that there will be minimal impacts to through traffic on Halletts Way and minimal queueing will occur.		
	Full details of the SIDRA assessment are provided in Section 9.3 of this report.		



How to ensure vehicles entry and exit the subject site safely especially during the peak hours. Will any road treatment or turning lane warrant be required to achieve that?	No turning lanes are considered necessary, given the low traffic volumes generated by the development and the low levels of queueing and delays shown in the SIDRA analysis. Nor is adding turn lanes feasible in this instance. Refer to Section 9.4 for additional discussion.
Safe sight distance at the proposed vehicle crossing – Will the existing traffic sign on the road obstruct the sight distance at the crossing?	SALT has undertaken a sight distance assessment which confirms that adequate sight distance is provided at the vehicle crossing and the existing traffic sign does not obstruct sight lines. Refer to Section 7.2 for additional discussion.

The following table provides a response to subsequent comments raised by Council's infrastructure team at the consultation meeting:

Table 2	Response	to infrastructure	team's	additional	comments
---------	----------	-------------------	--------	------------	----------

Council Comment	Response		
Council reviewed traffic data from July 2021 that indicated an AADT two-way traffic volume of 8,603 vehicle movements on Halletts Way.	The traffic data referred to is from a period of Covid restrictions, and hence it is reasonable to expect it will be lower than current conditions.		
AADT is the Average Annual Daily Traffic Volume, that is the average of 365 days of the year.	SALT has compared traffic volume data for Halletts Way available from the VicRoads SCATS database. This is sourced from detector loops in the road pavement at the Western Freeway off-ramp to the north. This can be ascertained by adding the northbound and southbound volumes together with the left-turn traffic at the off- ramp, which obtains the two-way volume south of the freeway.		
Based on this, Council considers the projected 2% annual increase in traffic			
volumes may be underestimated.	Weekday data from 19–23 September 2022 was compared to data from 18 – 22 September 2023.		
	The average weekday volumes are as follows:		
	2022 volume: 9,881 vpd		
	2023 volume: 9,102 vpd		
	Difference: - 710 vpd (-7.2%)		
	Based on this it can be seen that traffic volumes have <i>decreased</i> by 7.2% in the most recent 1 year period. This allows for traffic volumes to have 'settled' post-Covid.		
	It is noted that the total volumes from the SCATS database are significantly less than recorded by SALT's tube count. which indicates an average weekday volume of 11.709 vehicles per day. This may be due to detector loops not recording every vehicle: however, the relative difference in traffic volume is what's relevant.		
	SALT is hence comfortable to adopt a 2% annual growth rate for the purposes of carrying out a future conditions traffic assessment.		



2.2 OBJECTION STATEMENTS

SALT has reviewed the objector statements and summarised the key traffic engineering matters raised. The following table outlines our response to these matters.

Table	3	Ob	iectors	Response
1 STREET	-	~~	le e e e e e e e	1100001100

Objector Issue	Response
Increased levels of on-street parking	The provision of on-site parking meets the Planning Scheme requirements. Even if on-street parking did occur, parking surveys (refer Section 3.5) indicate that there is minimal on-street parking occurring in the surrounding area, with a maximum of 8 out of 38 parking spaces occupied within a short walk of the site during the survey times.
Car parking calculation excludes decking area	Pursuant to Planning Scheme definitions and requirements, outdoor areas (even if covered) are not included in parking calculations. The calculations apply only between external walls.
Traffic Impacts	As outlined in Section 9.1, the development is expected to generate up to 34 vehicle movements within the peak hour. Halletts Way has an existing peak hourly volume of 1.257 vehicles (Thursday 8am–9am). As such, the proposed development will result in an increase of just 2.7% to the volumes on Halletts Way (conservatively assuming no passing trade), which will be virtually indiscernible.
	Additionally, it is unlikely that the land uses will all peak at the same time. For instance, the café is more likely to peak during the morning whereas a take-away food premises is more likely to peak in the evening. A SIDRA assessment has been undertaken for the intersection of the site access and Halletts Way. The results indicate that there will be minimal impacts to the undertaken tage.
	minimal impacts to through traffic on Halletts Way and minimal queueing will occur. Full details of the SIDRA assessment are provided in Section 9.3 of this report.
Sight distance	SALT has undertaken a sight distance assessment which confirms that adequate sight distance is provided at the vehicle crossing. Refer to Section 7.2 for additional discussion.
No pedestrian crossings provided on Halletts Way	The provision of pedestrian crossings is a matter for Council to address and construct, not a responsibility of the applicant. This is an existing matter that occurs across the municipality. For example, pedestrians would currently cross in the vicinity to access the existing bus stops.
	We note there is opportunity for Council to complete a missing footpath link on the western side of Halletts Way – refer figure below. This would tie in with the existing kerb outstand on the eastern side of Hallets Way, that has evidently been installed to provide a pedestrian crossing point at this location.
	Additional or upgraded pedestrian crossing facility (e.g. signals) is clearly unwarranted in this location.



	Potential footpath link
Road rule – turning across white line	The road rules permit vehicles to cross a single continuous line to enter or leave a road.
Bus stop outside site creating delays	The crossover is proposed to be shifted to the north, hence a bus parked at the bus stop would not block access to the site. As the bus stop is located off the traffic lane, cars would only need to slow when the bus is entering and exiting the stop. It is highly unlikely that cars would need to come to a complete stop to give way to the bus. In the event that they do, this would only occur for a very short period of time which would not cause any significant delays on Halletts Way, and this is no different to the existing bus stop arrangement.

The following table provides a response to subsequent additional comments raised by objectors at the consultation meeting, that are not already considered in **Table 3**.

Table 4 Response to objector's additional comments

Objector Issue	Response
Concern raised that the traffic counters commissioned by SALT missed vehicles swerving around stationary vehicles turning right into Burbidge Way.	Burbidge Way is a closed street network servicing only 55 dwellings. Conservatively assuming 1 peak hour vehicle trip per dwelling equates to 55 movements. Adopting a standard PM peak hour ratio of 60% inbound trips equates to 33 movements. Next, the existing split of traffic in the critical weekday PM peak hour is approximately 50/50 north and south along Halletts Way. Therefore, it can be estimated that approximately 33 / $2 = 17$ vehicles would turn right into Burbidge Way in the PM peak hour, or 1 every 3.5 minutes on average. This is a very low number in traffic engineering terms.



	Inputting the estimated traffic distribution for the Burbidge way intersection to SIDRA results in an average 0.6 second delay for southbound movements on Halletts way. Hence, for the most part southbound vehicles will not be delayed and hence have no need to bypass right-turning vehicles in the parking lane. This movement will only be undertaken by a relatively small number of vehicles that would have negligible impact on the traffic analysis.
Concern that the front of the site is often used by the Police for breath testing, and any impact this had on the traffic counts.	SALT elected to adopt traffic volumes for the busiest observed weekday. rather than the average weekday volume which is more commonly used. Further, breath testing is typically done outside of the peak on-road periods to avoid causing significant traffic impacts. We are hence confident that the adopted peak hour data avoided police breath testing.
Should line marking be altered in Halletts way?	We do not see any need to alter line marking in Halletts Way. Drivers can legally turn in and out of the site across the existing line marking.
Traffic has increased since the off- ramp opened and Halletts Way was extended south to Maddingley.	SALT has collected recent traffic data and also assessed the development in a 10 year scenario, with a significant amount of traffic growth. The development is very small, and the traffic volumes will be comfortably accommodated.

3 EXISTING CONDITIONS

3.1 LOCATION AND LAND USE

The subject site is located on the eastern side of Halletts Way in Bacchus Marsh. **Figure 1** shows the location of the site with respect to the surrounding street network. An aerial view of the site is provided in **Figure 2**.

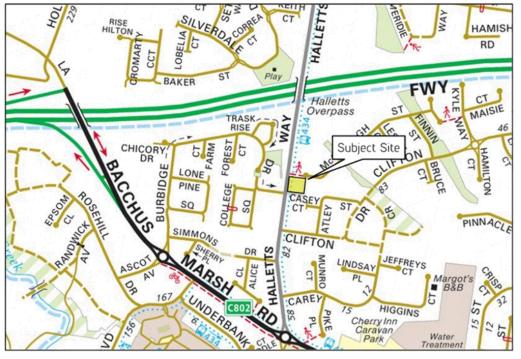


Figure 1 Subject site location





Figure 2 Aerial view of subject site

The site has an area of approximately 1,112m² with a frontage of approximately 28m to Halletts Way on its western side. It has an upwards slope from north to south.

A public walkway is located on the northern side of the site.

Land use in the vicinity of the site consists primarily of detached houses.

3.2 ZONING AND OVERLAYS

The site is located within a General Residential Zone - Schedule 2 (GRZ2).

Halletts Way is a Transport Zone Category 3 (TRZ3).

3.3 ROAD NETWORK

Halletts Way is a collector road under the jurisdiction of Moorabool Shire Council. The carriageway has a northsouth orientation and features a single traffic lane in each direction with indented parallel parking lanes provided on either side. To the north of the site there is a bridge where Halletts Way crosses the Western Freeway, as well as an on-ramp to the freeway (this is not shown in **Figure 1** as the Melways directory has not been updated to reflect the new on and off-ramps to the freeway).

A posted speed limit of 60km/h applies.

3.4 SUSTAINABLE TRANSPORT 3.4.1 WALKABILITY

There are footpaths provided on both sides of the carriageway to the south of the site and a shared user path provided on the western side of the carriageway to the north (across the bridge).



3.4.2 BICYCLES

As mentioned above, there is a shared path across the bridge to the north of the site. Additionally, the generally low-speed nature of the surrounding residential street network is appropriate for sharing between cars and cyclists.

3.4.3 PUBLIC TRANSPORT

There is a bus stop directly outside the site which is serviced by the route 434 bus (Bacchus Marsh Station – Telford Park via Bacchus Marsh).

Bacchus Marsh Station provides train services between Melbourne and Ballarat.

3.5 CAR PARKING UTILISATION

To determine the existing availability of on-street parking, SALT has undertaken car parking spot surveys in the area surrounding the site at several times on a standard weekday and on a Saturday at midday. The survey area is shown as orange in **Figure 3**.



Figure 3 Survey Area

The results are summarised in the table below.

Table 5 Parking Survey Results

Date/Time	Occupied	Available
Saturday 2nd Sep 12pm	5	33
Thursday 14 Sep 8:30am	4	34
Thursday 14 Sep 10:30am	3	35
Thursday 14 Sep 4pm	8ª	30
Thursday 14 Sep 7:30pm	5	33

eincluding one bus on western side of Halletts Way



This indicates that on-street parking is typically lightly utilised in the vicinity of the subject site.

3.6 EXISTING TRAFFIC VOLUMES

SALT commissioned a traffic tube count survey to be undertaken directly outside the subject site on Halletts Way from Saturday 2nd September – Friday 8th September 2023. The results are summarised in **Table 4**.

Table 6 Halletts Way Traffic Volumes

Measure	Volume
Peak weekday daily volume (two-way)	11.906 (Wednesday)
Peak weekday AM peak hour volume (two-way)	1,257 (Thursday 8am-9am)
Peak weekday AM peak hour volume (by direction)	Northbound – 668 Southbound – 589
Peak weekday PM peak hour volume (two-way)	1.210 (Friday 3pm-4pm)
Peak weekday PM peak hour volume (by direction)	Northbound – 592 Southbound – 618
85 th Percentile Speed	63.0km/h

3.7 CRASH HISTORY

A review of DTP's CrashStats database has been undertaken for Halletts Way in the vicinity of the site for the last 5 years of available data. CrashStats reports casualty crashes, that is where a level of injury has occurred (categorised as 'other', 'serious' or 'fatal') and police have attended.

In the last 5 years of available data (5 year period ending in November 2022), no casualty crashes have been recorded in the vicinity of the site.

4 PROPOSAL

It is proposed to construct a mixed-use development comprising the following:

- 1 x Convenience Shop (127.21m²);
- 1 x Café (71m²); and
- 1 x Food and Drinks premises (70m²).

An on-site car park is proposed which features 15 parking spaces, including one DDA space.

In addition, 2 double-sided bicycle hoops (4 spaces) are proposed.

Vehicle access is proposed via a 7.0m wide crossover to Halletts Way, located towards the northern end of the site. The existing crossover would be removed.



5 CAR PARKING

Clause 52.06-5 of the Moorabool Planning Scheme specifies parking provision requirements for various land uses.

The applicable parking requirements are summarised in Table 5.

Table 7 Clause 52.06 Car Parking Requirements

Land Use	Size	Parking Rate	Requirement ¹
Convenience Shop	127.21m ²	10 spaces to each premises	10 spaces
Food and Drink Premises ²	141m ²	4 spaces to each $100m^2$ leasable floor area	5 spaces
Total	15 spaces		

¹ Rounded down pursuant to Clause 52.06

² The café falls under the definition of 'Food and Drink Premises'. The deck is not counted towards leasable area as it is not enclosed.

The proposed provision of 15 car spaces meets the minimum statutory requirement and is hence satisfactory.

6 BICYCLE PARKING

Clause 52.34 of the Moorabool Planning Scheme specifies bicycle parking requirements for various land uses. The statutory rates applicable are outlined in **Table 6** below.

Table 8	Clause 52.34	Bicycle	Parking	Requirements
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Land Use	Size	Employee Rate	Customer Rate	Requirement
Shop	127.21m ²	1 to each 600 sq m of leasable floor area if the leasable floor area exceeds 1000 sq metres	1 to each 500 sq m of leasable floor area if the leasable floor area exceeds 1000 sq metres	0 employee 0 customer
Retail (Food and Drink)	141m²	1 to each 300 sq m of leasable floor area	1 to each 500 sq m of leasable floor area	0 employee 0 customer
Total	0 spaces			

It can be seen that there is no requirement to provide bicycle parking.

Nonetheless, two bicycle hoops (4 spaces) are proposed. The layout accords with AS2890.3.



7 CAR PARKING ACCESS AND LAYOUT7.1 CLAUSE 52.06 ASSESSMENT

An assessment against the relevant design standards of Clause 52.06 of the Moorabool Planning Scheme is provided in Table 5.

Table 9 Clause 52.06 Design Requirements

Requirement	Response
Design Standard 1: Accessways	
Accessways must:	
Be at least 3 metres wide.	Complies.
Have an internal radius of at least 4 metres at changes of direction or intersection or be at least 4.2 metres wide.	Complies. The accessway and car park aisle both exceed a width of 4.2m.
Allow vehicles parked in the last space of a dead-end accessway in public car parks to exit in a forward direction with one manoeuvre.	Complies. The end parking spaces are provided with a full 1.0m blind aisle extension in accordance with AS2890.1. Vehicle swept path diagrams are provided in Appendix 1 . Further, the blind aisle is six spaces long, which complies with AS2890.1 for the maximum length of blind aisle that can be provided without a turning bay. Should a driver enter the site and find the car park to be full, they can conveniently undertake a 3 point turn manoeuvre within the T-junction to exit the site in a forward direction.
Provide at least 2.1 metres headroom beneath overhead obstructions, calculated for a vehicle with a wheelbase of 2.8 metres.	Not applicable. There are no overhead obstructions.
If the accessway serves four or more car spaces or connects to a road in a Road Zone, the accessway must be designed so that cars can exit the site in a forward direction.	Complies.
Provide a passing area at the entrance at least 6.1 metres wide and 7 metres long if the accessway serves ten or more car parking spaces and is either more than 50 metres long or connects to a road in a Transport Zone 2 or Transport Zone 3.	Complies. The accessway is 7.1m wide which allows cars to pass. It is noted that the proposed location of the crossover ensures that buses stopped at the bus stop in front of the site will not block the crossover.
Have a corner splay or area at least 50 per cent clear of visual obstructions extending at least 2 metres along the frontage road from the edge of an exit lane and 2.5 metres along the exit lane from the frontage, to provide a clear view of pedestrians on the footpath of the frontage road.	Complies. A full 2.5m x 2.0m pedestrian visibility splay is provided on the exit side of the crossover.



	ient			Response
If an accessway to four or more car parking spaces is from land in a Road Zone, the access to the car spaces must be at least 6 metres from the road carriageway.			to the car	Complies
If entry to the car space is from a road, the width of the accessway may include the road.			the width of	Not applicable.
Design St	tandard 2: Car	Parking Spaces	3	
		accessways mu	st have the	Complies.
		sions: sions of car pa	rking spaces	Parking spaces are 4.9m long x 2.6m wide, with access from a 7.1m wide aisle, meeting/exceeding the Planning Scheme requirements.
Angle of car spaces to act way Parallel 45° 60° 90°	parking coss Accessway 3.6 m 3.5 m 4.9 m 6.4 m 5.8 m 5.2 m 4.8 m 3.5 m	vidth Car space widt 2.3 m 2.6 m 2.6 m 2.6 m 2.8 m 3.0 m 3.2 m	th Car space length 6.7 m 4.9 m 4.9 m 4.9 m 4.9 m 4.9 m 4.9 m	This makes the parking spaces easier to access.
I Wall For	aco column tro	a trop quard or	anu othor	Complies
structure nto the a , other th - A colu into a or colu - A stru is at le Diagram 1 Cl	that abuts a ca rea marked 'cle nan: umn, tree or tree space if it is w umn permitted' ucture, which m east 2.1 metres learance to car parkin	ay project into t above the space ng spaces	ot encroach ' on Diagram may project harked 'tree the space if it	Complies. There is an additional 300mm clearance provided for the car space next to the bin area.
structure nto the a l, other th - A colu into a or colu - A stru is at lu Diagram 1 Cl Diagram 1 Cl Car S - Car S - Car S - Access Car space metres lon and 5.5 m	that abuts a ca rea marked 'cle nan: umn, tree or tree space if it is w umn permitted' ucture, which m east 2.1 metres learance to car parkir space space bimen sway	sions in milimetres Clearance required sions in milimetres carports must res wide for a si a double space	ot encroach ' on Diagram may project harked 'tree the space if it e. be at least 6 ngle space	There is an additional 300mm clearance provided



Requirement		Response
Where two or more car parking spaces are provided for a dwelling, at least one space must be under cover.		Not applicable.
Disabled car parking spaces must be designed in accordance with Australian Standard AS2890.6- 2009 (disabled) and the Building Code of Australia. Disabled car parking spaces may encroach into an accessway width specified in Table 2 by 500mm.		Complies. The DDA space and shared area are both 5.4m long x 2.6m wide, meeting/exceeding the minimum requirements of AS2890.6. The DDA space and shared area encroach into the accessway by 500mm.
Design Standard	d 3: Ramp Gradients	
per cent) within safety for pedes	es must not be steeper than 1:10 (10 5 metres of the frontage to ensure trians and vehicles. oply to accessways serving three	Complies. The gradient of the accessway will be no steeper than approximately 1:20.
have the maximu	vithin 5 metres of the frontage) must um grades as outlined in Table 3 and vehicles travelling in a forward	Complies. The gradient of the accessway will be no steeper than approximately 1:20.
Type of car park Public car parks Private or residential car parks	Length of ramp Maximum grade 20 metres or less 1:5 (20%) longer than 20 metres 1:6 (16.7%) 20 metres or less 1:4 (25%) longer than 20 metres 1:5 (20%)	
of ramp or floor summit grade ch cent) for a sag g	ence in grade between two sections is greater that 1:8 (12.5 per cent) for a hange, or greater than 1:6.7 (15 per rade change, the ramp must include ion of at least 2 metres to prevent g or bottoming.	Not required.

The proposed parking layout fully complies with the relevant requirements of the Planning Scheme.

In addition, wheel stops have been placed in the spaces along the eastern side of the car park to protect the footpath. These have been placed 820mm from the front of the parking space in accordance with Table 2.1 of AS2890.1 (for kerbs higher than 150mm).

7.2 SIGHT DISTANCE ASSESSMENT

SALT has undertaken a sight distance assessment based on the requirements set out in AS2890.1–2004 (Section 3.2.4). The standard states that the posted speed limit is to be adopted unless the 85th percentile speed is more than 5km/h above the limit, in which case the tabulated speed nearest the 85th percentile shall be adopted.

The posted speed limit is 60km/h, and the 85th percentile speed is 63km/h (i.e. less than 5km/h greater than the posted speed), hence the desirable sight distance is 83m. **Figure 3** and **Figure 4** show images taken from 83m with a car parked at the crossover.





Figure 4 Northern site distance check (83m)



Figure 5 Southern site distance check (83m)

In both images, the vehicle can be clearly seen and is not blocked by any signage, hence the sight distance requirement is met.



8 LOADING AND WASTE COLLECTION

Waste would be collected by a standard 8.8m waste collection vehicle, from the on-site car park. Swept path analysis using AutoTURN (refer **Appendix 1**) demonstrates that an Australian Standard 8.8m Medium Rigid Vehicle can satisfactorily enter and exit the site. These movements are typically scheduled at off-peak times – refer Waste Management Plan prepared by SALT.

Loading will likely be undertaken by vans and small trucks which can utilise the on-site car park.

9 TRAFFIC IMPACTS

9.1 TRAFFIC GENERATION

A peak hour trip generation rate of 12.5 vehicle movements per 100m² floor area can be applied to the proposed land uses (source: RTA Guide to Traffic Engineering Developments). Applying this to the overall net floor area of 268.21m² equates to approximately 34 peak hour vehicle movements (17 in and 17 out) in total.

This is likely to be a conservative estimate, as the land uses will not peak at the same time. For example, the cafe will peak at lunchtime and weekends outside of the on-road peak periods, whereas the convenience shop will peak in the afternoons/evenings and weekends, and the food & drink premises may operate as a take-away that peaks only in the evening and weekend lunchtimes.

9.2 TRAFFIC DISTRIBUTION

Considering the layout of the surrounding road network and likely travel patterns of employees and customers, it is estimated that:

- 50% of traffic would be distributed to/from the north; and
- 50% of traffic would be distributed to/from the south.

Figure 5 demonstrates the likely traffic distribution for the proposal, given the above assumptions.

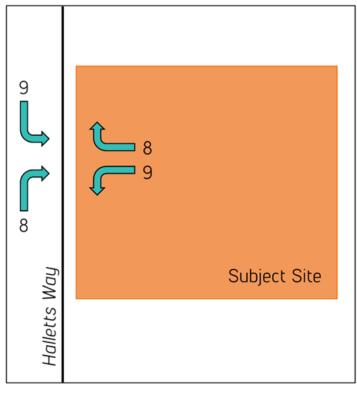


Figure 6 AM and PM peak hour traffic distribution



9.3 TRAFFIC IMPACT

Based on the above distribution, there would be on average one vehicle every 6.7 minutes for any single movement, or one vehicle every 1.8 minutes in total during the AM and PM peak hours. This is low in traffic engineering terms.

Adding an additional 34 vehicle movements to the existing peak hourly volume of 1,257 vehicles (Thursday 8am-9am) results in an increase of just 2.7% to the volumes on Halletts Way, which is virtually indiscernible.

SALT has undertaken a SIDRA assessment of the intersection between the subject site and Halletts Way. SIDRA is an advanced micro-analytical traffic evaluation tool that provides estimates of capacity and performance statistics on a lane-by-lane basis.

The default SIDRA settings have been adopted for this assessment with the exception of an 'extra bunching' factor that has been adopted based on the SIDRA Manual, to account for the signalised freeway off-ramp intersection to the north.

Key performance criteria include:

Degree of Saturation (DOS):	This represents the ratio of traffic volume to capacity. Generally speaking, a DOS of below 0.9 indicates acceptable performance. A DOS of over 1.0 indicates that capacity has been exceeded.
Level of Service (LOS):	An index of the operational performance of traffic based on service measures such as delay, degree of saturation, density and speed during a given flow period. A guide to LOS ratings is provided in Table 8 .
Average Delay:	The average delay time that can be expected for a given movement.
95th Percentile Queue:	The maximum queue length that can be expected in 95% of all observed queue lengths during the hour.

Table 10 Delay and Degree of Saturation (SIDRA) method for Level of Service definitions

Level of	Co	Control delay per vehicle in seconds (d) (including geometric delay)			
Service			Sign Control	(x)	
Α	d ≤ 10	d ≤ 10	d ≤ 10	0 < x ≤ 0.85	
В	10 < d ≤ 20	10 < d ≤ 20	10 < d ≤ 15	0 < x ≤ 0.85	
С	20 < d ≤ 35	20 < d ≤ 35	15 < d ≤ 25	0 < x ≤ 0.85	
D	35 < d ≤ 55	30 < d ≤ 55	25 < d ≤ 35	0 < x ≤ 0.85	LOS Targ
E	55 < d ≤ 80	50 < d ≤ 70	35 < d ≤ 50	0.85 < x ≤ 0.95	
F	80 < d	70 < d	50 < d	1.00 < x	

The detailed SIDRA outputs are provided in APPENDIX 2. The results are summarised in the following tables.



Leg	Movement	Degree of Saturation	Average Delay (s)	Level of Service	95% back of queue (m)
Halletts Way	Т	0.380	0.1	LOS A	1.0
(south)	R	0.380	8.8	LOS A	1.0
Subject Site	L	0.050	5.3	LOS A	1.1
(east)	R	0.050	16.6	LOS C	1.1
Halletts Way	L	0.322	8.9	LOS A	0.0
(north)	Т	0.322	0.0	LOS A	0.0

Table 11 SIDRA Summary – AM Peak Hour (2023)

Table 12 SIDRA Summary – PM Peak Hour (2023)

Leg	Movement	Degree of Saturation	Average Delay (s)	Level of Service	95% back of queue (m)
Halletts Way (south)	Т	0.355	0.1	LOS A	1.0
	R	0.355	8.3	LOS A	1.0
Subject Site	L	0.052	6.1	LOS A	1.2
(east)	R	0.052	16.9	LOS C	1.2
Halletts Way (north)	L	0.366	8.9	LOS A	0.0
	Т	0.366	0.0	LOS A	0.0

The SIDRA outputs indicate that minimal queueing will occur, both within the site and on Halletts Way. Importantly, on average there will be zero delay to through vehicles on Halletts Way in both the AM and PM peak hour, hence the development will have no material impact on the flow of traffic on Halletts Way.

A SIDRA assessment adopting 10 years of compound growth on the through traffic on Halletts Way has also been undertaken. For this assessment, a typical compound growth rate of 2% has been adopted. The results are summarised in the following tables.

Leg	Movement	Degree of Saturation	Average Delay (s)	Level of Service	95% back of queue (m)
Halletts Way	Т	0.463	0.1	LOS A	1.8
(south)	R	0.463	8.4	LOS A	1.8
Subject Site	L	0.081	6.6	LOS A	1.7
(east)	R	0.081	28.5	LOS D	1.7
Halletts Way (north)	L	0.392	8.9	LOS A	0.0
	Т	0.392	0.0	LOS A	0.0

Table 13 SIDRA Summary – AM Peak Hour + 10 years growth



Leg	Movement	Degree of Saturation	Average Delay (s)	Level of Service	95% back of queue (m)
Halletts Way	Т	0.433	0.2	LOS A	1.9
(south)	R	0.433	10.2	LOS B	1.9
Subject Site	L	0.085	7.8	LOS A	1.8
(east)	R	0.085	29.0	LOS D	1.8
Halletts Way (north)	L	0.445	8.9	LOS A	0.0
	Т	0.445	0.1	LOS A	0.0

Table 14 SIDRA Summary - PM Peak Hour + 10 years growth

The SIDRA outputs indicate that there will be a slight increase in average delays, most notably for vehicles turning right out of the site. However, does not impact the operation of Halletts Way. The 95th percentile queue lengths remain low (no more than 1 vehicle), and average delays for through traffic on Halletts Way also remain at zero.

Accordingly, it is found that the proposal will have minimal impact on the operation of the surrounding road network.

9.4 TURN LANE WARRANTS

SALT has reviewed the warrants for turn lanes on Halletts Way against AustRoads guidelines, which is shown in **Figure 7**.

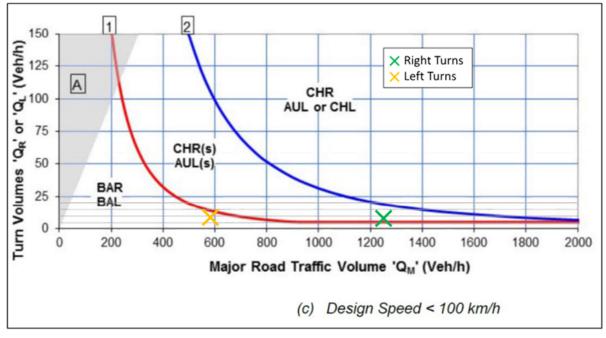


Figure 7 AustRoads turn lane warrants

The warrants suggest provision of a channelised right turn lane and a basic left turn lane; however, given the low turn volumes generated by the proposal and the characteristics of Hallets Way it is not considered necessary to provide formalised turn lanes for either right turns or left turns into the site. This is supported by the SIDRA assessment, which indicates that there is minimal queueing (95th percentile queues of less than one car length) on either of these movements, as well as minimal delays to through traffic on Halletts Way.

Further, due to the location of the bridge to the north of the site, a full channelised right turn lane is not feasible to construct. In addition, the construction of a right turn lane would extend back through the intersection of Burbridge Drive, as well as removing on-street parking adjacent the subject site and on the western side of Hallets Way.



No channelised turn lanes are provided on Halletts Way for the adjoining residential streets, most (if not all) of which would generate a larger traffic volume during the on-road peak hours than the proposed mixed-use development.

It is also noted that there is space on the western side of Halletts Way that vehicles could use as an informal passing lane if another car is waiting to turn right into the site, which is how the nearby intersections operate. This is demonstrated by the swept path diagram in **Figure 8**.

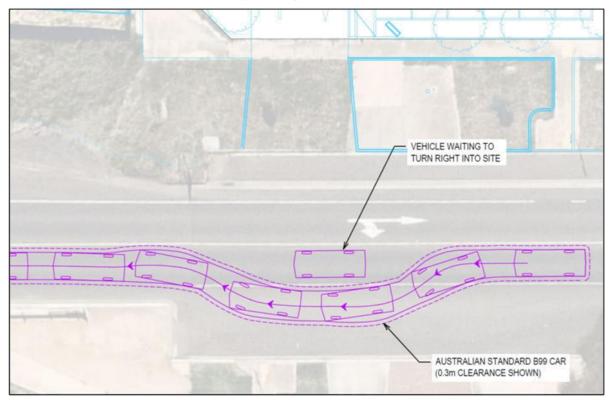


Figure 8 Informal passing movement

Accordingly, the provision of no turn lane treatments on Halletts way is appropriate.

10 CONCLUSIONS

Based on the preceding assessment, SALT is supportive of the proposal from a traffic engineering perspective. A summary of the analysis is provided as follows:

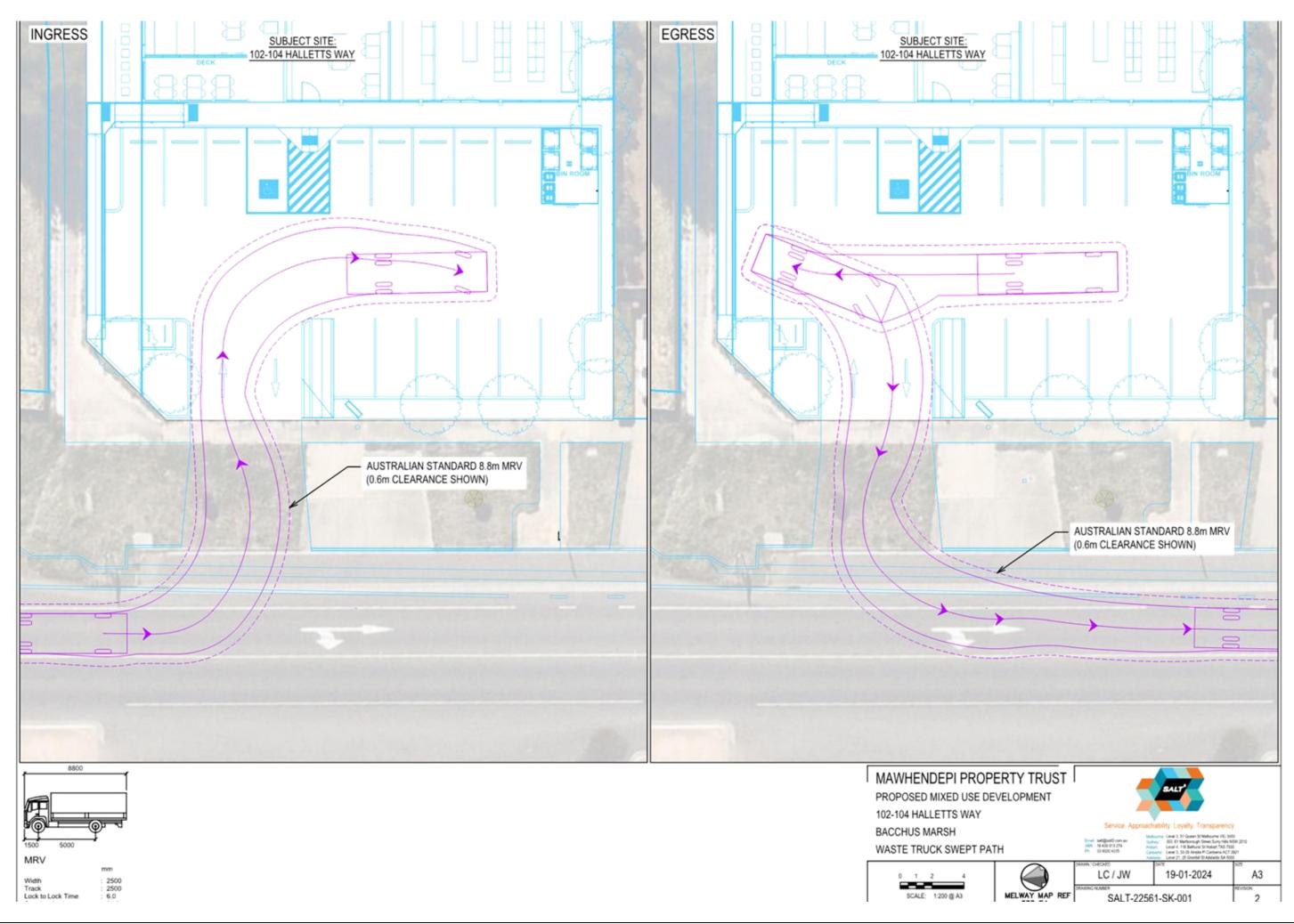
- The proposal includes 15 car parking spaces which meets the statutory requirement:
- There is no statutory requirement to provide bicycle parking, nonetheless four (4) spaces are proposed. These have been designed in accordance with AS2890.3 and Clause 52.34 of the Planning Scheme.
- The proposed car park access and layout has been designed in accordance with Clause 52.06 of the Planning Scheme and relevant Australian Standards, and facilitates convenient and efficient access;
- Adequate provisions have been made for loading and waste collection; and
- The traffic generated by the proposal will have no adverse impact on the safety and operation of the surrounding road network.

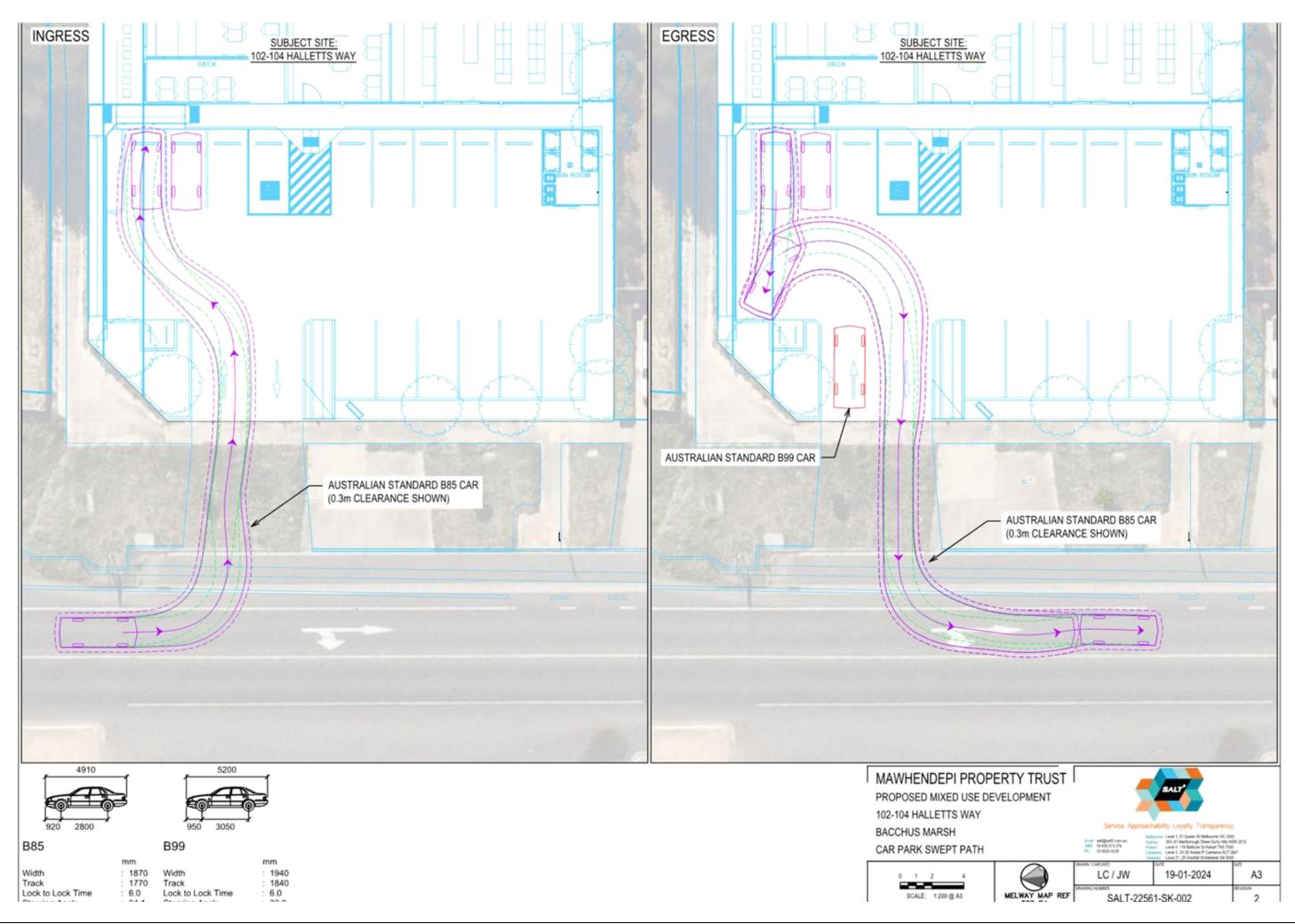
It is therefore concluded that there is no parking or traffic reason to inhibit the granting of a planning permit for the proposed mixed-use development.

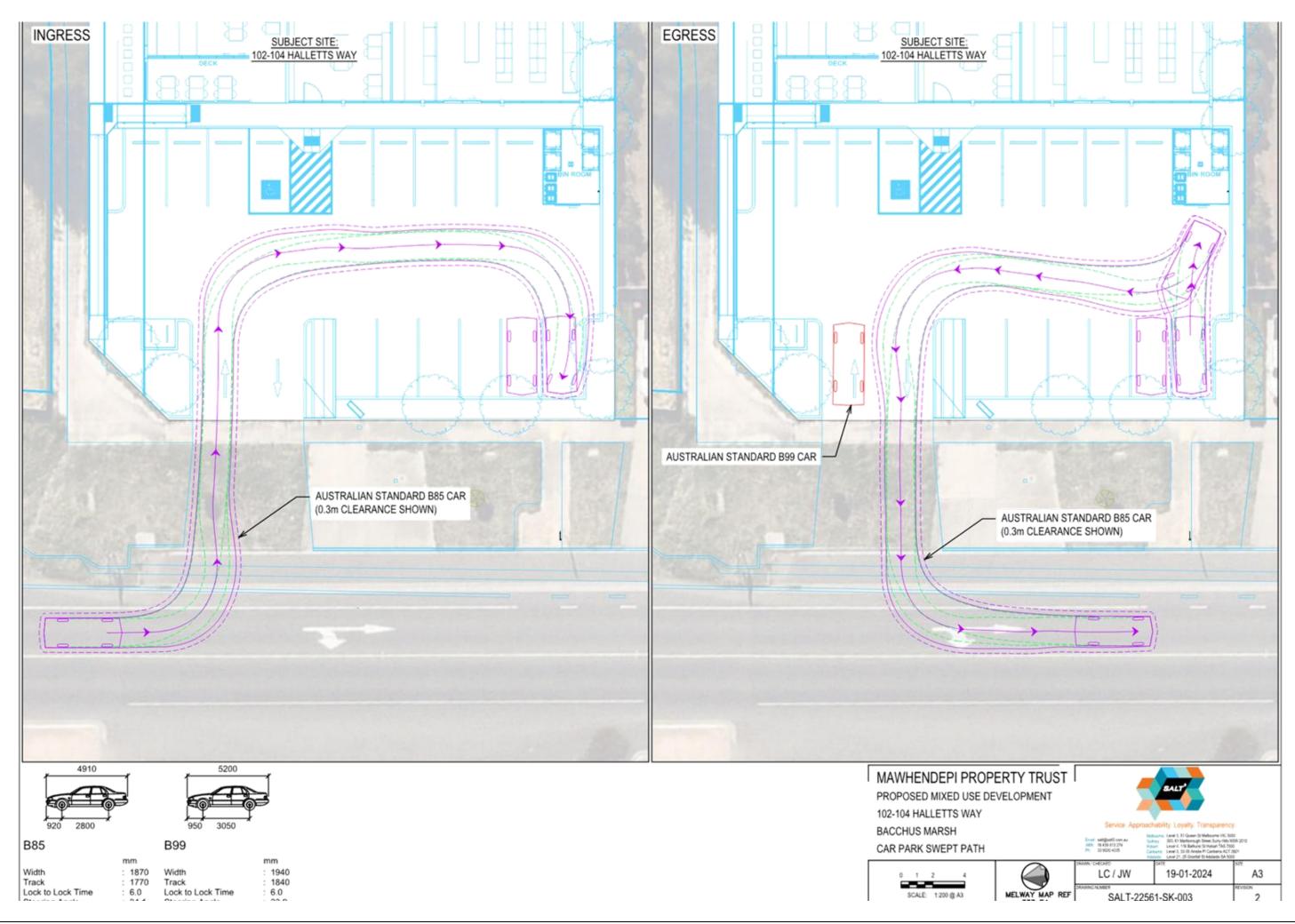


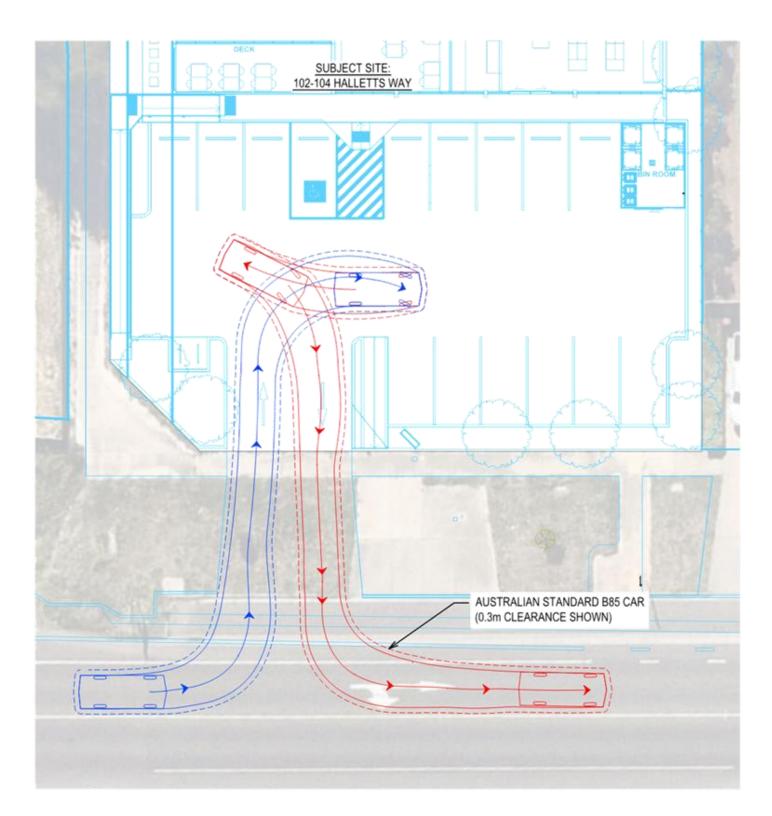
APPENDIX 1 SWEPT PATH DIAGRAMS

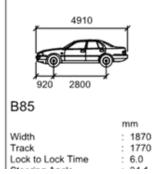






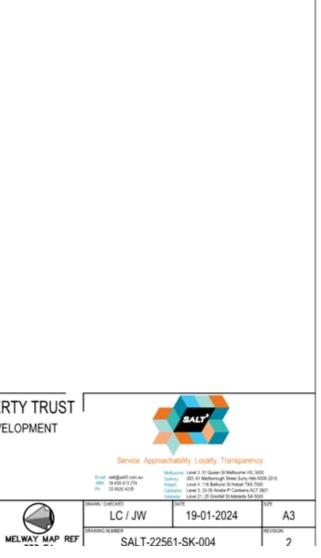






MAWHENDEPI PROPERTY TRUST PROPOSED MIXED USE DEVELOPMENT 102-104 HALLETTS WAY BACCHUS MARSH CAR PARK SWEPT PATH





APPENDIX 2 SIDRA OUTPUTS

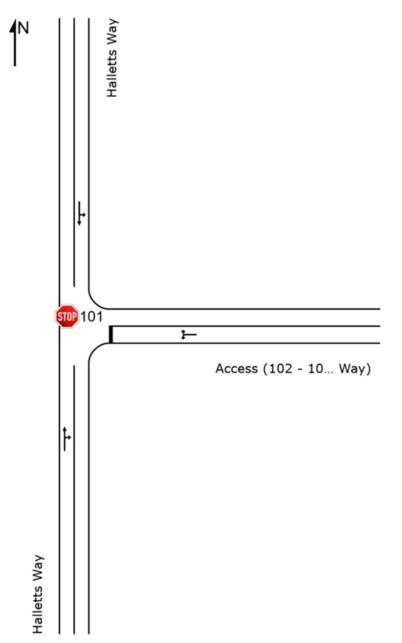


SITE LAYOUT

Site: 101 [Sc.1 Friday AM (Year 2023) (Site Folder: General)]

Scenario 1: 2023 Existing + Development Traffic Friday AM Site Category: (None) Stop (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.





Site: 101 [Sc.1 Friday AM (Year 2023) (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Scenario 1: 2023 Existing + Development Traffic Friday AM Site Category: (None) Stop (Two-Way)

Vehicle Movement

Vehi	cle I	Noveme	nt Perfor	mance	e										
Mov		Mov	Demand	Flows	Arrival F	lows	Dea.	Aver.	Level of	95% Back	Of Queue	Prop.	Eff.	Aver.	Aver.
ID	Turr	Mov Class	[Total	HV]	[Total	HV]			Service	[Veh.	Dist]	Que	Stop Rate	No. of Cycles	Speed
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South	South: Halletts Way														
2	T1	All MCs	669	10.0	669	10.0	0.380	0.1	LOS A	0.1	1.0	0.02	0.03	0.02	59.
3	R2	All MCs	8	0.0	8	0.0	0.380	7.1	LOS A	0.1	1.0	0.02	0.03	0.02	22.8
Appro	bach		678	9.9	678	9.9	0.380	0.2	NA	0.1	1.0	0.02	0.03	0.02	58.8
East:	Acc	ess (102	- 104 Halle	etts Wa	ay)										
4	L2	All MCs	9	0.0	9	0.0	0.050	5.3	LOS A	0.2	1.1	0.67	0.95	0.67	8.4
6	R2	All MCs	8	0.0	8	0.0	0.050	16.6	LOS C	0.2	1.1	0.67	0.95	0.67	18.5
Appro	bach		18	0.0	18	0.0	0.050	10.6	LOS B	0.2	1.1	0.67	0.95	0.67	13.8
North	: Ha	lletts Wa	y												
7	L2	All MCs	9	0.0	9	0.0	0.322	8.9	LOS A	0.0	0.0	0.00	0.02	0.00	42.3
8	T1	All MCs	572	10.0	572	10.0	0.322	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	58.9
Appro	bach		581	9.8	581	9.8	0.322	0.2	NA	0.0	0.0	0.00	0.02	0.00	58.6
All Ve	ehicle	es	1277	9.7	1277	9.7	0.380	0.3	NA	0.2	1.1	0.02	0.04	0.02	57.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign

Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Site: 101 [Sc.1 Friday PM (Year 2023) (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Scenario 1: 2023 Existing + Development Traffic Friday PM Site Category: (None)

Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turr	Mov	Demand	Flows	Arrival F	lows	Deg.	Aver.	Level of	95% Back	Of Queue	Prop.	Eff.	Aver. No. of	Aver.
ID	Tun	Class	[Total	HV]	[Total	HV]	Satn	Delay	Service	[Veh.	Dist]	Que	Stop Rate	Cycles	Speed
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Halletts Way															
2	T1	All MCs	623	10.0	623	10.0	0.355	0.1	LOS A	0.1	1.0	0.03	0.04	0.03	58.8
3	R2	All MCs	8	0.0	8	0.0	0.355	8.3	LOS A	0.1	1.0	0.03	0.04	0.03	22.7
Appro	bach		632	9.9	632	9.9	0.355	0.2	NA	0.1	1.0	0.03	0.04	0.03	58.4
East:	Acc	ess (102	- 104 Halle	etts Wa	ay)										
4	L2	All MCs	9	0.0	9	0.0	0.052	6.1	LOS A	0.2	1.2	0.70	0.98	0.70	8.2
6	R2	All MCs	8	0.0	8	0.0	0.052	16.9	LOS C	0.2	1.2	0.70	0.98	0.70	18.3
Appro	oach		18	0.0	18	0.0	0.052	11.1	LOS B	0.2	1.2	0.70	0.98	0.70	13.6
North	: Ha	lletts Way	/												
7	L2	All MCs	9	0.0	9	0.0	0.366	8.9	LOS A	0.0	0.0	0.00	0.02	0.00	42.3
8	T1	All MCs	651	10.0	651	10.0	0.366	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	59.0
Appro	bach		660	9.9	660	9.9	0.366	0.2	NA	0.0	0.0	0.00	0.02	0.00	58.7
All Ve	ehicle	es	1309	9.7	1309	9.7	0.366	0.3	NA	0.2	1.2	0.02	0.04	0.02	56.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Site: 101 [Sc.2 Friday AM (10 year) (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Scenario 2: 2033 Scenario 1 + Background Traffic Growth Friday AM Site Category: (None) Stop (Two-Way) Design Life Analysis (Final Year): Results for 10 years

veni	cle	Moveme	nt Perfor	mance	e										
Mov	_	Mov	Demand	Flows	Arrival F	lows	Dea.	Aver.	Level of	95% Back	Of Queue	Prop.	Eff.	Aver.	Aver.
ID	Turr	Mov Class	[Total	HV]	[Total	HV]			Service	[Veh.	Dist]		Stop Rate	No. of Cycles	Speed
]		veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South	South: Halletts Way														
2	T1	All MCs	816	10.0	816	10.0	0.463	0.1	LOS A	0.2	1.8	0.02	0.03	0.03	58.8
3	R2	All MCs	8	0.0	8	0.0	0.463	8.4	LOS A	0.2	1.8	0.02	0.03	0.03	22.6
Appr	oach		825	9.9	825	9.9	0.463	0.2	NA	0.2	1.8	0.02	0.03	0.03	58.5
East:	Acc	ess (102	- 104 Halle	etts Wa	ay)										
4	L2	All MCs	9	0.0	9	0.0	0.081	6.6	LOS A	0.2	1.7	0.79	1.00	0.79	6.7
6	R2	All MCs	8	0.0	8	0.0	0.081	28.5	LOS D	0.2	1.7	0.79	1.00	0.79	15.6
Appr	oach		18	0.0	18	0.0	0.081	16.9	LOS C	0.2	1.7	0.79	1.00	0.79	11.4
North	n: Ha	lletts Wa	у												
7	L2	All MCs	9	0.0	9	0.0	0.392	8.9	LOS A	0.0	0.0	0.00	0.02	0.00	42.3
8	T1	All MCs	697	10.0	697	10.0	0.392	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	59.0
Appr	oach		706	9.9	706	9.9	0.392	0.2	NA	0.0	0.0	0.00	0.02	0.00	58.7
All Ve	ehicle	es	1549	9.8	1549	9.8	0.463	0.4	NA	0.2	1.8	0.02	0.04	0.03	56.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Site: 101 [Sc.2 Friday PM (10 year) (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

Scenario 2: 2033 Scenario 1 + Background Traffic Growth Friday PM Site Category: (None) Stop (Two-Way) Design Life Analysis (Final Year): Results for 10 years Vehicle Movement Performance

veni	ciei	vioveme	nt Perfor	mance	e										
Mov		Mov	Demand	Flows	Arrival F	lows	Deg.	Aver.	Level of	95% Back	Of Queue	Prop.	Eff.	Aver.	Aver
ID	Turr	Mov Class	[Total	HV]	[Total	HV]			Service	[Veh.	Dist]		Stop Rate	No. of Cycles	Speed
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South	South: Halletts Way														
2	T1	All MCs	760	10.0	760	10.0	0.433	0.2	LOS A	0.2	1.9	0.03	0.04	0.03	58.3
3	R2	All MCs	8	0.0	8	0.0	0.433	10.2	LOS B	0.2	1.9	0.03	0.04	0.03	22.4
Appr	oach		768	9.9	768	9.9	0.433	0.3	NA	0.2	1.9	0.03	0.04	0.03	58.0
East:	Acc	ess (102	- 104 Halle	etts Wa	ay)										
4	L2	All MCs	9	0.0	9	0.0	0.085	7.8	LOS A	0.3	1.8	0.82	1.00	0.82	6.6
6	R2	All MCs	8	0.0	8	0.0	0.085	29.0	LOS D	0.3	1.8	0.82	1.00	0.82	15.3
Appr	oach		18	0.0	18	0.0	0.085	17.8	LOS C	0.3	1.8	0.82	1.00	0.82	11.1
North	n: Ha	lletts Way	у												
7	L2	All MCs	9	0.0	9	0.0	0.445	8.9	LOS A	0.0	0.0	0.00	0.01	0.00	42.3
8	T1	All MCs	793	10.0	793	10.0	0.445	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.0
Appr	oach		802	9.9	802	9.9	0.445	0.2	NA	0.0	0.0	0.00	0.01	0.00	58.8
	ehicle	es	1588	9.8	1588	9.8	0.445	0.4	NA	0.3	1.9	0.02	0.04	0.03	56.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

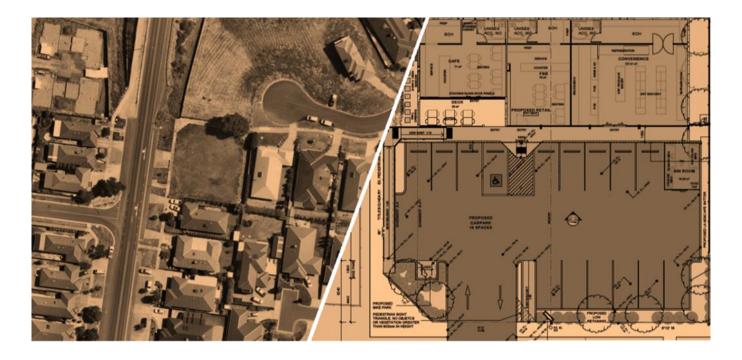
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



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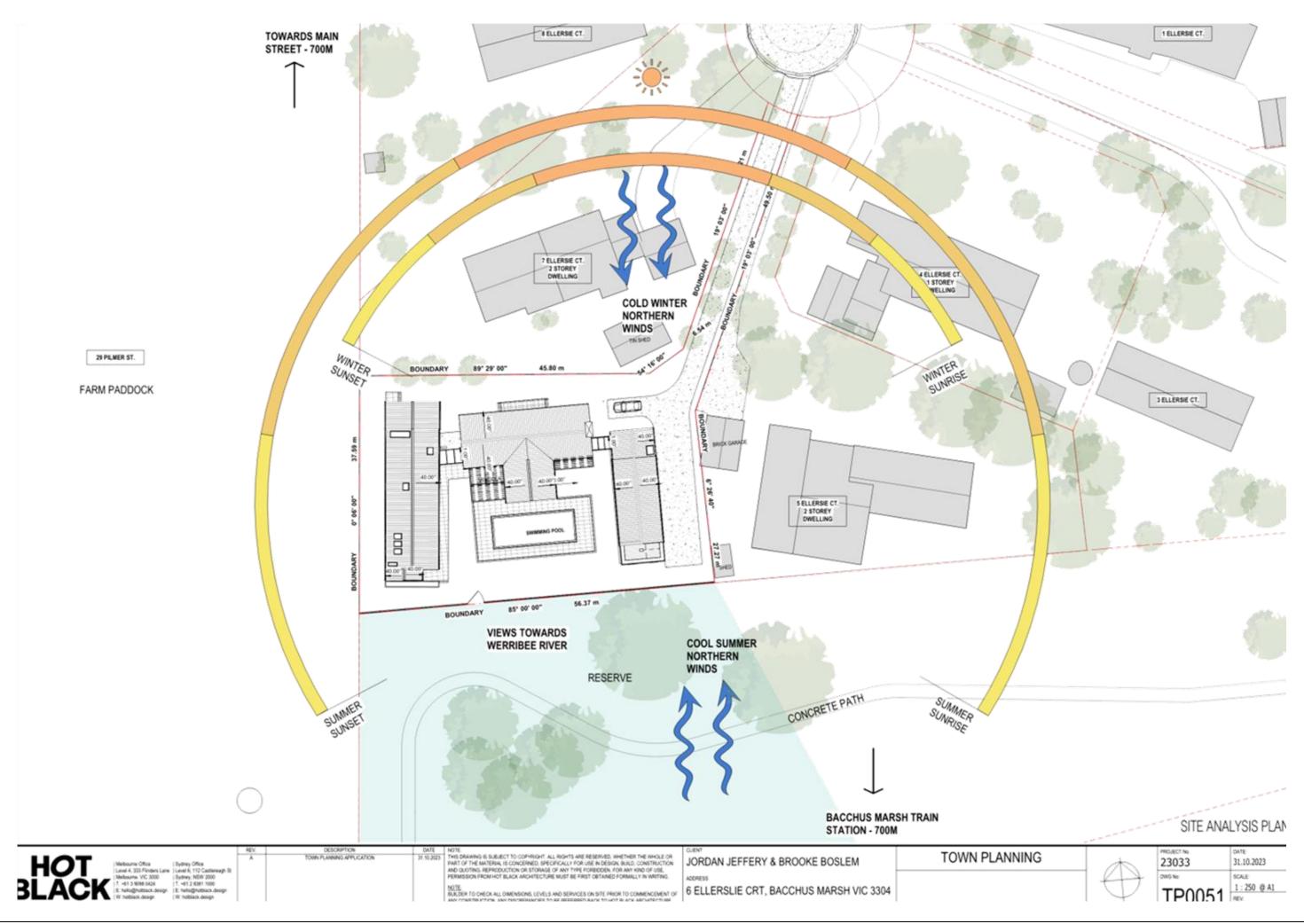
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VEW TO DRIVEWWAY OF 6 ELLERGUE COURT FROM O.4. OE SAC

VEW TOWARDS WERRIBEE RIVER



NORTH WEST VIEW

NORTH VEW TOWARDS 7 ELLERSUE ORT

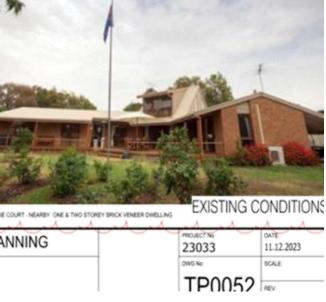








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ARCHITECTURAL DESIGN RESPONSE

SITE DESCRIPTION

If Chembe Court, Bacchus Marsh, is a battle are block, localed at the end of a cuil de sac, and accessed via a sing driveway currently shared with #5 Effective Court. The skill backs price a reserve recared beacter Remittee Roam.

The adjacent western site is a working term, with no dwellings or buildings located near the subject property.

The site is relatively flat, with a fail of 1.35m from the top of the driveway to the south west corner of the site.

RESPONSE TO SITE

Inductivation of series for development of series to build a new tensity home for themselves and their two young chicken. Their tend was for a modern termboxies, which reads out the proposed taxes character of the areas. The site is identified as consisting of a motive of homewhead and readom sight deadlings estuarts terminal operations deadlines. The preferred taxes of homewhead and readom sight deadlings estuarts terminal operation space terms. The preferred taxes of homewhead and readom sight deadlings estuarts terminal operated spaces preferred. The article of homewhead and readom sight deadlings estuarts terminal operated process preferred. The entertainty deadlings are to site to a terminal terminal operated and ferrous an or dominant the termination are to site to a terminal termination of the proposed development will have to impact on the observacing. One can be safe to a balloware toxic the proposed development will have to impact on the observacing of Ethensite Court.

The position of the house has respected the ride setback requirements set out in the Nacesbool Phenning Scheme, and also sequencine to the site, to excite views lowers the reserve. Therefore, there are protected Ride Gauss towards the rise of the site, a white metaling a generous state goal with a whiteming pool. The position of the touid forms will enable senings access to the seteming pool and to the majority of the year.

Ad habitable areas have respected the privacy of the adjacent siles, with windows on the upper leads on the weaters and easiers ode consisting of risks sing windows when at a row-level to direct the views downwards towards the oligit own garden at ground level, of at a high level where views are directed up towards the else.

ARCHITECTURAL INTENT

The three politions are remarkant of rural properties, where a more tempore is usually supported by another, buildings for storage of produce, equipment or animals, indeed the majority of the neighbouring buildings have anothery etructures, that are precommandly to shock that have no architectural ment or

By separating the home into items structures the width of the panisons ensures good cross flow ventilation and apportunities for displays access to all eves of the house, thereby inducing the need for mechanical ventilation. North facing ventures to the mean triving panelskip provides toportunities to use the stats as a thermail must during venture sits charaner and more pacelet appoints' to heading.

We have lasted with an ESD consultant to ensure the glacing will provide a home-that means the new NCC 7-star requestments to ensure a routian-bite approach to the house is implemented.

Bedrooms to the upper level face inwards to views towards the swimming pool, whith the proposed invater bedrooms, quest bedroom to the ground face, and "hain quest "luing area above the garage taken views directed to both the swimming pool in the centre of the view, and the views towards the river and bass. The internal spaces make use of the steep galated form poinding needs called to dark the same and bass.

The house is located predominantly on the northern side of the property, ensuring that any overshadowing uill have little to no impact on the neighbouring properties.

CONTRAVENTION TO PLANNING CONTROLS The vite has a longifiction of this which is exceeded by the weatern painters. The proposed building remains inside the envelope described within the required setbacks for the site.

The height contravention consists of the top of the nort forms of the pankton above the bedrooms, to mantaen the architectural consistency of the pilot across all three panktons. The height contravention does not result in additional floor areas, above not decensive affects the neighbouring properties with eccessive overshadowing, and will have 4 positive contribution to the character of the area alway several from the reserve.





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resource so cancel, and use of all interconnected paintions. In response to the nural setting, and the chemis request the another style transmouse, each paintial has a steep gather conditions ensures of their networkies, with a continuition of a steep takes, and canceling sets to the appreciate and conting.

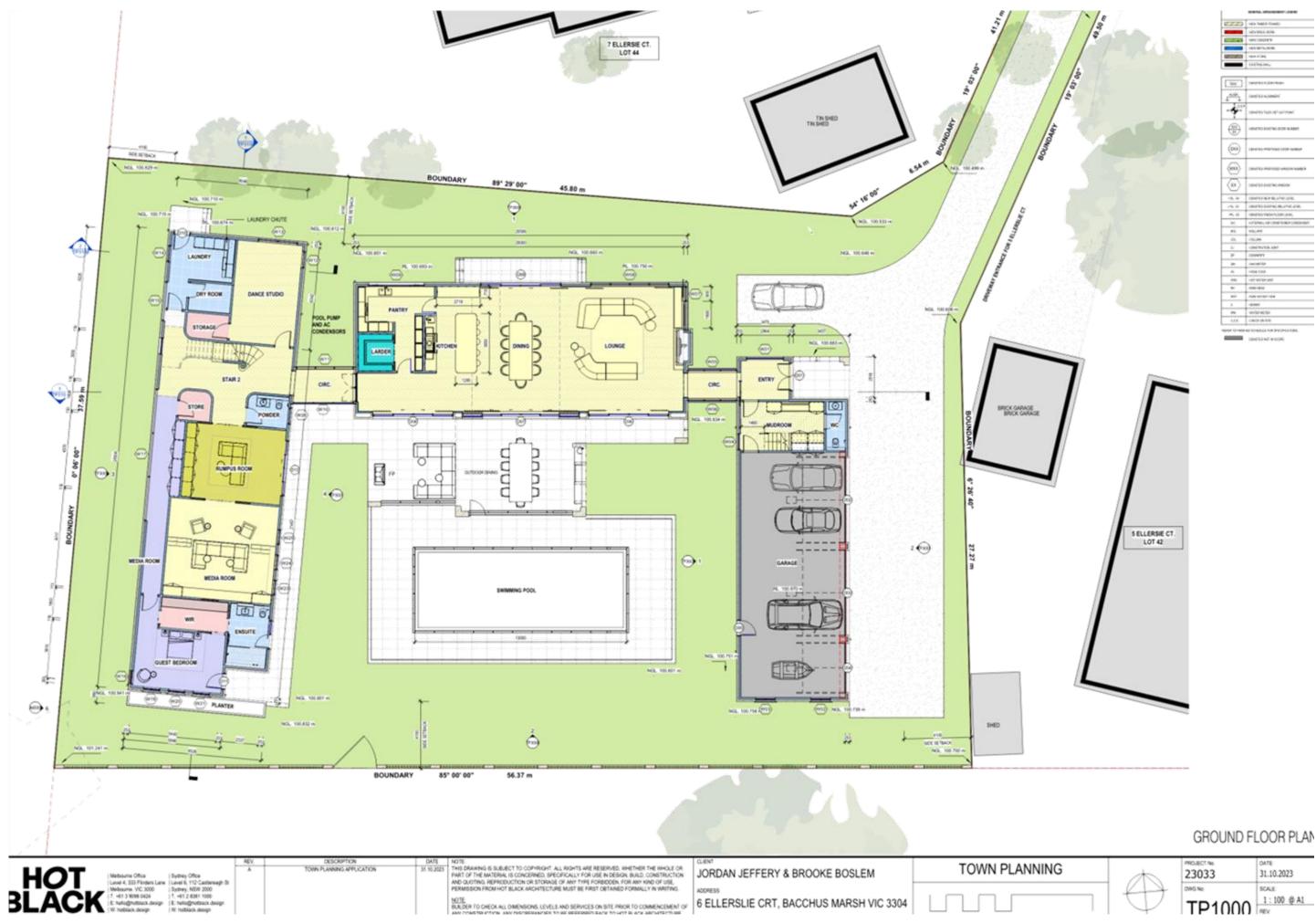
buildings have archites structures, that are pressuremently to since the new new environment expressions and the steeps galaxies providing solid collings. The internal spaces make use of the steep galaxies periodice solid productionable for the pravate functions of the trans, such as dependitures, the two story weeken periodice and productive to the the pravite functions are stored to the trans, such as the stored periodic to the two stored to the prave solid to t

Given the proposed contravention does not denired any amenty of the neighbours or local area, we implore council to approve the design.

ARCHITECTURAL DESIGN RESPONSE

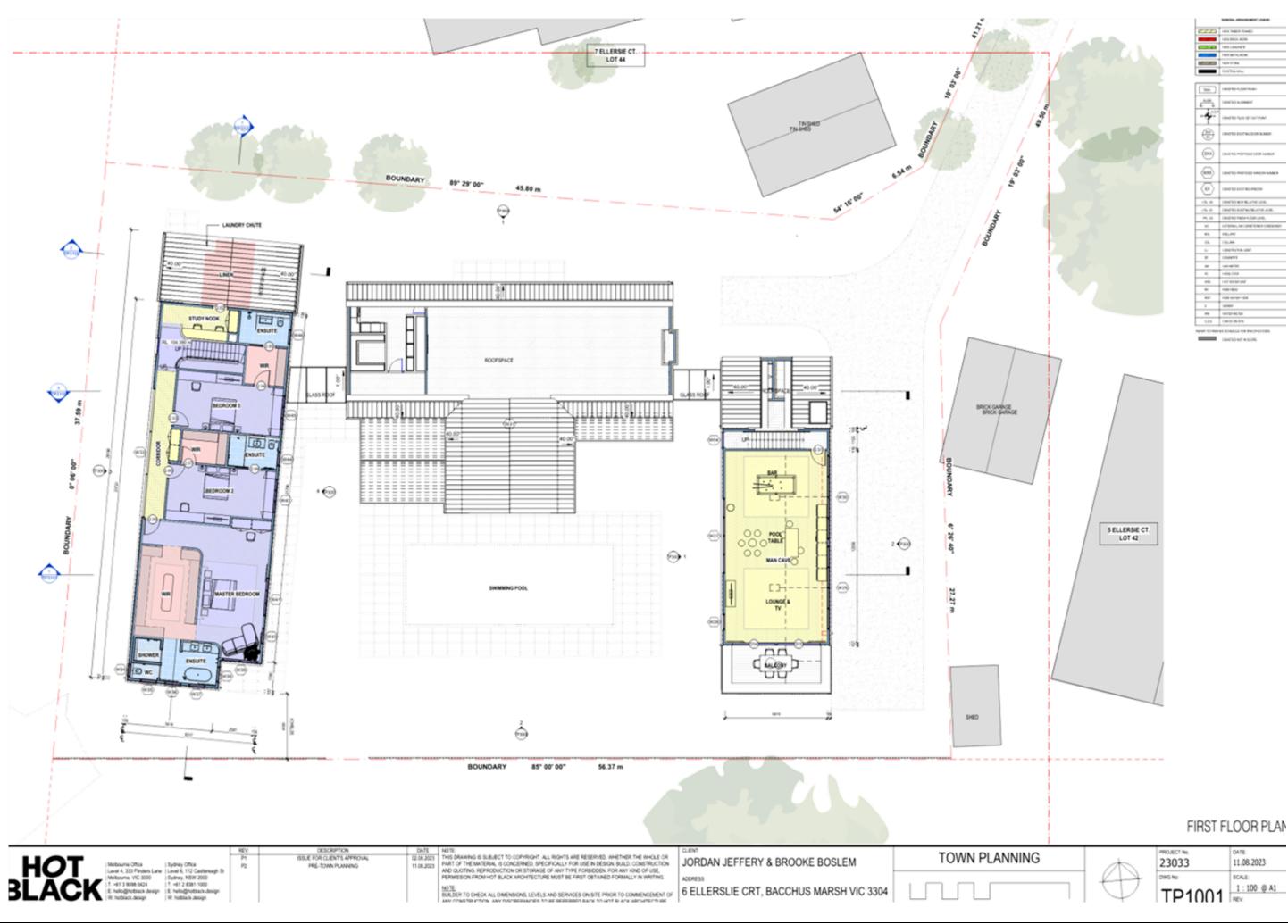
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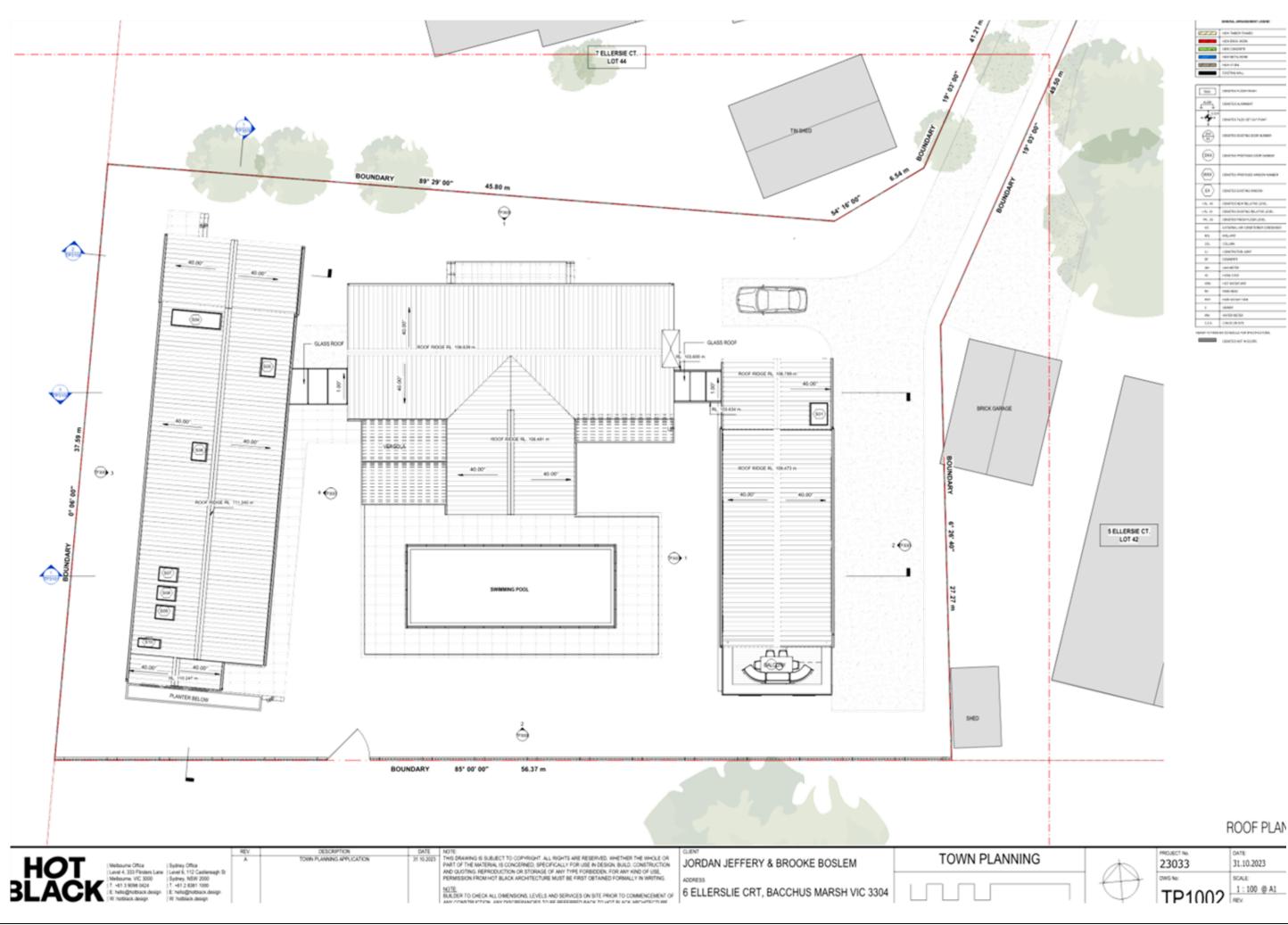




Page 77

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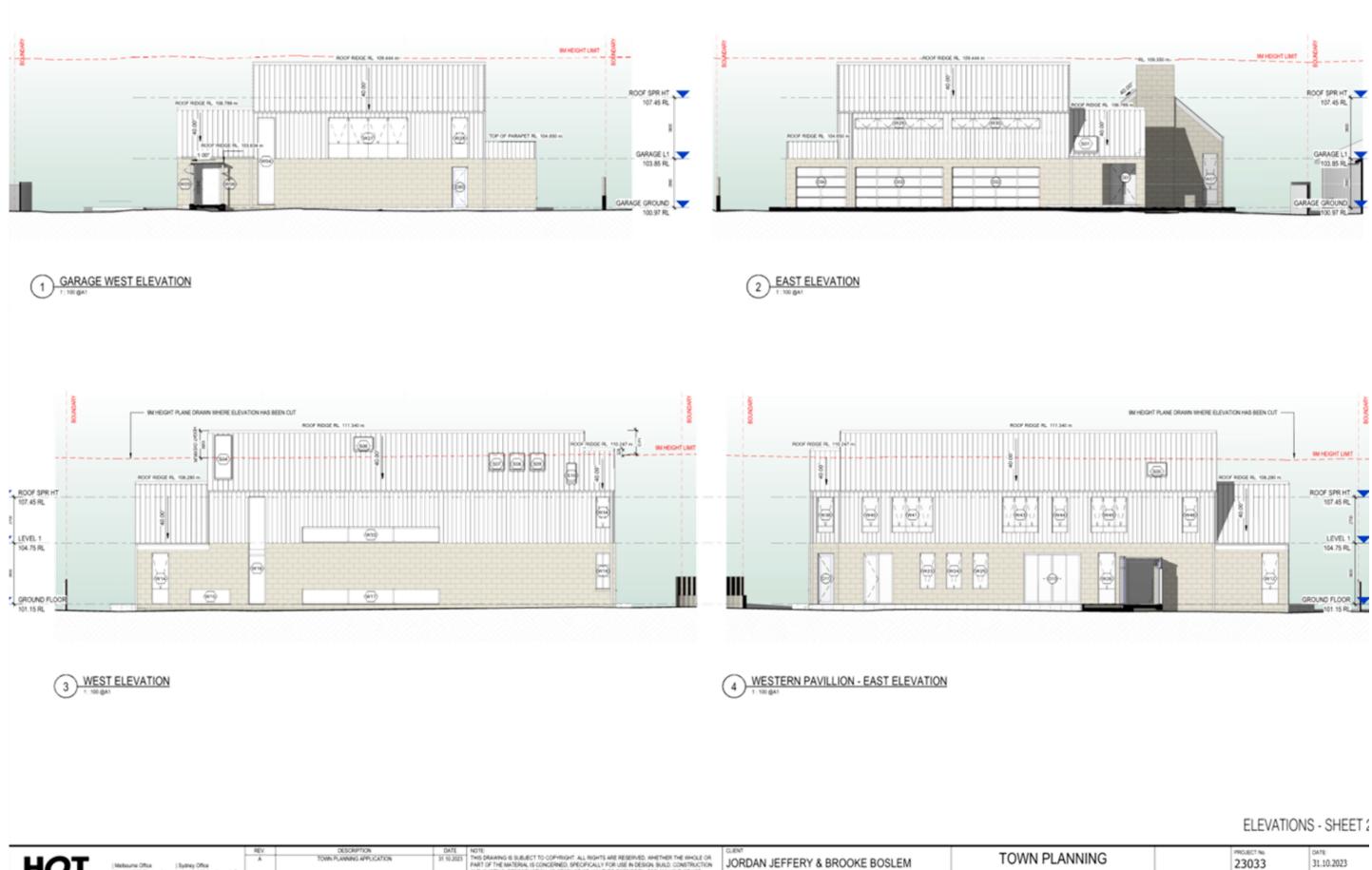


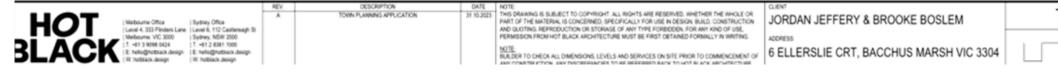




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ELEVATIONS - SHEET

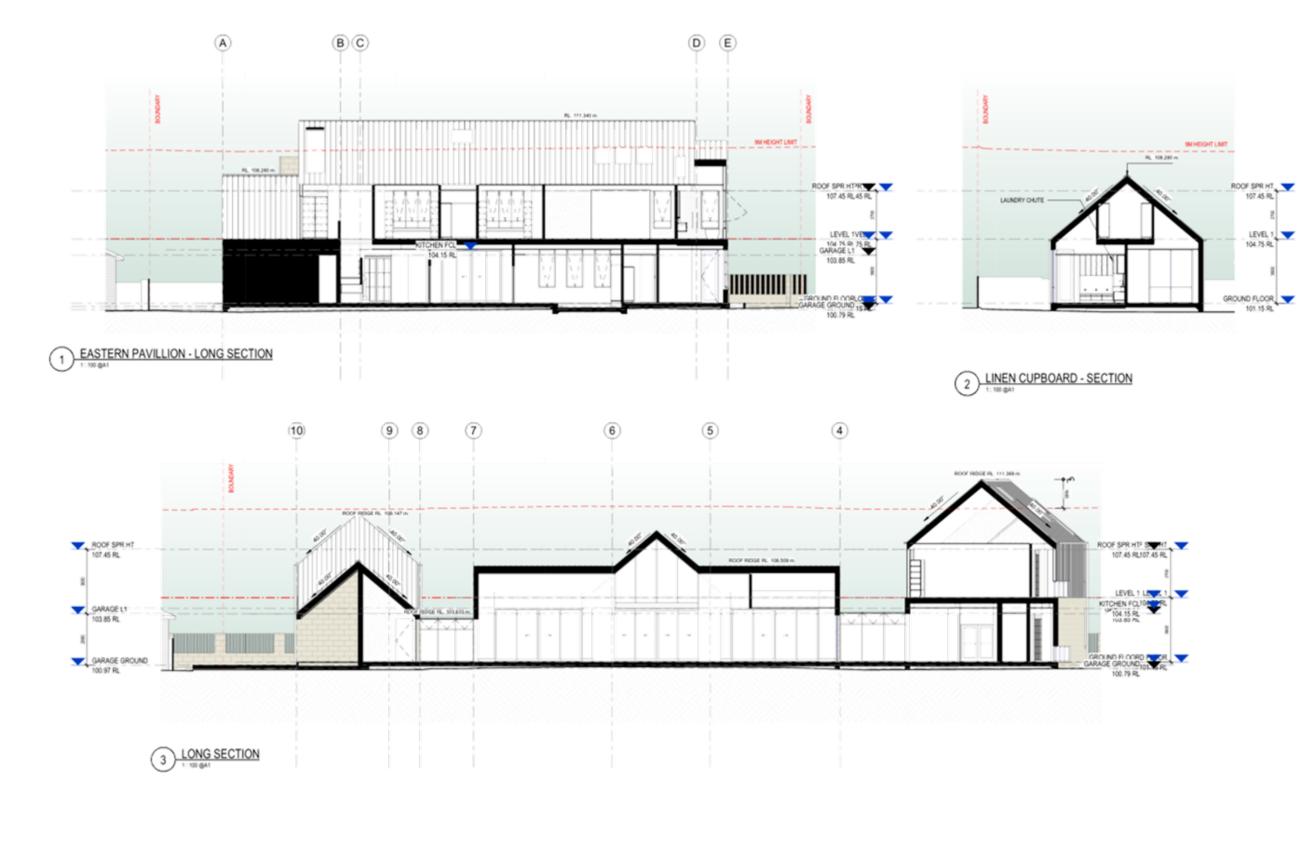


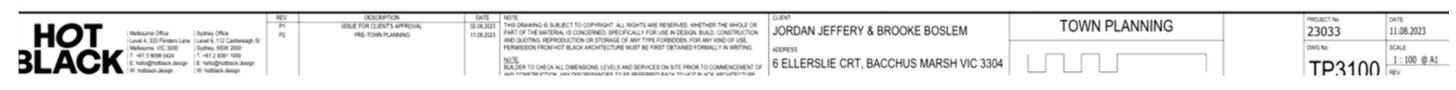


TP3001

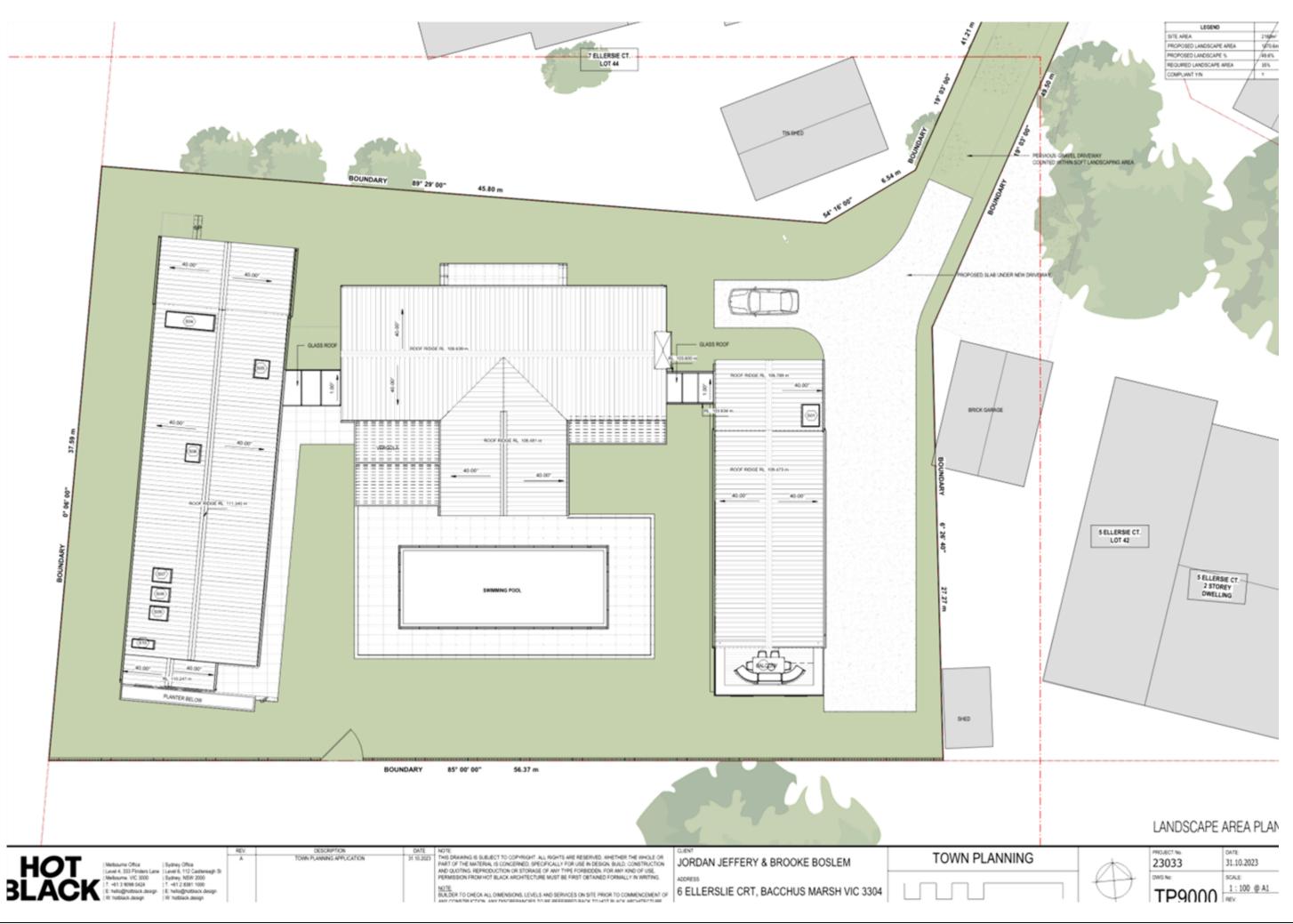
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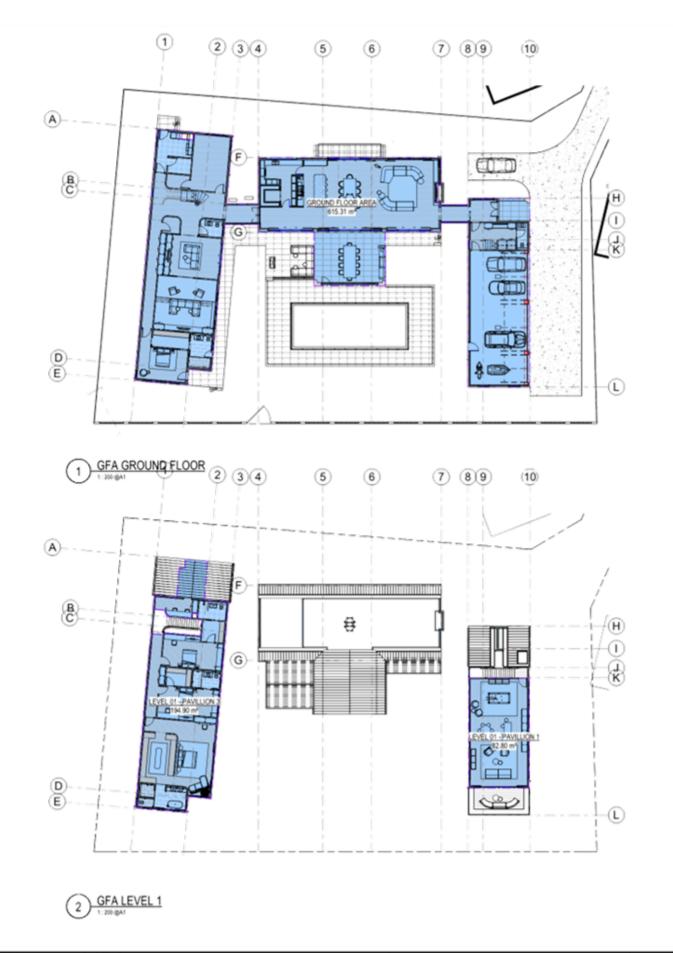
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BLACK Status Status </td <td></td> <td></td> <td></td> <td>PERMISSION FROM HOT BLACK ARCHTECTURE MUST BE FIRST OBTAINED FORMALLY IN WRITING. NOTE BUILDER TO CHECK ALL DIMENSIONS, LEVELS AND SERVICES ON SITE PROR TO COMMENCEMENT OF ANY COMMENTS WITHIN ANY PROBEDIANCES TO BE DESERVICES ON SITE PROR TO COMMENCEMENT OF ANY COMMENTS WITHIN ANY PROBEDIANCES TO BE DESERVICES ON SITE PROR TO COMMENCEMENT OF</td> <td>ADDRESS 6 ELLERSLIE CRT, BACCHUS MARSH VIC 3304</td> <td></td>				PERMISSION FROM HOT BLACK ARCHTECTURE MUST BE FIRST OBTAINED FORMALLY IN WRITING. NOTE BUILDER TO CHECK ALL DIMENSIONS, LEVELS AND SERVICES ON SITE PROR TO COMMENCEMENT OF ANY COMMENTS WITHIN ANY PROBEDIANCES TO BE DESERVICES ON SITE PROR TO COMMENCEMENT OF ANY COMMENTS WITHIN ANY PROBEDIANCES TO BE DESERVICES ON SITE PROR TO COMMENCEMENT OF	ADDRESS 6 ELLERSLIE CRT, BACCHUS MARSH VIC 3304	

GROSS FLOOR AREA

GROUND FLOOR AREA	615 m ²
LEVEL (1 - PAVILLION 3	195 m ²
LEVEL 01 - PAVILLION 1	83 m ²
Grand total: 3	993 m²
SITE AREA	2160m2
PROPOSED F.S.R	0.4111

SITE AREA PROPOSED F.S.R. **Moorabool Planning Scheme**

Gross Floor Area: The total floor area of a building, measured non-the outside of external walls or the centre of party walls, and includes all notified areas.



GFA PLANS



	TP9150	REV
	OWG No.	SCALE
INING	23033	DATE 11.12.2023

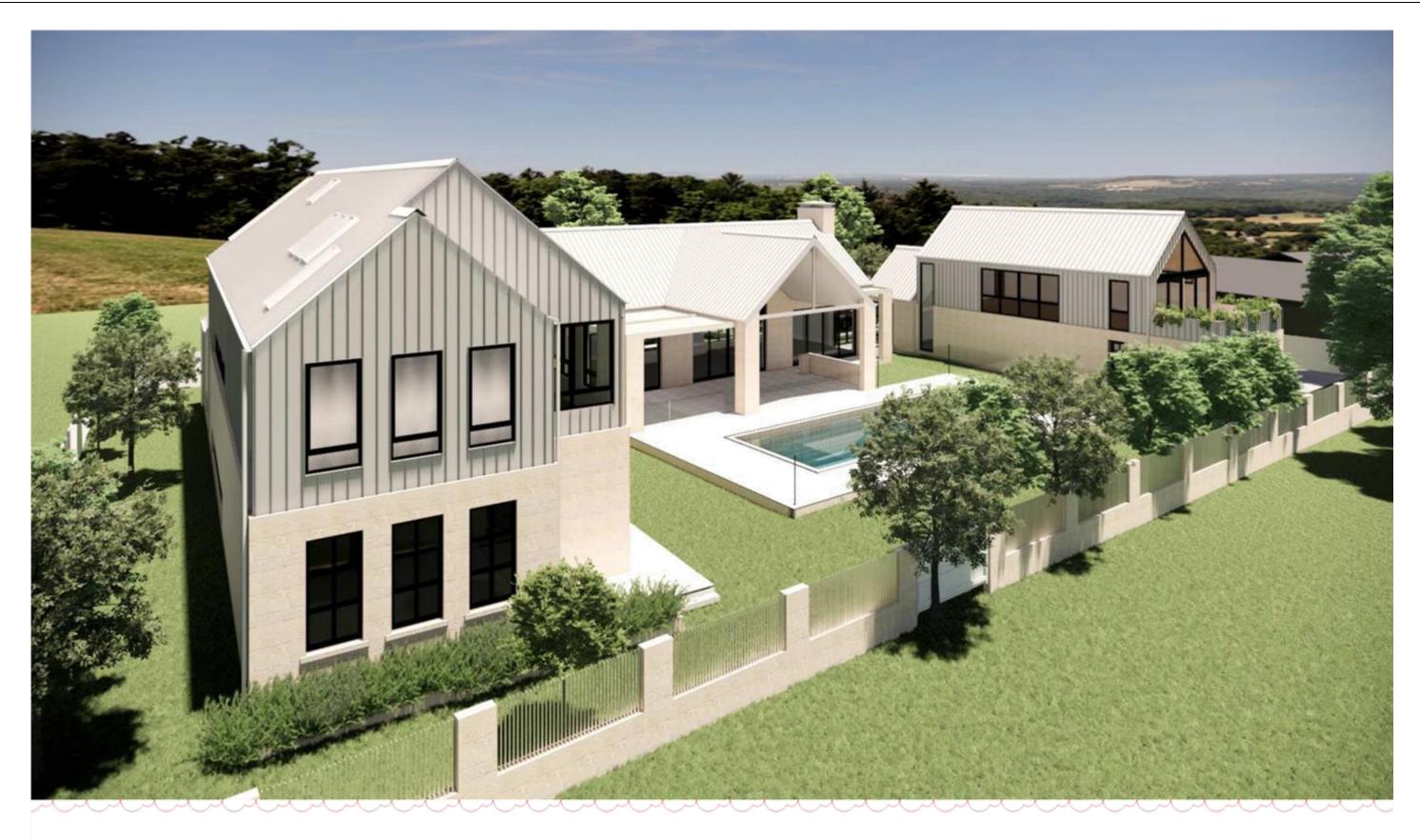
BIRDSEYE VIEW FROM NORTH EAST



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VIEW FROM END OF DRIVEWAY



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BIRDSEYE VIEW FROM SOUTH WEST

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23033 DATE 11.12.2023 OWG NE SCALE TP9155

VIEW FROM NORTH WEST





PC01 BLACK POWDERCOATED FNISH WINDOW FRAME

POS2 SOUTHERLY POWDERCOATED FNISH WINDOW FRED PANELS



GL01 GLASS - CLEAR FINSH WINDOWS, GLAZING ROOF

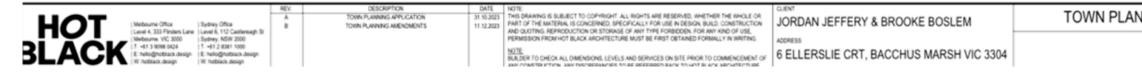


IRF01 STANDING SEAM - LYSAGHT ENSEAM COLORBOND SOUTHERLY FINISH LEVEL 1 WALLS AND ROOF



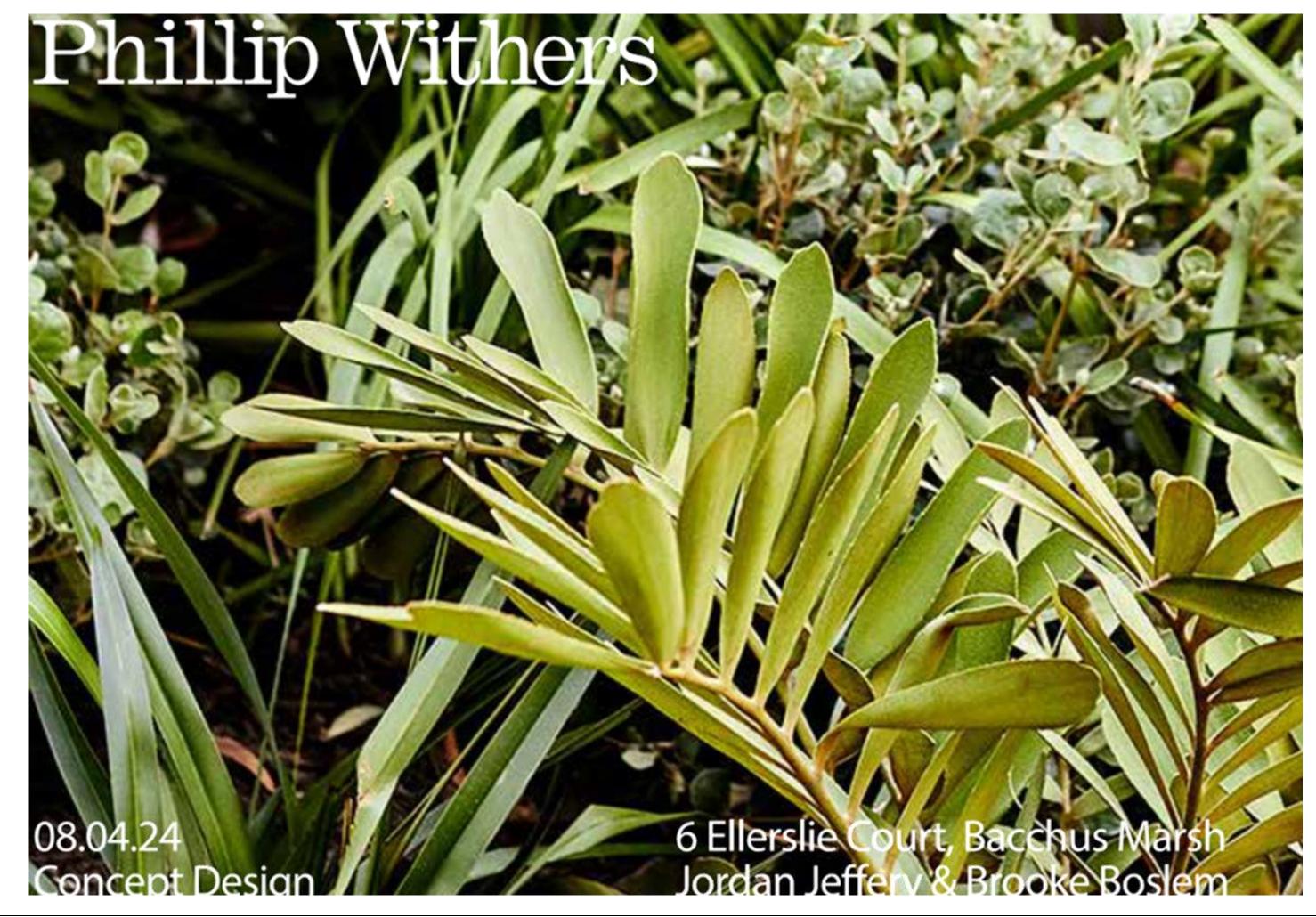
ST01 LIMESTONE AUSTRUA - OYSTER GROUND FLOOR VIALLS





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DIGITAL FINISHES BOARE



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Landscape Design 1.1 Landscape Vision



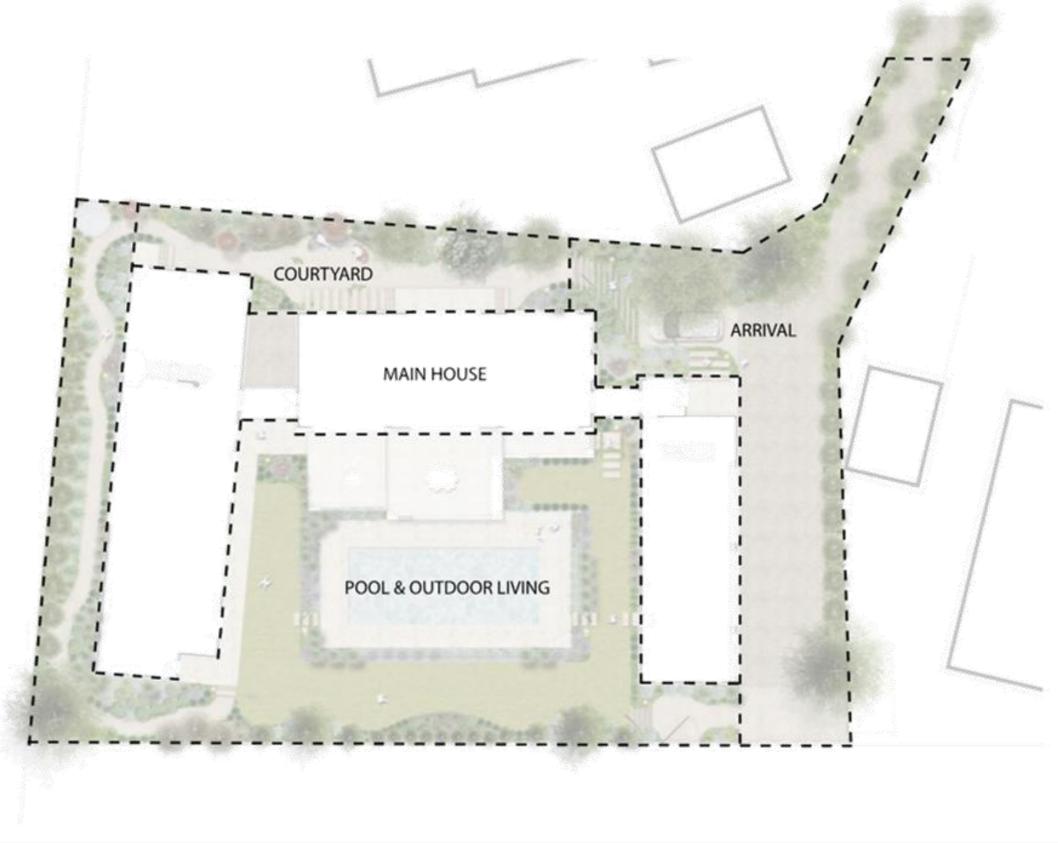
POOL

OUTDOOR LIVING

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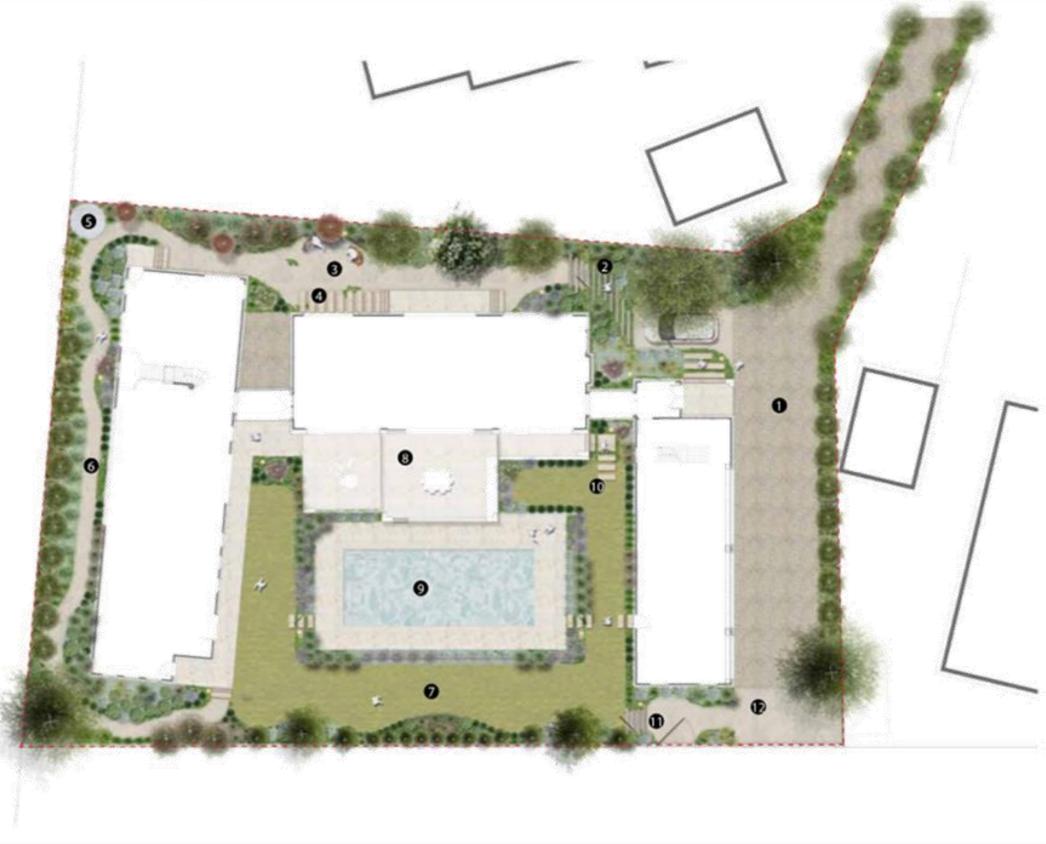
COURTYARD

Landscape Design 1.2 Landscape Areas

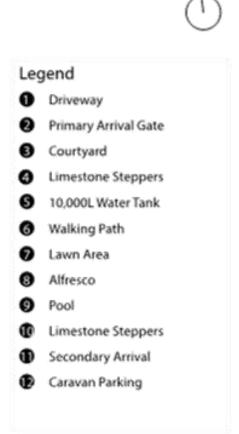




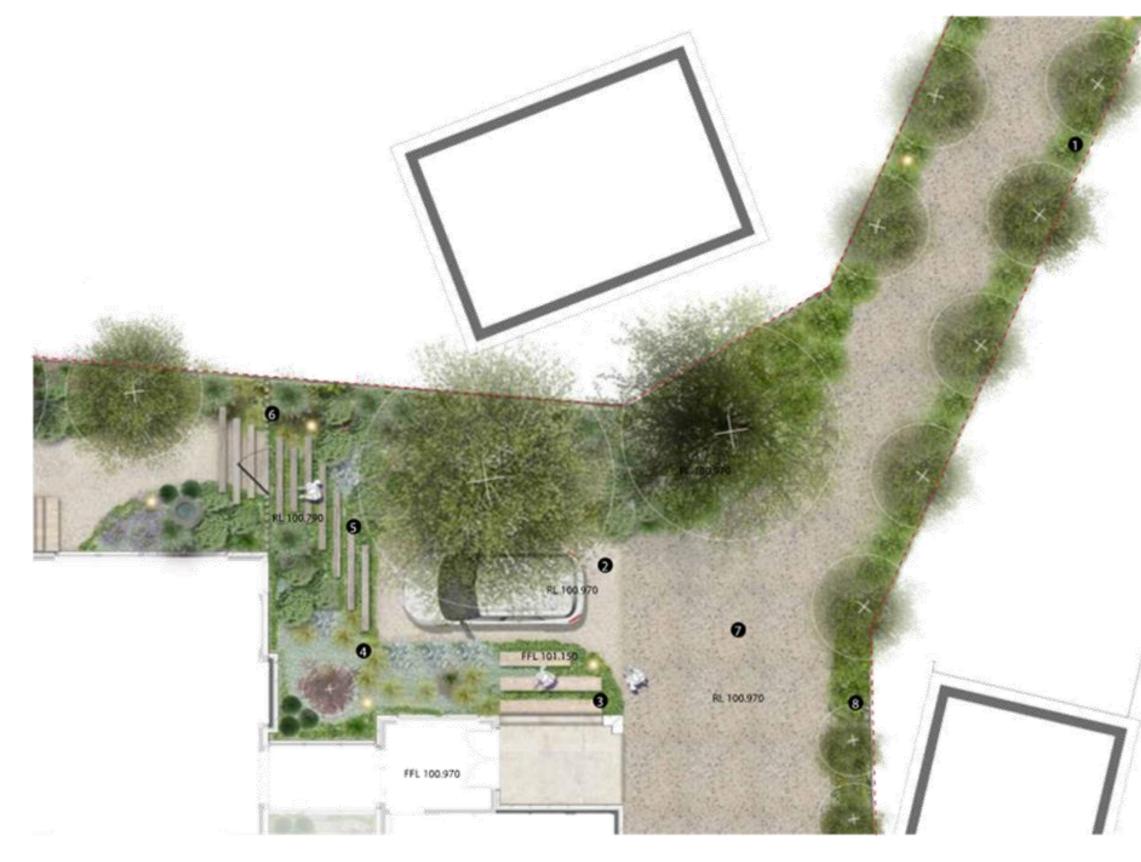
Landscape Design 1.3 Landscape Plan



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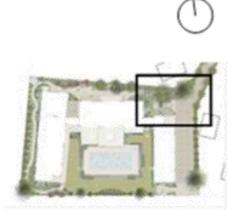
Landscape Design 1.4 Arrival Plan



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enter a constantes

2 Blanks Parce Barcher Barch, 66 April 9654, 19985, 44844



Legend



- Tree Lined Driveway Garden Bed
- 2 Car Park with Toppings
- Elimestone Entry Steppers
- Garden Bed with Feature Tree
- G Reclaimed Timber Steppers
- 6 Reclaimed Timber Fence & Gate
- Exposed Aggregate Driveway
- B Screening Trees

Landscape Design 1.5 Driveway Plan

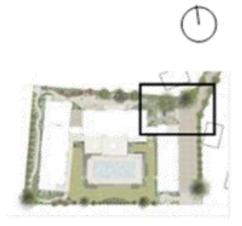
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Item 7.2 - Attachment 2

2 BEARER PARTE BARRIER MARKE IN AND AND PART AND



Legend



Exposed Aggregate Concrete
 Driveway

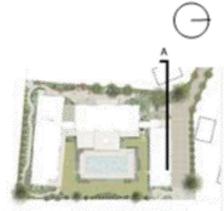


Canopy Trees with Garden Bed and Lighting

Landscape Design 1.6 Arrival Section



Phillip Withers | 9

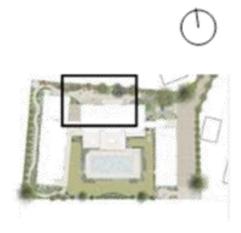


Landscape Design 1.7 Courtyard Plan



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2 Elizaber Parrel Barelou March, 66 Andi 9054 - PARS - MARA



Legend

Toppings Pathway

Natural Rock Bird Bath

Limestone Paved Deck

- Garden Bed with Mixed Exotic & Native Planting
- Gathering Space with Feature Rock Seats
- Limestone Steppers

Landscape Design 1.8 Courtyard Section

Limestone Deck & Path Steps

Pathway Toppings

Feature Rock Seats

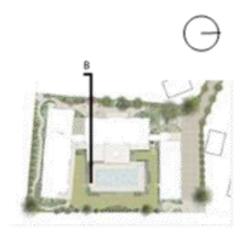


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2 Elevela Parce Barcher Brack, 66 April 5654 (1965) AMAM







Landscape Design
1.9 Outdoor Living Plan



Michigan Markali, and Karda

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2 Blander Parcel Bandon March 66 And 5654 - 19965 - 3884



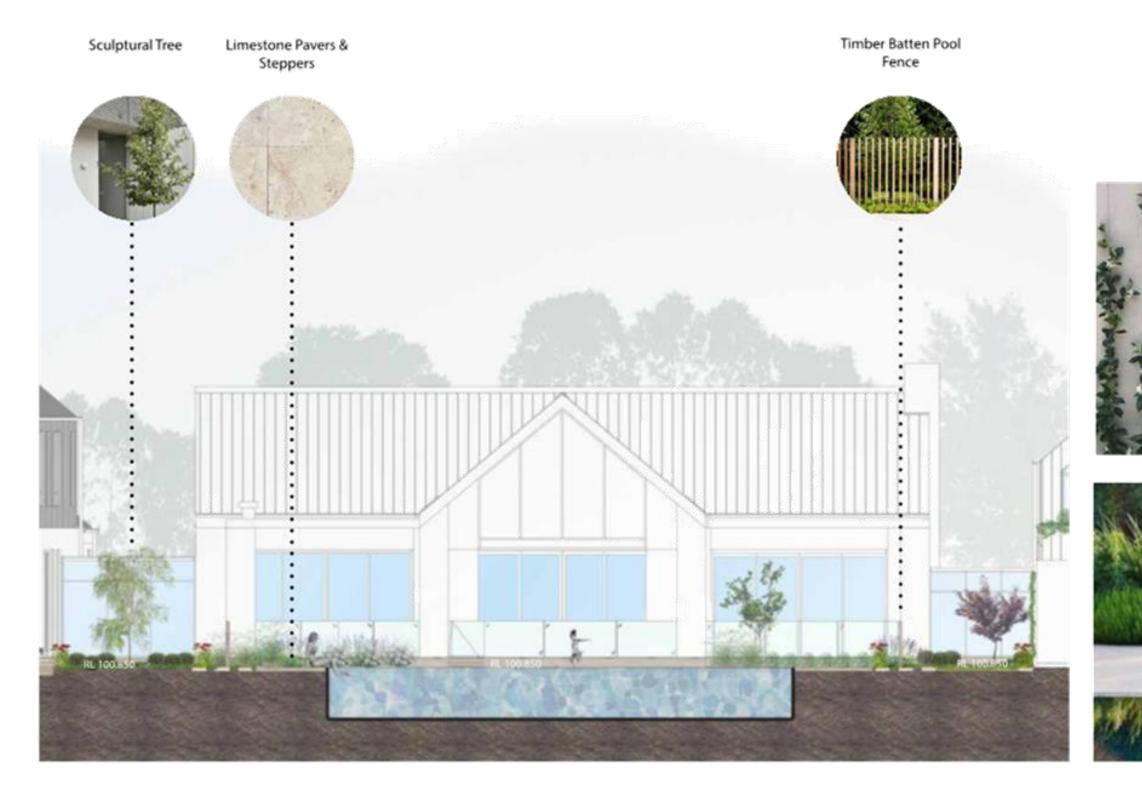
Leg	end
0	Feature Tree
0	Western Lawn
0	Limestone Paved Walkway
0	Toppings Pathway
6	Pool
6	Alfresco Dining
0	Glass Pool Gate
8	Limestone Steppers
0	Limestone Steppers from Pool Gate
Ø	Glass Pool Fence along Northern Boundary
Ð	Eastern Lawn
Ð	Timber Pool Fence along Western, Southern and Eastern Boundaries
₿	Secondary Entrance Gate with Reclaimed Timber

Steppers



Page 103

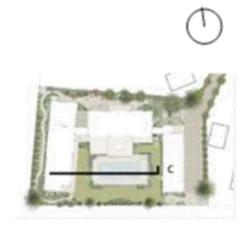
Landscape Design 1.10 Outdoor Living Section



Million March and Lars

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2 Elizabe Parcel Barelow March 65 Audi 2024 (2005) 38664







Landscape Design 1.11 Outdoor Living Fence Elevation

Colorbond Fence

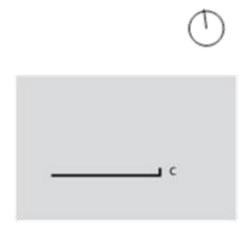




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2 Elizabet Parce Barcher Brack, 66 And 5054 19955 34844









Material Palette 2.1 Material & Finishes







Lawn

Timber Pool Fence TIMBERZOO

Reclaimed Timber Steppers TIMBERZOO



Galvanised Steel Garden Bed Edging FORMBOSS



Exposed Aggregate Concrete Geostone



Lillycan Toppings Bacchus Marsh Sand & Soil



Shell Limestone Pavers Limestone Australia

2 Elizaber Parre Barriers March, 16 And 1994 - 1993 - 14844



Plant Palette 3.1 Trees

Trees



Baln

Callistemon 'Pink Champagne'

Banksia integrifolia Coast Banksia



Silver Banksia

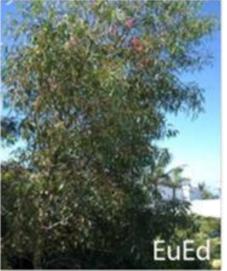


Hymenosporum flavum

Native Frangipani



Waterhousea floribunda Weeping Lilly Pilly



Eucalyptus leucoxylon 'Euky Dwarf' Dwarf Yellow Gum



Acacia implexa Lightwood



Citrus x meyeri 'Lemonicious'



Citrus latifolia Tahitian Lime



Punica granatum 'Wonderful' Pomegranate

and the stands are it as

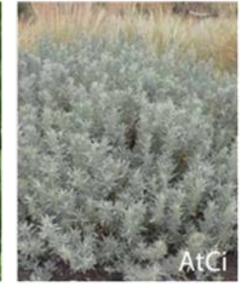
Allocasuarina littoralis Black Sheoak

Laegerstroemia indica x faurei 'Natchez' White Crepe Myrtle

Plant Palette 3.2 Shrubs







Bursaria spinosa Sweet Bursaria



Chrysocephalum semipapposum **Clustered Everlasting**



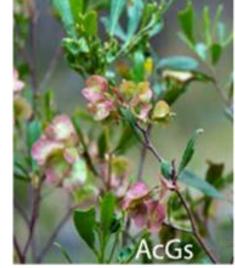
Acacia cognata

Adenanthos sericeus Woolly Bush

Atriplex cinera Coast Saltbush



Correa glabra Ivory Lantern



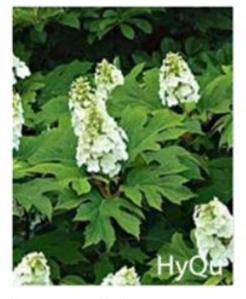
Dodonea viscosa Hop Bush



Goodenia ovata Hop Goodenia



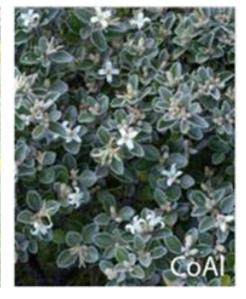
Grevillea olivacea Olive Leaf Grevillea - Orange



Hydrangea quercifolia 'Prinsnow'

en de la secon combina





Correa alba White Correa



Indigofera australis Austral Indigo

Plant Palette 3.3 Shrubs









Leptospermum continentale Prickly Tea Tree

Olearia lirata Showy Daisy Bush

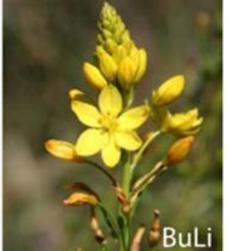
Ozothamnus ferrugineus Tree everlasting

Westringia fruticosa Coastal Rosemary

Plant Palette 3.5 Perennials











Arthropodium strictum Chocolate Lily

Brachyscome multifida Cut-Leafed Daisy

Bulbine lily Bulbine Lily

Calocephalus citreus Lemon Beauty Heads

Chrysocephalum apiculatum 'Desert flame' Common Everlasting



Pycnosorus golbusus Billy Buttons



Wahlenbergia stricta Native Bluebell

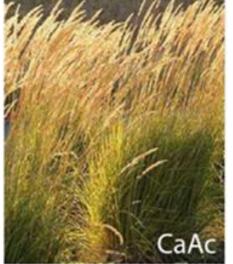


Xerochrysum viscosum Sticky Everlasting

Coronidium scorpoides Button Everlasting

Plant Palette 3.6 Grasses & Groundcovers

Grasses







Common Plume Grass



Festuca glauca **Blue Fescue Grass**

Calamagrostis x acutiflora 'Karl Foerster'

Dianella revoluta Black-anther Flax-lily

Dichanthium sericeum Silky Blue Grass



Poa labillardierei Tussock Grass



Themeda triandra Kangaroo Grass



Xanthorrhoea minor Small Grass Tree

Lomandra 'Misty Green'

Plant Palette 3.8 Groundcovers & Climbers

Groundcovers











Casuarina glauca Cousin It

Climbers

Carpobrotus rossii Karkalla Pig Face

Dichondra argentea Silver Falls

Dichondra repens Kidney Weed

Pratia pedunculata White Star Creeper



Hardenbergia violacea Hardenbergia Regent

 $(\alpha_{i},\beta_{i})_{i=1}^{n} \in \{\alpha_{i},\alpha_{i},\ldots,\alpha_{i},\alpha_{i}\}$

Viola hederacea Native Violet

Thanks for your time. We hope you like the seeds we've planted.

Phillip Withers 422 Bridge Road, Richmond, VIC 3121 phillipwithers.com 03 9077 5989 info@phillipwithers.com

