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Sustainable Transport. Safe Solutions

295 Karoborup Road, Carabooda

Proposed Recreation and Events Business

TRANSPORT IMPACT STATEMENT



Prepared for:
Jimmy Rum Western Front

October 2023

295 Karoborup Road, Carabooda

Prepared for: Jimmy Rum Western Front
Prepared by: Paul Ghantous
Date: 6 October 2023
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U23.129.r01	08/09/23	Magnum Bakunawa	DRAFT	Internal
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1 Introduction

This Transport Impact Statement has been prepared by Urbii on behalf of Jimmy Rum Western Front with regards to the proposed recreation and events business, located at 295 Karoborup Road, Carabooda.

The subject site is situated at the western side of Karoborup Road, as shown in Figure 1. The site is rural and presently accommodates a dwelling which operates as a bed and breakfast (B&B). A rum distillery is also presently operating at the site as a home-based business.

It is proposed to host recreation classes and events at the site, in addition to the existing uses.

The key issues that will be addressed in this report include the traffic generation and distribution of the proposed development, access and egress movement patterns, car parking and access to the site for alternative modes of transport.



Figure 1: Subject site location



2 Proposed development

The proposal for the subject site is for a recreation and events business comprising:

- A reception centre and open space for hosting events such as weddings (maximum 100 people)
- Provision of open space for conducting recreation activities such as yoga or martial arts classes (maximum class size of 40 people);
- 4 onsite caravan parking bays, and ;
- 26 onsite car parking bays, including one ACROD bay.

Vehicle access to the site is proposed via the existing crossover on Karoborup Road.

The proposed development plans are included for reference in Appendix A.

3 Vehicle access and parking

3.1 Existing vehicle access

Existing vehicular access to the site is provided via one crossover on Karoborup Road, which will be maintained for the proposed development (Figure 2).



Figure 2: Existing vehicle access

3.2 Parking supply and demand

Advice provided by the project town planner indicates that the following parking requirements are applicable for the proposed uses”

- Reception centre: 1 bay per 4 persons accommodated (25 bays required).
- Recreation private: 1 bay per 4 persons accommodated (10 bays required).

The events hosting and recreation classes will be scheduled with no overlap, which means that a maximum of 25 bays are required for the proposed uses.

It is proposed to provide 26 car parking bays, including one ACROD bay. Car parking is proposed to be provided at the front of the site.

The home-based rum distillery and bed & breakfast are existing approved uses with parking already accommodate on site.

Four caravan parking bays are proposed to be provided at the rear of the existing building, with additional informal overflow parking available for caravans at the rear of the site. It is understood that caravan parking will only be associated with events being hosted at the reception centre and will not generate traffic or parking as a separate activity.

3.3 Car parking layout

Dimensions of car parking aisles and bays are compliant with AS2890.1. Onsite bays are 2.5m wide by 5.4m long and an aisle width of 6.2m has been provided. The ACROD bay is designed to AS2890.6 with a shared space.

4 Provision for service vehicles

The proposed development will not generate significant service vehicle traffic. It is recommended that smaller vehicles such as vans or utes be utilised for deliveries to the site. These smaller vehicles can park in a car parking bay for a short time during 'off-peak' periods.

The existing home-based rum distillery and bed & breakfast will continue to be serviced as per the existing situation. No issues are anticipated with access for delivery and waste vehicles.

Swept path analysis was undertaken for caravans and an 8.8m Medium Rigid Vehicle, which confirms that service vehicles can enter and exit the site in forward gear.

Swept path analysis confirms satisfactory service vehicle movements and is presented in Appendix B.



5 Hours of operation

Based on the information provided to Urbii, the hours of operation for the existing and proposed site uses are detailed in Table 1.

Table 1: Site operating hours for existing and proposed uses

Use	Day(s)	Time(s)
B&B (existing)	Thursday to Sunday	Hosting overnight stays
Rum business (existing)	Monday to Friday	8am to 5pm
Front area for events	Any day	Typically 1 to 2 hours per event
Front area for yoga/martial arts	3 to 4 days a week	1 to 2 classes per day Typically 1-hour sessions scheduled sometime between 9am to 6pm
Caravan camping	Any day	Ancillary to event hosting

6 Daily traffic volumes and vehicle types

6.1 Traffic generation

Traffic generation for the development was calculated using first principles assumptions:

6.1.1 Existing traffic

Advice from the site operator indicates that the rum distillery is permitted up to 2 staff and up to 3 customers to visit each day. The Bed and Breakfast (B&B) is operated by the site owners who are also residents at the site.

- Rum distillery traffic: assume 2 trips in and 2 trips out during the peak hour.
- B&B traffic: assume 1 trip in and 1 trip out during the peak hour.

The existing development is estimated to generate around 6 vehicles per hour (vph) during the road network PM peak hour.

6.1.2 Proposed development traffic – Private recreation

Advice from the site operator indicates that the private recreation area will accommodate 40 people at a time.

- Private recreation class traffic: assume 1 car per 2 people, which will generate 20 cars in and 20 cars out in the peak hour.

The proposed private recreation use is estimated to generate a total of 40 vehicles per hour (vph) during the peak hour.

6.1.3 Proposed development traffic – Reception centre

Advice from the site operator indicates that the reception centre area will accommodate a maximum of 100 people.

- Recreation centre traffic: assume 1 car per 4 people, which will generate 25 cars in for an event that will last at least one hour. Exits will carryover to the next hour.
- Caravan parking is incidental to the reception centre and will not generate traffic independently.

The proposed development is estimated to generate a total of 25 vehicles per hour (vph) during the peak hour.

The private recreation and reception centre will occur at different times, which then suggests that the maximum traffic expected is 46 vph during the PM peak hour (6vph existing traffic plus 40vph private recreation traffic).



6.2 Impact on surrounding roads

The WAPC Transport Impact Assessment Guidelines for Developments (2016) provides the following guidance on the assessment of traffic impacts:

“As a general guide, an increase in traffic of less than 10 percent of capacity would not normally be likely to have a material impact on any particular section of road but increases over 10 percent may. All sections of road with an increase greater than 10 percent of capacity should therefore be included in the analysis. For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10 percent of capacity. Therefore, any section of road where development traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis.”

The proposed development will not increase traffic flows on any roads adjacent to the site by the quoted WAPC threshold of +100vph to warrant further analysis. Therefore, the impact on the surrounding road network is moderate (Figure 3).

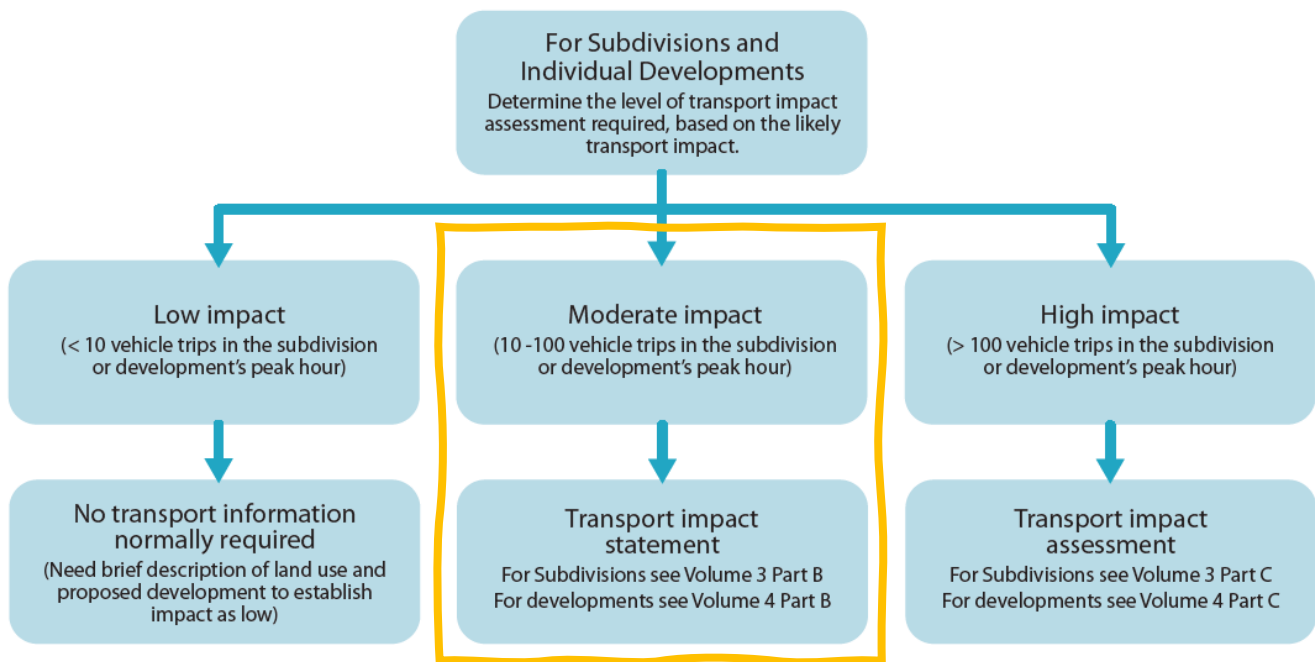


Figure 3: Level of traffic impact for subdivisions and individual developments

Source: WAPC *Transport Impact Assessment Guidelines Volume 4: Individual Developments*, August 2016

7 Traffic management on the frontage roads

Information from online mapping services, Main Roads WA, Local Government, and/or site visits was collected to assess the existing traffic management on frontage roads.

Karoborup Road near the subject site is an approximately 8.2m wide, two-lane undivided road. There are no footpaths and no bicycle lanes provided along Karoborup Road.

Karoborup Road is classified as a *Local Distributor* road in the Main Roads WA road hierarchy (Figure 4) and operates under sign-posted speed limit of 70km/h (Figure 5).

Local Distributor roads are the responsibility of Local Government and typically are for the provision of movement within local areas and connect access roads to higher order Distributors (Figure 6).

The City of Wanneroo advised that no traffic data was available for Karoborup Road at the time of preparation of this report. Based on the surrounding land uses we estimate that Karoborup Road carries under 500 vehicles per day.



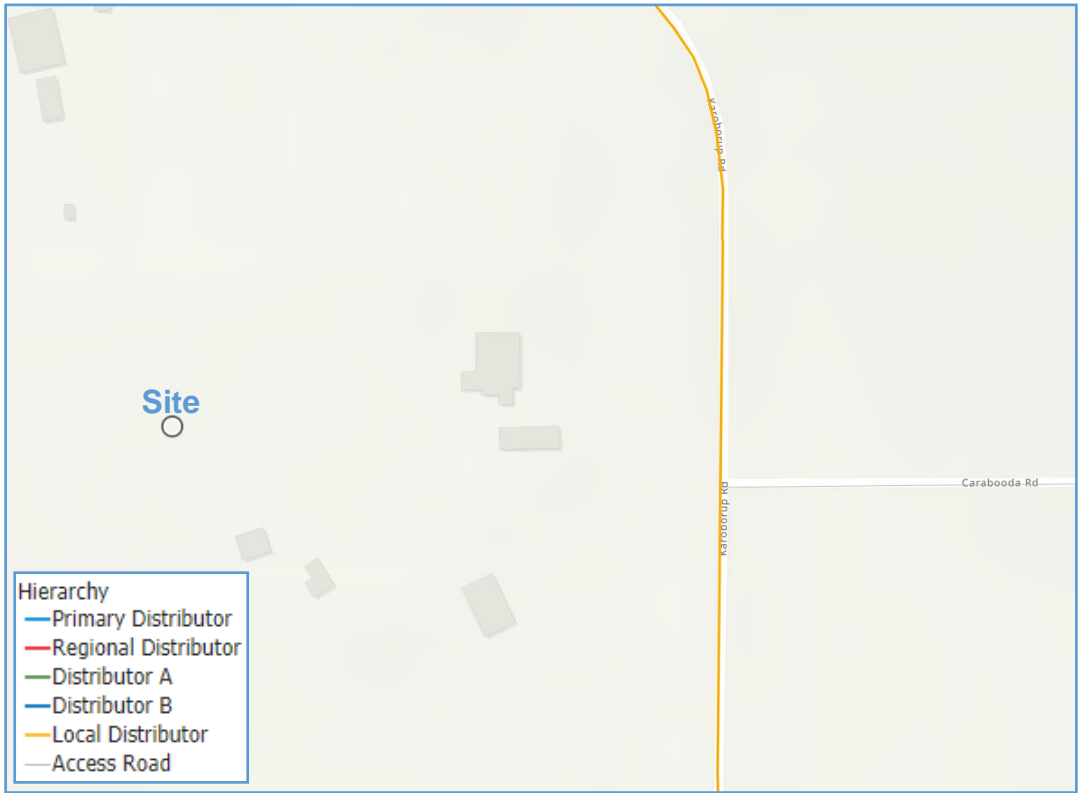


Figure 4: Main Roads WA road hierarchy plan

Source: Main Roads WA Road Information Mapping System (RIM)

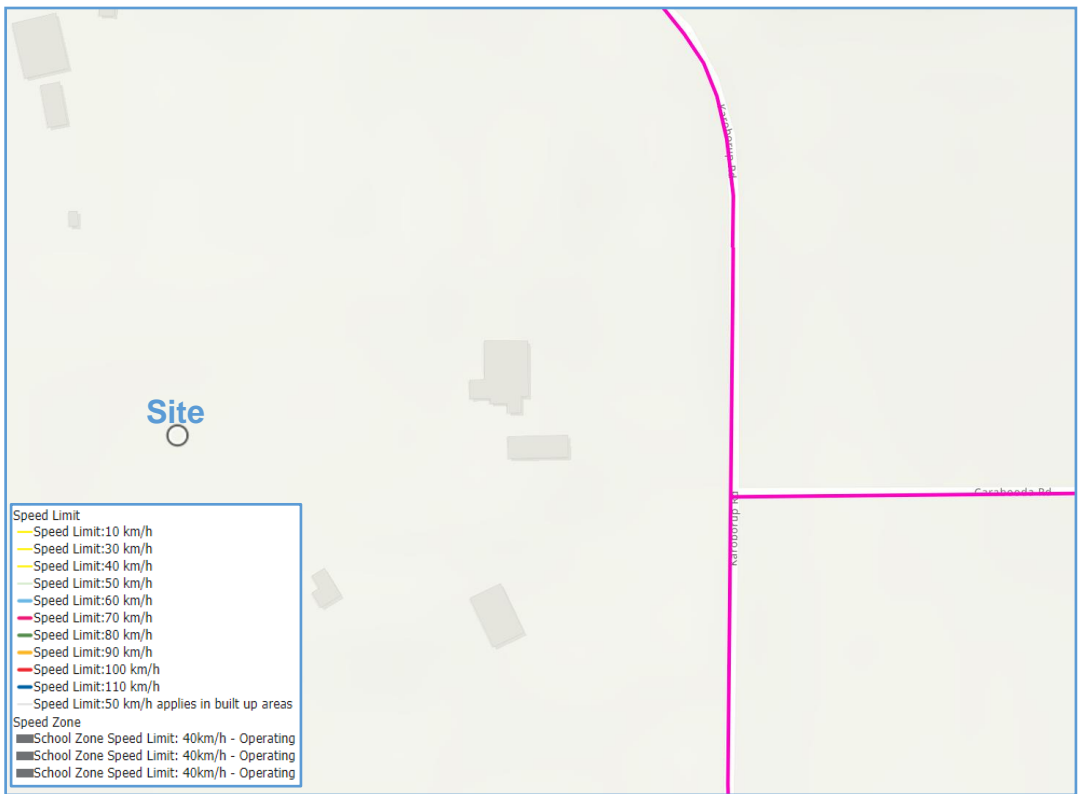


Figure 5: Main Roads WA road speed zoning plan

Source: Main Roads WA Road Information Mapping System (RIM)

**ROAD HIERARCHY FOR WESTERN AUSTRALIA
ROAD TYPES AND CRITERIA (see Note 1)**

CRITERIA	PRIMARY DISTRIBUTOR (PD) (see Note 2)	DISTRICT DISTRIBUTOR A (DA)	DISTRICT DISTRIBUTOR B (DB)	REGIONAL DISTRIBUTOR (RD)	LOCAL DISTRIBUTOR (LD)	ACCESS ROAD (A)
<i>Primary Criteria</i>						
1. Location (see Note 3)	All of WA incl. BUA	Only Built Up Area.	Only Built Up Area.	Only Non Built Up Area. (see Note 4)	All of WA incl. BUA	All of WA incl. BUA
2. Responsibility	Main Roads Western Australia.	Local Government.	Local Government.	Local Government.	Local Government.	Local Government.
3. Degree of Connectivity	High. Connects to other Primary and Distributor roads.	High. Connects to Primary and/or other Distributor roads.	High. Connects to Primary and/or other Distributor roads.	High. Connects to Primary and/or other Distributor roads.	Medium. Minor Network Role Connects to Distributors and Access Roads.	Low. Provides mainly for property access.
4. Predominant Purpose	Movement of inter regional and/or cross town/city traffic, e.g. freeways, highways and main roads.	High capacity traffic movements between industrial, commercial and residential areas.	Reduced capacity but high traffic volumes travelling between industrial, commercial and residential areas.	Roads linking significant destinations and designed for efficient movement of people and goods between and within regions.	Movement of traffic within local areas and connect access roads to higher order Distributors.	Provision of vehicle access to abutting properties
<i>Secondary Criteria</i>						
5. Indicative Traffic Volume (AADT)	In accordance with Classification Assessment Guidelines.	Above 8 000 vpd	Above 6 000 vpd.	Greater than 100 vpd	Built Up Area - Maximum desirable volume 6 000 vpd. Non Built Up Area – up to 100 vpd.	Built Up Area - Maximum desirable volume 3 000 vpd. Non Built Up Area – up to 75 vpd.
6. Recommended Operating Speed	60 – 110 km/h (depending on design characteristics).	60 – 80 km/h.	60 – 70 km/h.	50 – 110 km/h (depending on design characteristics).	Built Up Area 50 - 60 km/h (desired speed) Non Built Up Area 60 – 110 km/h (depending on design characteristics).	Built Up Area 50 km/h (desired speed). Non Built Up Area 50 – 110 km/h (depending on design characteristics).
7. Heavy Vehicles permitted	Yes.	Yes.	Yes.	Yes.	Yes, but preferably only to service properties.	Only to service properties.
8. Intersection treatments	Controlled with appropriate measures e.g. high speed traffic management, signing, line marking, grade separation.	Controlled with appropriate measures e.g. traffic signals.	Controlled with appropriate Local Area Traffic Management.	Controlled with measures such as signing and line marking of intersections.	Controlled with minor Local Area Traffic Management or measures such as signing.	Self controlling with minor measures.
9. Frontage Access	None on Controlled Access Roads. On other routes, preferably none, but limited access is acceptable to service individual properties.	Prefer not to have residential access. Limited commercial access, generally via service roads.	Residential and commercial access due to its historic status. Prefer to limit when and where possible.	Prefer not to have property access. Limited commercial access, generally via lesser roads.	Yes, for property and commercial access due to its historic status. Prefer to limit whenever possible. Side entry is preferred.	Yes.
10. Pedestrians	Preferably none. Crossing should be controlled where possible.	With positive measures for control and safety e.g. pedestrian signals.	With appropriate measures for control and safety e.g. median/islands refuges.	Measures for control and safety such as careful siting of school bus stops and rest areas.	Yes, with minor safety measures where necessary.	Yes.
11. Buses	Yes.	Yes.	Yes.	Yes.	Yes.	If necessary (see Note 5)
12. On-Road Parking	No (emergency parking on shoulders only).	Generally no. Clearways where necessary.	Not preferred. Clearways where necessary.	No – emergency parking on shoulders – encourage parking in off road rest areas where possible.	Built Up Area – yes, where sufficient width and sight distance allow safe passing. Non Built Up Area – no. Emergency parking on shoulders.	Yes, where sufficient width and sight distance allow safe passing.
13. Signs & Linemarking	Centrelines, speed signs, guide and service signs to highway standard.	Centrelines, speed signs, guide and service signs.	Centrelines, speed signs, guide and service signs.	Centrelines, speed signs and guide signs.	Speed and guide signs.	Urban areas – generally not applicable. Rural areas - Guide signs.
14. Rest Areas/Parking Bays	In accordance with Main Roads' Roadside Stopping Places Policy.	Not Applicable.	Not Applicable.	Parking Bays/Rest Areas. Desired at 60km spacing.	Not Applicable.	Not Applicable.

Figure 6: Road types and criteria for Western Australia

Source: Main Roads Western Australia D10#10992



8 Public transport access

Information was collected from Transperth, PTA and site visits to assess the existing public transport access to and from the site.

Public transport accessibility is presently limited for the locality. The nearest public transport service is via Butler Train Station, which is approximately 6.3km from the site. The limited connectivity will make public transport less desirable in comparison to walking and cycling.

Public transport is not a significant consideration for this development. Given the nature of the development and rural setting, patrons are expected to drive to and from the site.

9 Pedestrian access

Information from online mapping services, Main Roads WA, Local Government, and site visits was collected to assess the pedestrian access for the proposed development.

9.1 Pedestrian facilities and level of service

No footpaths or crossing facilities are provided on Karoborup Road near the subject site. Accessibility by walking is not a significant consideration for this development. Given the nature of the development and rural setting, patrons are expected to drive to and from the site.



10 Bicycle access

Information from online mapping services, Department of Transport, Local Government, and/or site visits was collected to assess bicycle access for the proposed development.

10.1 Bicycle network

There is no cycle-specific infrastructure provided near the subject site. People may choose to cycle on the road.

Accessibility by cycling is not a significant consideration for this development. Given the nature of the development and rural setting, patrons are expected to drive to and from the site.

11 Site specific issues

No additional site-specific issues were identified within the scope of this assessment.



12 Safety issues

The five-year crash history in the vicinity of the site was obtained from Main Roads WA. As detailed in Figure 7, no crashes were recorded in the immediate locality in the last five years.

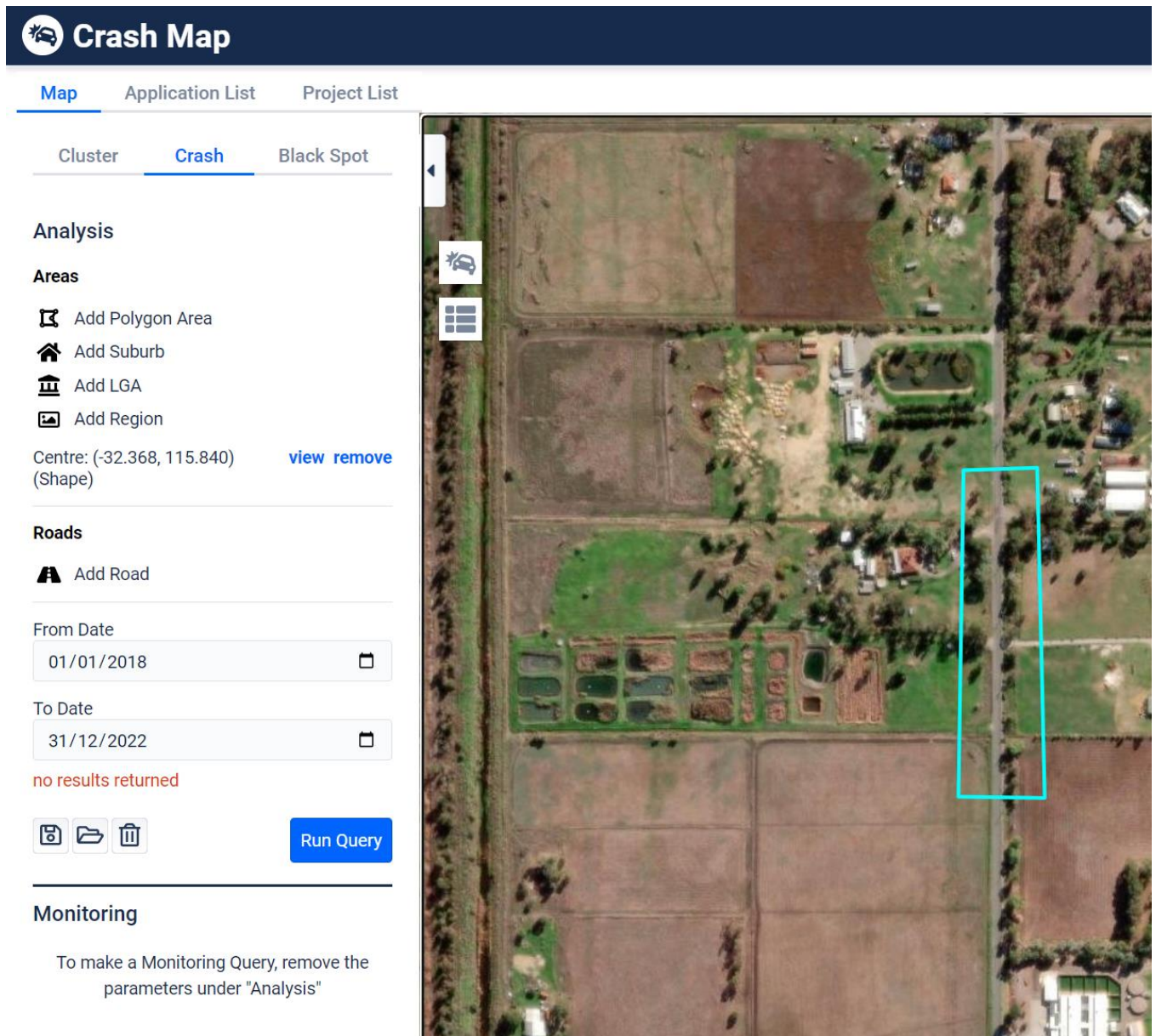


Figure 7: 5-year crash map in the locality (2018-2022)

Source: MRWA crash mapping tool

13 Conclusion

This Transport Impact Statement has been prepared by Urbii on behalf of Jimmy Rum Western Front with regards to the proposed recreation and events business, located at 295 Karoborup Road, Carabooda.

The subject site is situated at the western side of Karoborup Road. The site is rural and presently accommodates a dwelling which operates as a bed and breakfast (B&B). A rum distillery is also presently operating at the site as a home-based business.

It is proposed to host recreation classes and events at the site, in addition to the existing uses.

Given the purpose of this development and the location of the site in a rural setting, public transport, cycling and walking access are not critical considerations for the development.

The car parking provision meets the needs of the proposed development.

The traffic analysis undertaken in this report shows that the traffic generation of the proposed development is moderate (less than 100vph on any lane) and as such would have moderate impact on the surrounding road network.

It is concluded that the findings of this Transport Impact Statement are supportive of the proposed development.



Appendices

Appendix A: Proposed development plans



PROPOSED LAND USE
 295 KAROBORUP ROAD
 CARABOODA
COURTESY: RECREATIONAUSTRALIA, BY COURTESY OF JAGOLIFE





Planning Institute Australia
 SCALE: 1:500 @ A3
 DATE: 30/06/2023
 FILE: 188_0516285.dwg
 DRAWN: -SB
 CHECKED: -


DYNAMIC PLANNING
 ART & DESIGN
188 488 488 • 8/100 Lonsdale Street, Melbourne VIC 3000 • 188 488 488
 188 488 488 • 188 488 488
 188 488 488 • 188 488 488
 188 488 488 • 188 488 488



Reception Centre / Private Recreation
 Approved Home Business - Rum Production
 Single House / Bed & Breakfast

Appendix B: Swept path diagrams

Swept path diagrams are included in this section of the report. Different coloured lines are employed to represent the various envelopes of the vehicle swept path, as described below:


Cyan represents the wheel path of the vehicle

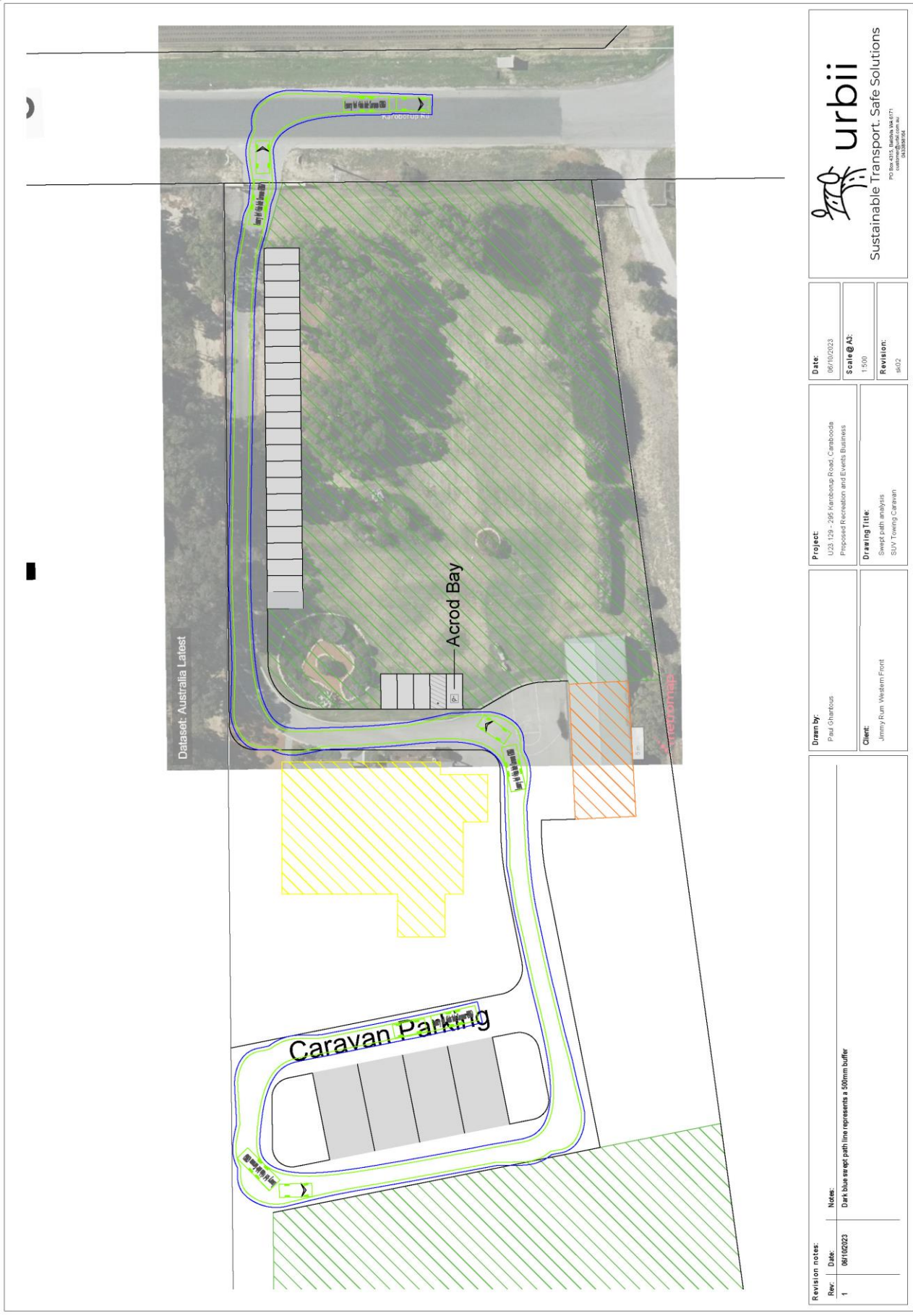
Green represents the vehicle body envelope

Blue represents a 500mm safety buffer line, offset from the vehicle swept path

The swept path diagrams are also provided separately in high-quality, A3 PDF format.



Revision notes: Rev: 1 Date: 06/10/2023 Notes: Dark blue swept path line represents a 500mm buffer		Drawn by: Paul Gharneus		Project: U33.129 - 295 Harnonup Road, Carabooda Proposed Recreation and Events Business		Date: 06/10/2023	
Client: Jimmy Run Western Front		Drawing Title: Swept path analysis SUV, Turning, Caravan		Scale @ A3: 1:500		Revision: 06/10	
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Date:	06/10/2023
Scale @ A3:	1:500
Revision:	002

Project:	U23.129 - 295 Karaborup Road, Carabooda Proposed Recreation and Events Business
Drawing Title:	Swept path analysis SUW, Towning, Caravan

Drawn by:	Paul Ghentous
Client:	Jimmy Run Western Front

Revision notes:	
Rev:	Date:
1	06/10/2023
Notes:	Dark blue swept path line represents a 500mm buffer

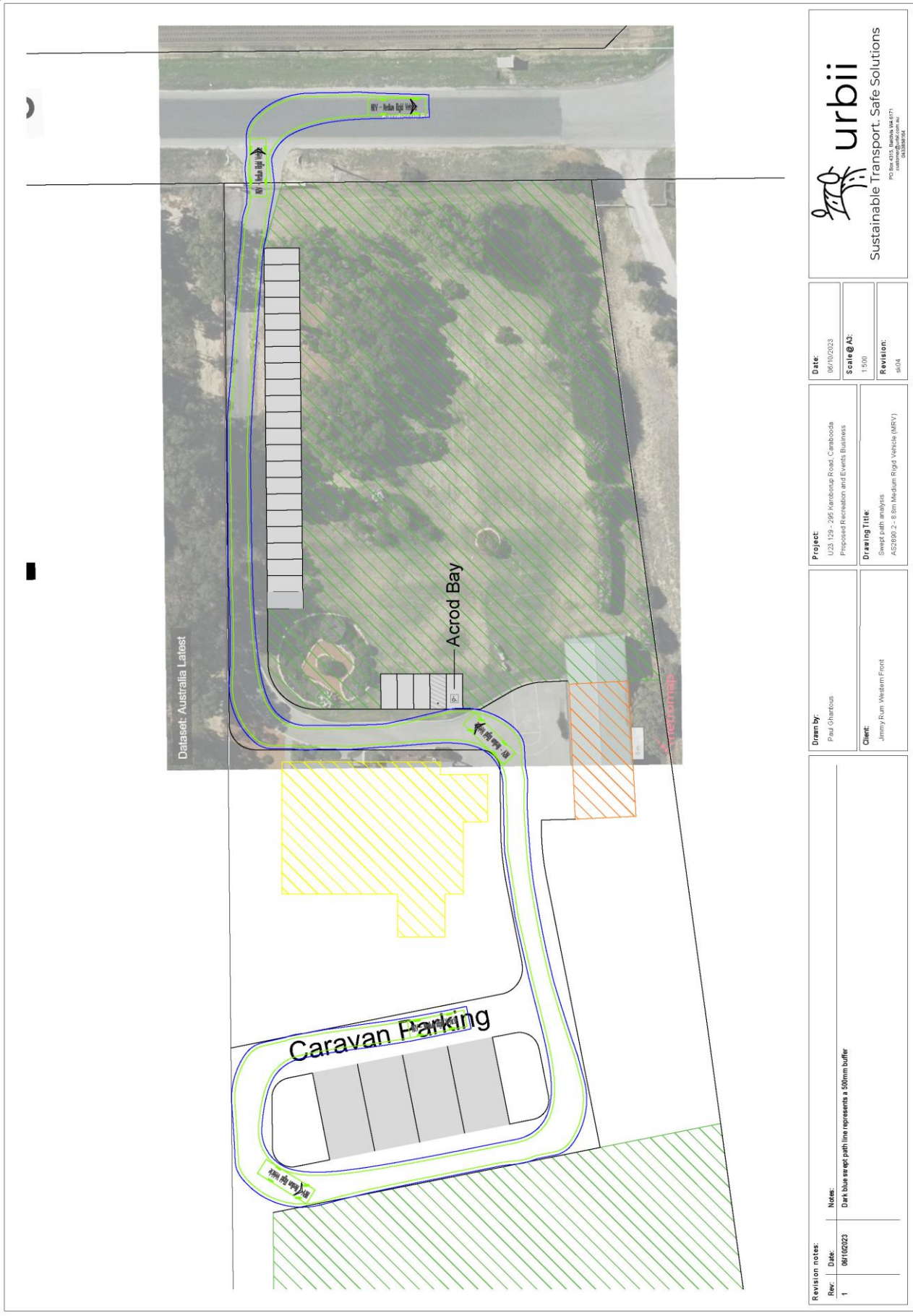



Date:	06/10/2023
Scale @ A3:	1:500
Revision:	003

Project:	U33.128 - 295 Harnonup Road, Carabooda Proposed Recreation and Events Business
Drawing Title:	Sweep path analysis AS2880.2 - 8.8m Medium Right Vehicle (MRV)

Drawn by:	Paul Ghentous
Client:	Jimmy Run Western Front

Revision notes:	Notes:
Rev: 1	06/10/2023
	Dark blue swept path line represents a 500mm buffer



Revision notes:		Notes:	
Rev:	Date:	Dark blue swept path line represents a 500mm buffer	
1	06/10/2023		
Drawn by:		Project:	
Paul Ghertous		U23.129 - 295 Karaborup Road, Carabooda Proposed Recreation and Events Business	
Client:		Date:	
Jimmy Run Western Front		06/10/2023	
		Scale @ A3:	
		1:500	
		Revision:	
		5/04	
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