

Melissa Crane

From: [REDACTED]
Sent: Tuesday, 20 September 2016 2:55 PM
To: Planning
Subject: Glenburn hotel site. Attention JANE ARCHER.

Sent from my iPad
Thank you for your email and assistance.

AN OUTLINE OF OUR OBJECTIVES.

The Tavern is intended to supply locals and passing travellers an opportunity to access a facility which will encompass and full fill a culinary experience at affordable prices, with a diverse and seasonal menu, with a strong emphasis on WOOD FIRED OVEN cookery.

We would intend to provide early morning breakfast, lunch and dinner a few days per week and during peak holiday seasons, long weekends etc

The intended operating hours at this point in time is listed below.

FRIDAYS. 11am-approx 11pm
SATURDAY. 7am. 11pm
SUNDAY. 11am. 10pm

Public holidays and peak holiday periods, extended trading hours to meet demand as required.

We anticipate catering for seated patrons both indoors and outdoors to 80/100 at peak times.

There will be parking available on site for patrons at thirty two designated parks including two for disabled, and a further 4/6 for staff.

The area between Breakaday road and the boundary of the property fence is 6400 metres at the closest point and would provide an excellent opportunity for off property parking . Further parking could be made available on site, but at this stage we wish to keep the area as open as possible for landscaping and potential outdoor activities.

Should you have any further questions please contact us asap as we are anxious too get the project under way.

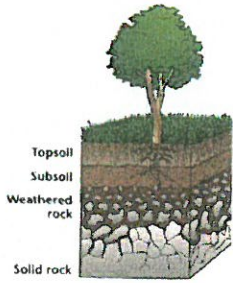
Thank you

DAVID MOON. ([REDACTED])

Liquor Licence at 3813 Melba Highway

We shall be seeking a restaurant and cafe liquor license.
Based on the Red line area, which includes alfresco dining we shall be seeking a license allowing up to 300 people although we consider this to be unlikely.

The opening hours for onsite liquor service would be 11am to 11pm on trading days which at this point in time we anticipate would be Friday, Saturday and Sunday, Public holidays and peak holiday



Mansfield Land Capability & Soil Assessments

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LAND CAPABILITY ASSESSMENT

Client: David Moon

Site Address: 3813 Melba Hwy, Glenburn.



Figure 1: Proposed Irrigation Area viewed from south to north as at 3rd August 2016.

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1. INTRODUCTION

Mansfield Land Capability & Soil Assessments has been engaged to undertake a Land Capability Assessment (LCA) for a site at 3813 Melba Hwy, Glenburn, 3717.

My field visit and report have been undertaken and entirely carried out by myself and I have the required professional indemnity insurance. The field testing included soil profile logging and sampling, laboratory testing, water and nutrient balance modelling and risk assessment has revealed that on-site effluent disposal is appropriate and sustainable.

My submission will provide information about the site and soil conditions. It will also provide a detailed LCA and include a conceptual design for suitable onsite wastewater management, including recommendations for monitoring and management requirements.

The proposed development is to construct a Taven to supply drinks and food for customers as well as supply takeaway pizza's. The developers 'realistically' estimate serving 100-150 people per day from Friday night through to Sunday night with one bar attendant as the majority of customers will be purchasing takeaway food.

This site originally was the Glenburn Hotel until it burnt down during the 2009 bushfires and the original septic system was removed along with the hotel remains.

2. DESCRIPTION OF DEVELOPMENT

Site address:	3813 Melba Hwy, Glenburn, 3717.
Parcel Details:	Lot 1 LP124920 (Refer to Appendix B.)
Client:	David Moon
Postal address:	95 MITTON BRIDGE RD ST ANDREWS 3761
Phone:	0417395874
Vic Roads directory reference:	61 H8 (ed.8)
Council area:	Murrindindi Shire
Council property number:	6507
Allotment area:	Approx 4558m ²
Planning Zone:	Rural Activity Zone (RAZ) Schedule to the Rural Activity Zone Refer to Appendix E
Planning Overlay:	Non affecting this land.
Catchment Area:	The site is not located in a Special Water Supply Catchment area.

3. INVESTIGATION METHOD

My report is in accordance with the current Code of Practice - *Onsite Wastewater Management*, E.P.A. Publication 891.4, *Land Capability Assessment for Onsite Domestic Wastewater Management*, E.P.A. Publication 746.1 and *AS/NZS 1547:2012*.

My capability assessment involved investigating and reporting on climate, slope, aspect, vegetation, soil profile characteristics, proximity to surface waters and escarpments, transient soil moisture characteristics and hydraulic conductivity.

Exploratory excavating was undertaken and a test pit dug to a depth of 1.2m as shown in Appendix D.

6 soil permeability tests within the proposed irrigation area were conducted using the constant head permeameter testing method in accordance with *AS/NZS 1547:2012* as shown in Appendix C.

Water and nutrient balance analyses were based on the mean rainfall (redistribution of rainfall 9th Decile) recorded by the Glenburn weather station No 88028 and mean evaporation data for Lake Eildon. The rainfall and evaporation data were obtained from the National Climate Centre, Bureau of Meteorology. The data was subsequently analysed and applied to our water and nutrient balance analyses.

4. CAPABILITY ASSESSMENT

Slope and Aspect

The proposed irrigation area slopes 2 to 4% to the west, and is exposed to some winds and sunshine throughout the year. There is an existing water tank to the south and existing fence to the west that will shadow the area at different time of the day. The area has had some earth movement (fill) occur whilst removing the old septic and building materials from the site.

Upslope to the east of the proposed irrigation area is flat car parking area constructed from road base gravel and a cut off drain will be required. A large log remains on site that will need to be removed for the proposed irrigation area. See Figure 1.

Slope Stability

The ground slopes stability within the proposed irrigation area is unlikely to be compromised by hydraulic loadings or slope degree due to the soil structure.

Climate

The general area receives a mean annual rainfall of 845mm and the redistribution of rainfall (9th Decile) of 1127.5mm and a mean annual evaporation of 1156mm.

Vegetation

The proposed irrigation area is vegetated with a mixture of grasses including clove grass as shown in Figure 1 and Attachment C.

Subsurface Profile

The general subsurface profile consists of;

- A-horizon; layer of dark brown, soft, moist, sandy silt (loam), with a soil reaction trend of 6.0 pH and electrical conductivity of 0.08 dS/m, to a depth of 100-120mm

- B₁-horizon; layer of light light brown, firm, moist, silty clay (Clay loam), with a soil reaction trend of 6.3 pH and electrical conductivity of 0.05 dS/m, between the depths of 100-500mm

- B₂-horizon; layer of dark brown, stiff, silty clay (Light clay), with a soil reaction trend of 6.4 pH and electrical conductivity of 0.02 dS/m, between the depths of 500-1200mm.

The soil horizon profile can be seen in Appendix D.

Soil Permeability

The soil tests were conducted on 3rd August 2016.

6 constant head permeameter tests were undertaken and prepared in accordance with AS/NZS 1547:2012 as shown in Appendix C & F.

Profile analysis in accordance with Table 5.1 in AS/NZS 1547:2012 and the EPA Code of Practice, Table 9- Appendix A and my laboratory determined swell potential shows the B-horizon soils to be moderately structured clay loam with an indicative permeability (Ksat) in the range of 0.5 to 1.5m/day.

The constant head permeameter testing on the 3rd August 2016 resulted in a Ksat of 1.08m/day.

For the moderately structured B-horizon clay loam soils, I have adopted the design loading rate at a 4mm/day.

Soil Classification

In accordance with AS/NZS1547:2012 and EPA Code of Practice, Table 9- Appendix A, the soil can be classified as Category 4 soil (clay loam).

Surface Waters

The proposed irrigation area slopes to the west and the nearest drainage line is located at least 60m away, nearest watercourse (Yea River) is located at least 140m away to the west and there are no dams within 100m of the proposed irrigation area.

Groundwater Bores

There are no groundwater bores within 20m of the proposed irrigation area and no visible evidence of groundwater use for domestic purposes within 100m of the proposed irrigation area.

Watertable

One bore hole was drilled to a depth of 1.5m and one test pit excavated to a depth of 1.2m and no sign of ground water was visible in either.

5. LAND CAPABILITY AND CAPABILITY ASSESSMENT TABLE

Land features	Land Capability Risk Rating				Mitigation
	LOW	MEDIUM	HIGH	LIMITING	
Site Drainage: Run off/run on	No actual or potential	Low potential	High Potential	Cut-off drain not possible	Minor cut-off drain required upslope near car park area.
Flooding	Never	<1 in100	>1 in 100 and <1 in 20	<1 in 20	N/A
Proximity to waterway	>100m	70-100	40-70m	<40m	N/A
Proximity to drainage depression	>60m	40-60	<40		N/A
Slope % - Trenches & beds	<5%	5%-10%	10%-15%	>15%	Install trenches along contours .
Slope% - Subsurface Irrigation	<10%	10%-30%	30%-40%	>40%	Install irrigation along contours.
Landslip	No actual or potential	Low potential	Potential	Present	N/A
Groundwater (m)	>2.0	2-1.5	<1.5	Surface	N/A
Compaction	No potential	Moderate	High	Severe potential	Vehicle barriers required.
Exposure	High sun and wind	Moderate	Low sun and wind		Increase LAA
Landform - AS1547:2000 figure 4.1b2	Convex side slope and plains	Straight sided slopes	Concave side slopes	Floodplains	Minor cut-off drain required upslope.
Vegetation	Pasture/turf	Sparse grasses	Dense forest		Gypsum required.
Rainfall (mm/yr) site 083020	<500	500-750	750-1000	>1000	Refer to water Balance table
Pan evaporation (mm/yr) BOM site 083023	>1250	1000-1250	750-1000	<750	Refer to water Balance table
Fill	No fill	Small amount of fill		Fill present	N/A
Permeability (m/day)	<0.3	0.3-3	3-5	>5.0	Gypsum required in excavated trenches
Presence of mottling	None	Slight		Extensive	N/A
Coarse fragments %	<10	10-20	>20		N/A
pH	6-8	4.5-6	<4.5, >8		N/A
Emerson aggregate class	4,5,6,8	7	2,3	1	N/A
Free Swell (%)	<30	30-80	80-120	>120	N/A

Note: Site assessments and soil test results are within the coloured range.

The above results indicate disposal of effluent is achievable by secondary treated effluent via on-site subsurface irrigation system.

6. RISK ASSESSMENT

Land Feature	Land Capability Risk Rating				RISK RATING	Remarks
	LOW	MEDIUM	HIGH			
Distance to reservoir (km)	>15	2-15	<2		1	>15km to a reservoir.
Soil type rating (from LCA assessment table above)	1	2	3		2	Shallow Profile with low hydraulic conductivity of moderately structured soil.
Distance to river (m)	>80	40-80	<40		1	No river within 100m+
Distance to stream (m)	>80	40-80	<40		1	>100m to nearest watercourse.
Distance to drain (m)	>40	10-40	<10		1	>40m to nearest drain/drainage depression.
Lot size (ha)	>10	2-10	0.2-2		3	4558m ²
Density (houses/km ²)	<20	20-40	>40		1	Approx. 9 dwellings in the km ² area.
LCA rating (from LCA assessment table above)	1 (LOW)	2 (MEDIUM)	3 (HIGH)		3	Refer to LCA table above.
System fail rate (%)	<5	5-10	>10		3	Assumed conservative rating for a Taven.

I have assessed the proposed site using the above risk assessment, Dr Robert Edis identified major factors which influence the level of risk posed by an on-site system. These factors have a differing level of importance, or weighting, when considered relative to other factors and that the interaction between factors must also be considered.

The individual factors can be rated as;

1. **Low risk** (Rn<2.5) which reflects the range in which there is no expected consequential impact on water quality,
2. **Medium risk** (Rn2.5-5) which reflects the range in which the factor may influence the risk to water quality, though as a minor component of the overall risk, and
3. **High risk** (Rn>5) which represents a significant influence on the risk to water quality.

The Edis risk algorithm weights the major factors appropriately in the context of protecting the integrity of the potable water supply, as shown below:

$$\text{Formula } R_n = ((R_{\text{Res}} + R_{\text{Soil}}) \times (R_{\text{Riv}} + R_{\text{Str}} + R_{\text{Drain}} + R_{\text{Lot}}) + (2 \times R_{\text{LCA}}) + (3 \times R_{\text{Fail}} + R_{\text{Den}}))/10$$

Where

- R_n = Combined Risk Number,
- R_{Res} = Distance to reservoir risk rating
- R_{Soil} = Soil risk rating
- R_{Driv} = Distance to river risk rating
- R_{Dstr} = Distance to stream risk rating
- R_{Drain} = Distance to drain risk rating
- R_{Lot} = Lot size risk rating
- R_{LCA} = Land capability assessment risk rating
- R_{Fail} = System fail rate risk rating
- R_{Dens} = Density of development risk rating

The combined risk number for this site is **3.6 (Medium Risk)**

7. WATER LOADING and NUTRIENT BALANCES

Nominated Area Water Balance & Storage Calculations

Site Address: 3813 Melba Hwy, Glenburn.

Notes: This water and nutrient balance is carried out in accordance with the MAV Model LCA

INPUT DATA				NOTES												
Design Wastewater Flow	Q	1,000	L/day	Based on a 1000Lp/day, with full water-reduction features(EPA Code of Practice 891.3 Table 4)												
Permeability	DLR	1.06	m/day	Assumes Clay Loam soil structure, DLR taken from AS/NZS 1547:2012, Table 5.2												
Daily DIR	DIR	4.0	mm/day	Assumes Clay Loam soil structure, DIR taken from AS/NZS 1547:2012, Table 5.2												
Nominated Land Application Area	L	900	m ²	Used for iterative purposes (if desired) to determine storage requirements for nominated areas												
Crop Factor	C	0.45-0.7	unitless	Estimates evapotranspiration as a fraction of pan evaporation, varies with season and crop type												
Retained Rainfall	Rf	0.8	unitless	Proportion of rainfall that remain onsite and infiltrates, allowing for any runoff												
Rainfall Data	Station 88026 mean annual			Glenburn site												
Evaporation Data	Station 088023 mean annual			Eidon site												
Parameter	Symbol	Formula	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Days in month	D		days	31	28	31	30	31	30	31	31	30	31	30	31	365
Rainfall (8th Decile)	R		mm/month	48.1	45.9	49	62.7	113.5	119.1	152.1	141.1	121.3	107.1	96.9	69.7	1127.5
Evaporation	E		mm/month	17.2	15.9	12.1	7.6	4.4	3.1	2.9	5.3	6.6	10.6	12.0	16.2	115.6
Crop Factor	C			0.70	0.70	0.70	0.60	0.50	0.45	0.40	0.45	0.55	0.65	0.70	0.70	
OUTPUTS																
Evapotranspiration	ET	ExC	mm/month	121	111	85	46	22	14	13	24	27	36	51	114	746.45
Percolation	B	(DPR) x D	mm/month	124.0	112	124.0	120.0	124.0	120.0	124.0	124.0	120.0	124.0	124.0	124.0	1240.0
Outputs	ET+E		mm/month	245.1	223.3	209.7	165.6	146.0	134.0	137.2	147.9	157.4	182.3	211.0	238.1	2206.5
INPUTS																
Retained Rainfall	RR	R x Rf	mm/month	39.26	36.72	29.2	66.16	90.6	95.28	105.68	112.68	97.04	85.68	77.52	56.76	902
Effluent Irrigation	W	Q x D x L	mm/month	31.3	28.3	21.3	30.3	31.3	30.3	31.3	31.3	30.3	31.3	30.3	31.3	366.7
Inputs	RR+W		mm/month	70.6	65.0	70.5	96.5	122.1	125.6	137.0	144.2	127.3	117.0	107.8	87.1	1270.7
STORAGE CALCULATION																
Storage remaining from previous month			mm/month	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Storage for the month	S	(RR+W) - (ET+E)	mm/month	-174.5	-156.3	-132.2	-89.1	-23.9	6.4	0.2	3.7	30.1	75.3	152.2	151.0	
Cumulative Storage	M		mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum Storage for Nominated Area	N		mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Storage	V	N x L	L	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
LAND AREA REQUIRED FOR ZERO STORAGE																
			m ²	151	150	183	302	562	776	984	886	497	291	225	170	
MINIMUM AREA REQUIRED FOR ZERO STORAGE:				983.1 m ²												

Nutrient Balance

Site Address: 3813 Melba Hwy, Glenburn.

Please read the attached notes before using this spreadsheet

SUMMARY - LAND APPLICATION AREA REQUIRED BASED ON THE MOST LIMITING BALANCE = **436 m²**

INPUT DATA (1)			
Wastewater Loading		Nutrient Crop Uptake	
Hydraulic Load	1000 L/Day	Crop N Uptake	220 kg/ha/yr
Effluent N Concentration	30 mg/L	Crop P Uptake	36 kg/ha/yr
% Lost to Soil Processes (Geary & Gardner 1996)	0.2 Decimal	Phosphorus Sorption	
Total N Loss to Soil	6.000000 mg/m ² /day	P-sorption result	250 mg/kg
Annual N loss to Soil	2.19 kg/year	Bulk Density	1.5 g/cm ³
Effluent P Concentration	10 mg/L	Depth of Soil	0.8 m
Design Life of System	50 yrs	% of Predicted P-sorp.	0.5 Decimal
			which equals 337.5 kg/ha

NUTRIENT BALANCE BASED ON ANNUAL CROP UPTAKE RATES			
Minimum Area required with zero buffer		Determination of Buffer Zone Size for a Nominated Land Application Area (LAA)	
Nitrogen	368 m ²	Nominated LAA Size	900 m ²
Phosphorus	436 m ²	Predicted N Export from LAA	-10.59 kg/year
		Predicted P Export from LAA	-4.64 kg/year
		Phosphorus Longevity for LAA	-128 Years
		Minimum Buffer Required for excess nutrient	0 m ²

PHOSPHORUS BALANCE			
STEP 1: Using the nominated LAA Size			
Nominated LAA Size	900 m ²	Phosphorus generated over life of system	162.5 kg
Daily P Load	0.01 kg/day	Phosphorus vegetative uptake for life of system	0.250 kg/m ²
Daily Uptake	0.013562 kg/day	Phosphorus adsorbed in 50 years	0.169 kg/m ²
Measured p-sorption capacity	0.3375 kg/m ²	Desired Annual P Application Rate	8.291 kg/year
Assumed p-sorption capacity	0.169 kg/m ²		which equals 0.02272 kg/day
Site P-sorption capacity	167.06 kg		
P load to be sorbed	-1.30 kg/year		

The water balance table requires 983m²

8. SIZING CALCULATIONS

The irrigation area has been determined from the results of the water and nutrient balance analyses, Victorian Land Capability Assessment Framework January 2014 and AS/NZS 1547:2012, Appendix M.

For the waste water load of 1000 litres produced from the proposed development, the effluent is required to be applied to an irrigation area of 990m² with an application rate of 1.1mm/day.

The calculations are conservative as they take into consideration the limiting factors of the site.

9. RECOMMENDATIONS

The following recommendations are based on the results of our assessment, and are made in accordance with the *Code of Practice - Onsite Wastewater Management*, E.P.A. Publication 891.4, M.A.V. Model Land Capability Assessment Report and *AS/NZS 1547:2012*. They are based on the limiting clay materials, waste water load and are designed to demonstrate the viability of on-site effluent disposal of 1000 litres per day.

SUBSURFACE IRRIGATION

General

Based on the results of the water and nutrient balance analysis, subsurface conditions including soil profile, constant head permeameter testing, slope and adequate site drainage, on-site subsurface drip irrigation is appropriate after secondary treatment for effluent disposal.

Effluent

The effluent generated from the proposed dwelling will be black and grey water classed as 'all waste' and will be treated using an AWTS or sand filter and pressure-compensating sub-surface drip irrigation system.

Domestic Water Supply

Onsite roof water collection and river water supply available.

Anticipated Wastewater Load

Design wastewater load is calculated on a one bar attendant and therefore =1000L/day. This design is sourced from the Code of Practice - Onsite Wastewater Management, E.P.A. Publication 891.4, table 4.

Irrigation Area

The irrigation area and application rate has been determined from the results of the constant head permeameter tests, water and nutrient balance analyses and *AS/NZS 1547:2012*.

General Requirements

For secondary treated effluent, it is assumed that the design, construction, operation and maintenance are carried out in accordance with *AS/NZS1547:2012*, Code of Practice - Onsite Wastewater Management, EPA Publication 891.4 and Council Permit to Install/use.

Ground Preparation and Excavations

Results of the Emerson Crumb Test show the residual clay soils have a low slaking and low shrink-swell potential and are non-dispersive. It is recommended that gypsum be broadcasted over the excavated irrigation disposal trenches prior to the installation of the dripper lines at the rate of 1kg/m². Irrigation disposal trenches shall not be backfilled with clay or heavy soil (use topsoil) and shall be installed along the contours, not exceeding 200mm in depth with 1m separation between trenches.

Gypsum shall be reapplied every 4-5 years to assist in soil renovation.

AWTS & Balance Tank

AWTS and balance tank to be installed on natural soils (not fill), all inspection opening brought up above ground surface level and after installing the tank it must be two-thirds filled with clean water to provide ballast in the tank and prevent groundwater lifting the tank out of the ground.

Inspections and Monitoring

The 'permit to use' issued by the local shire council should state the required inspection periods. I recommend that the AWTS is inspected every 3 months and a service report be issued to the local shire council to ensure the ongoing effectiveness of the system.

Reserve Area

In accordance with EPA Publication 891.4, no reserve area is required.

Site Drainage

A cut-off drain shall be placed upslope of the proposed irrigation area and the drain shall extend at least 100 mm into the limiting clay subsoil and all potential stormwater run-on be discharged down slope well away of the proposed irrigation area.

Site Compaction

As the proposed irrigation area is located near a car park it must be fenced to prevent all vehicles from causing compaction or damage to the area.

Setback Distances

All setbacks referred to in Table 5- *Code of Practice – Onsite Wastewater Management*, E.P.A. Publication 891.4 are achievable.

Permit to Install Septic Tank

Before any works commence, a 'Permit to install' must be obtained from the local shire council for all wastewater generated on the premises.

SUMMARY OF RECOMMENDATIONS

My capability and risk assessment indicate that primary effluent and trench systems are not appropriate for this development and effluent shall be treated to a minimum 20/30 standard by an AWTS system. Sufficient space exists for retention of all wastewater on the allotment and is achievable by using the principle of sub-surface irrigation after secondary treatment. This assessment concludes the proposal for on-site wastewater management system to be sustainable, with minimal risk to the environment and human health as required by state environment protection policies.

10. CONCLUSION

I have assessed the development site and proposed irrigation area for existing and potential risks. The Edis risk algorithm has a combined risk assessment rating of **3.6 (Medium Risk)**.

I recommend installing an AWTS system preferably with nutrient reduction (Taylex ABS 2000 or similar) to treat effluent to a minimum 20/30 quality. I also recommend installing a grease trap prior to the AWTS for all kitchen waste pipes to be connected too and all other plumbing sewer pipes may be connected straight to a balance tank.

Proposed Treatment System Recommendation.

The proposed development is only operating three days a week and to reduce the irrigation area size and achieve a balanced wastewater disposal rate, I recommend installing a Taylex Advanced Blower System (ABS or similar system) that is designed to treat the wastewater from a site with a hydraulic influent loading up to 2,000 litres per day and a balance tank that will hold 4,000 litres.

The Tavern's wastewater will be delivered to one Taylex 4,000 litre balance tank (or similar) that will balance the flows to the Taylex ABS unit over a 24 hour period 7 days a week.

The Taylex 4,000 litre balance tank consists of a monolithic constructed precast concrete tank with a capacity of 4,435 litres. The tank is fitted with a Davey D75GA grinder pump and high water alarm, the internal surface of the chamber is coated in a chemical and gas resistant two pack epoxy coating to protect the chamber from gases and acidic compounds. The pump is connected to a Taylex Duty Cycle Timer that is situated in a stainless steel control box bolted to the top of the tank. The timer is factory set to deliver the required amount of litres per day (430) to the treatment plant. However, this timer can be adjusted at any time by the service operator if required.

By using a balance tank the irrigation field can be reduced and wastewater applied more evenly across the irrigation area and extend the recovery time between dosing.

Wastewater loading.

$$3\text{days} \times 1000\text{L/day} = 3000\text{L}$$

$$3000\text{L} / 7 \text{ days} = 428\text{L/day} (430\text{L/day})$$

$$430\text{L/day} / 24\text{hrs} = 18\text{L/h}$$

430L/day requires 423m² irrigation area which is conservative as it takes into consideration the limiting factors of the site and potential volume of wastewater and will provide a further increase in confidence that the system will be able to contain all wastewater.

The effluent applied to land via pressure-compensating sub-surface drip irrigation system installed along the contours and install a total of 450m² irrigation area.

The irrigation pipe to be Netafim Bioline dripper system or equivalent as the Netafim Bioline dripper system is a pressure compensating system that will allow even distribution across the irrigation field.

11. MANAGEMENT PROGRAMME

To ensure for the most effective use of any effluent system the following measures are recommended:

Wastewater treatment systems serving the proposed dwelling must comply with the EPA conditions indicated in approval conditions or equivalent.

The plumber installing the system shall provide a Plumbing Industry compliance certificate and an as-laid plan to the local Council in order to obtain a Permit to Use.

For best practice:

1. Trenches to be monitored for signs of any surcharge or seepage;
2. Sink strainer to be used to catch food particles;
3. Front-loading washing machine be used when possible;
4. Surge loads be avoided (letting out large volumes of water at the same time);
5. Use biodegradable soaps;
6. Environmentally-friendly, low-phosphate laundry products to be used;
7. Scrape all dishes to remove grease and fats before washing;
8. Do not install a garbage grinder waste disposal system;
9. Do not allow sanitary napkins or hygiene products to enter the system;
10. Do not dispose of aggressive toxic cleaning agents in the system;

- 11. Do not dispose of any solvents or paints in the system;
- 12. Do not allow bleach, whiteners, nappy soakers, spot removers or disinfectants to enter the system;
- 13. Water saving devices should be used where practicable, eg: shower head, aerator on sink outlet, pressure regulating valve;
- 14. If a spa or insinkerator is to be installed, additional trench length(s) shall be added to the system;
- 15. A maintenance and service contract, with a service technician accredited by the manufacturer, is in place to ensure the system is regularly serviced in accordance with the relevant EPA CA and local council permit (Approval to Use Septic Tank System).

12. REFERENCES

AS/NZS 1547:2012 On-site domestic wastewater management
 Environment Protection Act 1970 (Victoria)
 EPA Victoria (1996), *Code of Practice – Septic Tanks (Publication 451)*
 EPA Victoria (2003), *Septic Tanks Code of Practice (Publication 891)*
 EPA Victoria (2003), *Land Capability Assessment for Onsite Domestic Wastewater Management (Publication 746.1)*
 EPA Victoria (2013), *Code of Practice – Onsite Wastewater Management (Publication 891.3)*
 Municipal Association of Victoria (2006), *Model Land Capability Assessment Report*, MAV & DSE
 Land Capability Assessment for On-site Wastewater Management 2010- Joe Whitehead
 Mansfield Shire Domestic Wastewater Management Plan Pilot Project 2014

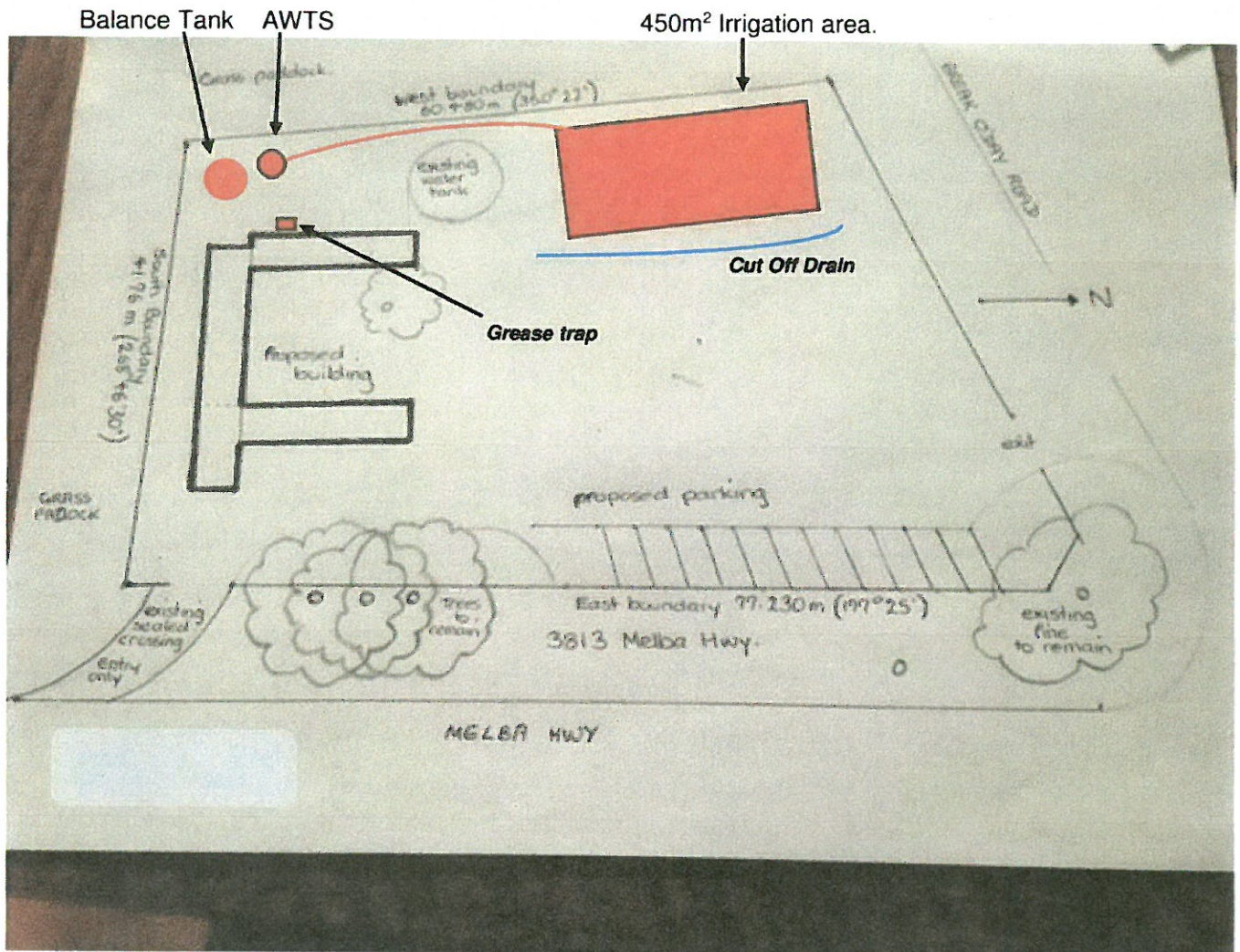


Adam Layfield
Mansfield Land Capability & Soil Assessments
7th August 2016.

Member of;
Victorian Construction Materials Laboratories Association (VCMLA)
Australian Water Association (AWA)
Foundation and Footings Society (Vic) Inc. (FFSV)
Victorian Building Authority Licence No 32561

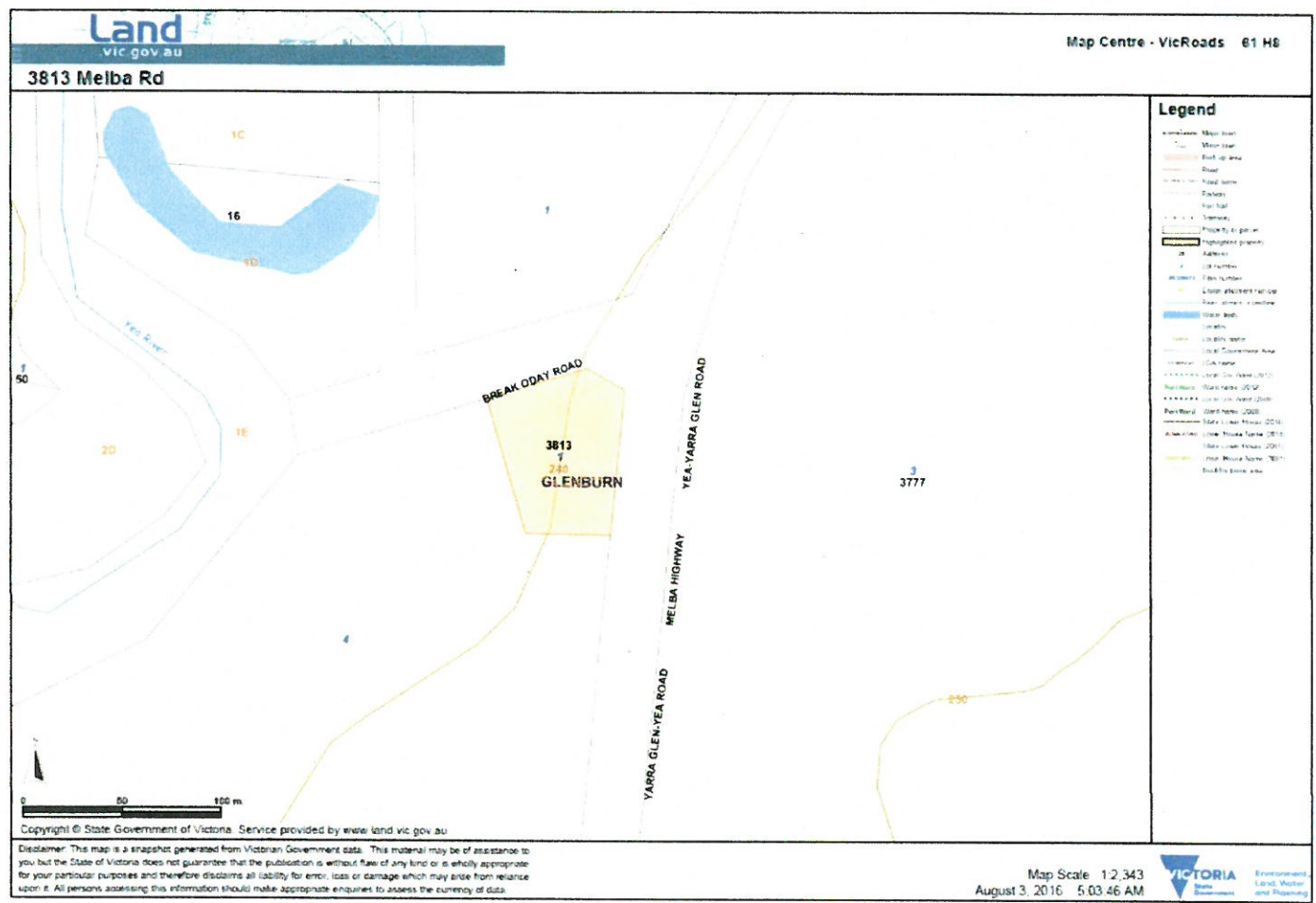
Appendix A

Site Plan
Not to Scale



Appendix B

Map from DEPI of Lot 1, 3813 Melba Road, Glenburn.



Appendix C

Photo of constant head permeameter tests conducted on 3rd August 2016.



Appendix D

Soil Horizon



Appendix E

Planning Overlay

Planning Property Report

From www.delwp.vic.gov.au/planning on 07 August 2016 04:55 PM

Address: 3813 MELBA HIGHWAY GLENBURN 3717

Lot / Plan: Lot 1 LP124920

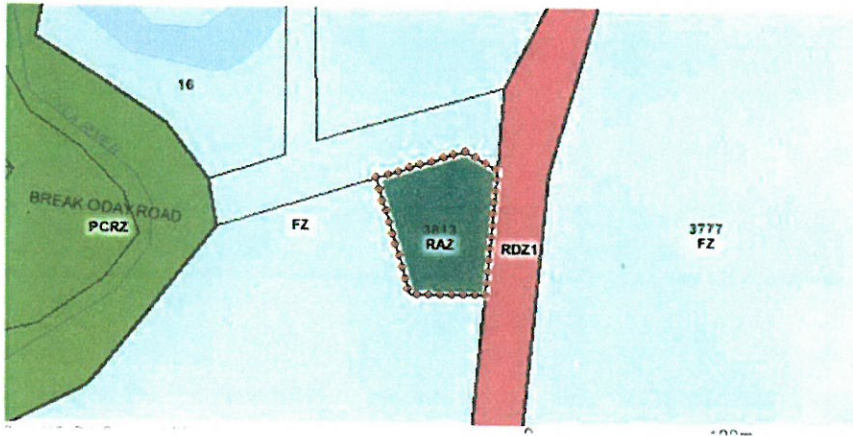
Local Government (Council): MURRINDINDI **Council Property Number:** 6507

Directory Reference: VicRoads 61 H8

Planning Zone

RURAL ACTIVITY ZONE (RAZ)

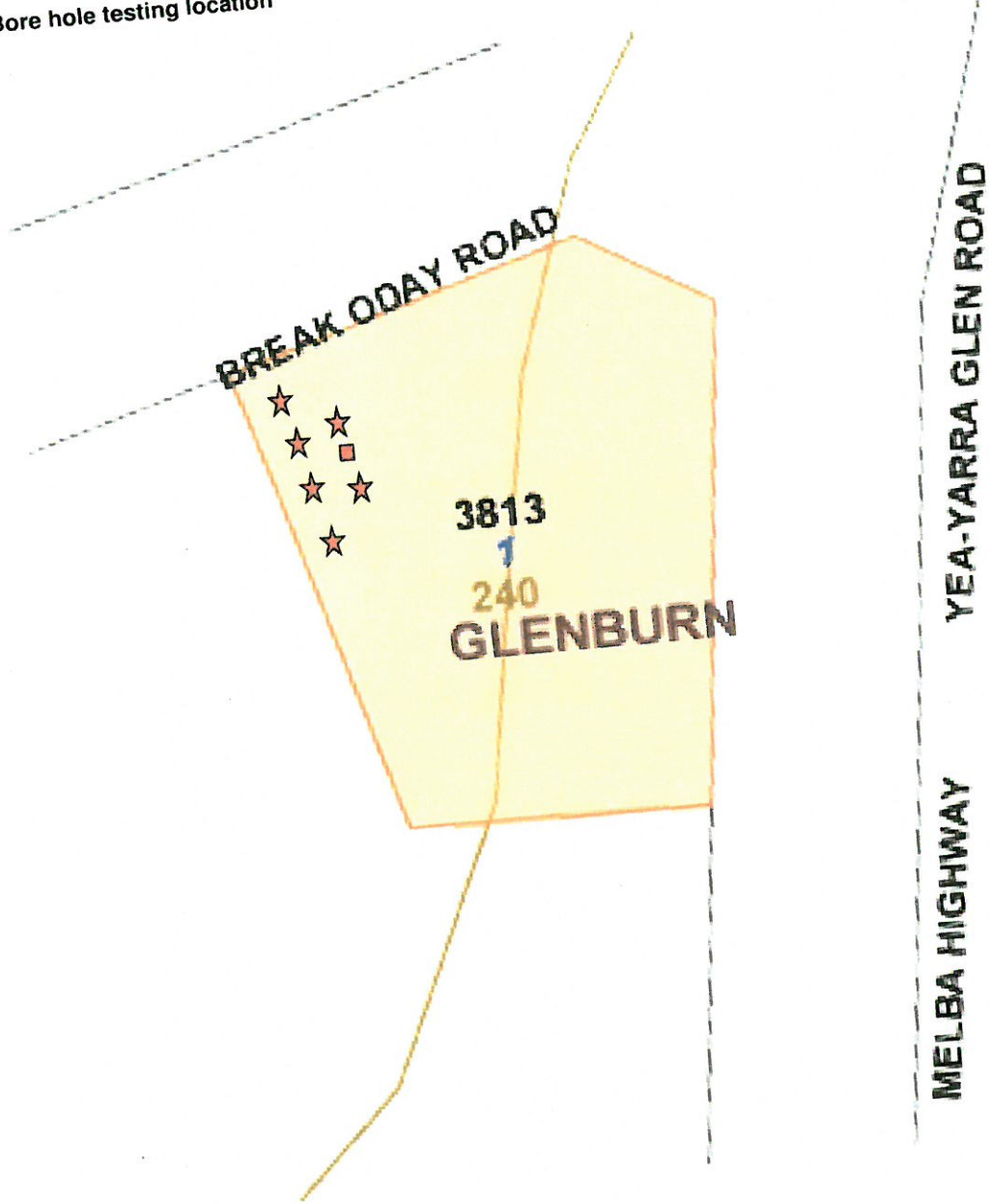
SCHEDULE TO THE RURAL ACTIVITY ZONE



D16/11170

Appendix F

Bore hole testing location



★ Bore Hole
■ Test pit

Biodiversity assessment report

Biodiversity information for applications for permits to remove native vegetation under clause 52.16 or 52.17 of the Victoria Planning Provisions

Date of issue: 14 July 2016

Time of issue: 16:03:19

Property address 3813 MELBA HIGHWAY GLENBURN 3717

Summary of marked native vegetation

Risk-based pathway	Low
Total extent	1 tree
Scattered trees	1 tree
Location risk	A

See Appendix 1 for risk-based pathway details

Offset requirements

If a permit is granted to remove the marked native vegetation, a requirement to obtain a native vegetation offset will be included in the permit conditions. The offset must meet the following requirements:

Offset type	General offset
Offset amount (general biodiversity equivalence units)	0.002
Offset attributes	
Vicinity	Goulburn Broken Catchment Management Authority (CMA)
Minimum strategic biodiversity score	0.080
Strategic biodiversity score of marked native vegetation	0.100

See Appendix 2 for offset requirements details

Biodiversity assessment report

Next steps

This proposal to remove native vegetation must meet the application requirements of the low risk-based pathway and it will be assessed in the low risk-based pathway.

If you wish to remove the marked native vegetation you are required to apply for a permit from your local council.

The Biodiversity assessment report should be submitted with your application for a permit to remove native vegetation you plan to remove, lop or destroy.

The Biodiversity assessment report provides the following information that is required to be provided with your application for a permit to remove native vegetation:

- The location of the site where native vegetation is to be removed.
- The area of the patch of native vegetation and/or the number of any scattered trees to be removed.
- Maps or plans containing information set out in the *Permitted clearing of native vegetation - Biodiversity assessment guidelines*.
- The risk-based pathway of the application for a permit to remove native vegetation.
- The strategic biodiversity score of the native vegetation to be removed.
- The offset requirements should a permit be granted to remove native vegetation.

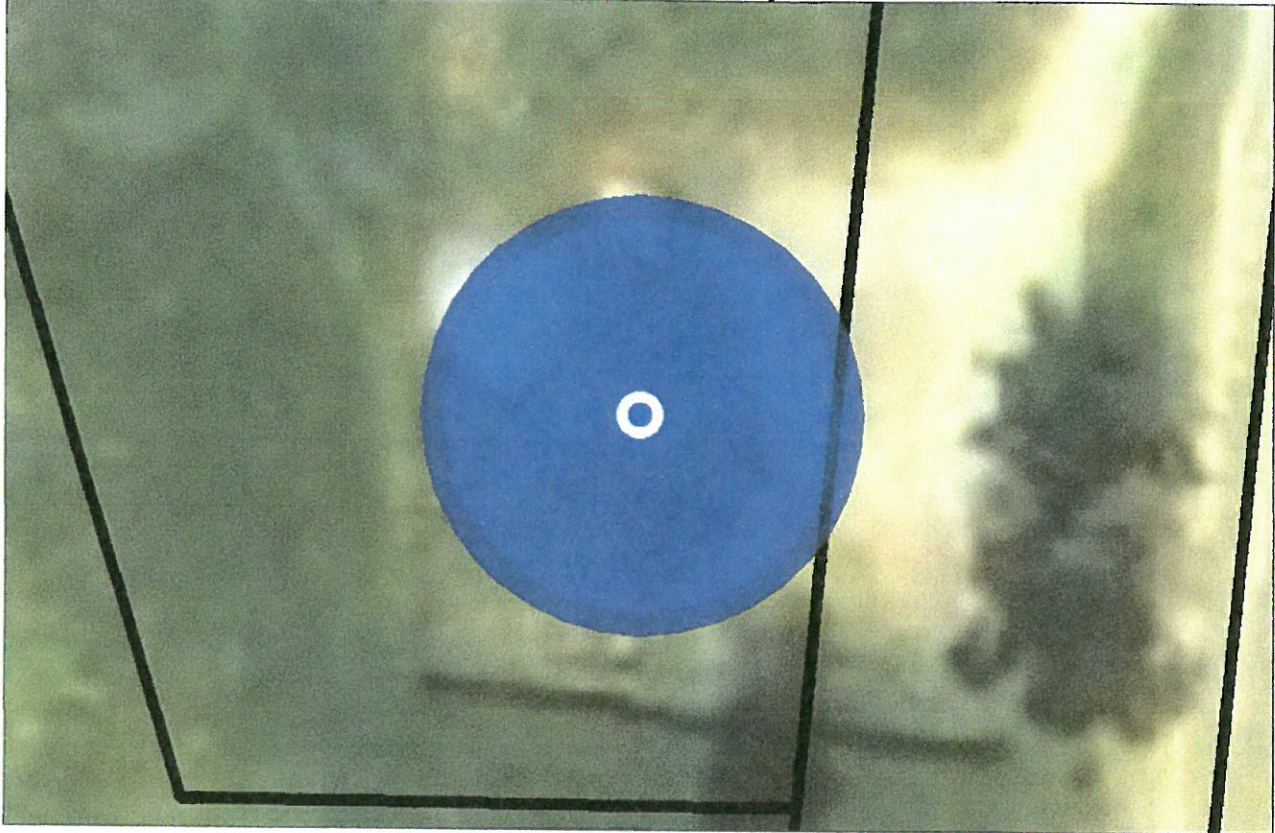
If you have undertaken any permitted clearing on your property within the last five years contact DELWP to confirm offset requirements.

Additional information is required when submitting an application for a permit to remove native vegetation. Refer to the *Permitted clearing of native vegetation - Biodiversity assessment guidelines* for a full list of application requirements.



Biodiversity assessment report

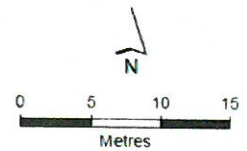
Maps of marked native vegetation

Marked native vegetation to be removed, lopped or destroyed



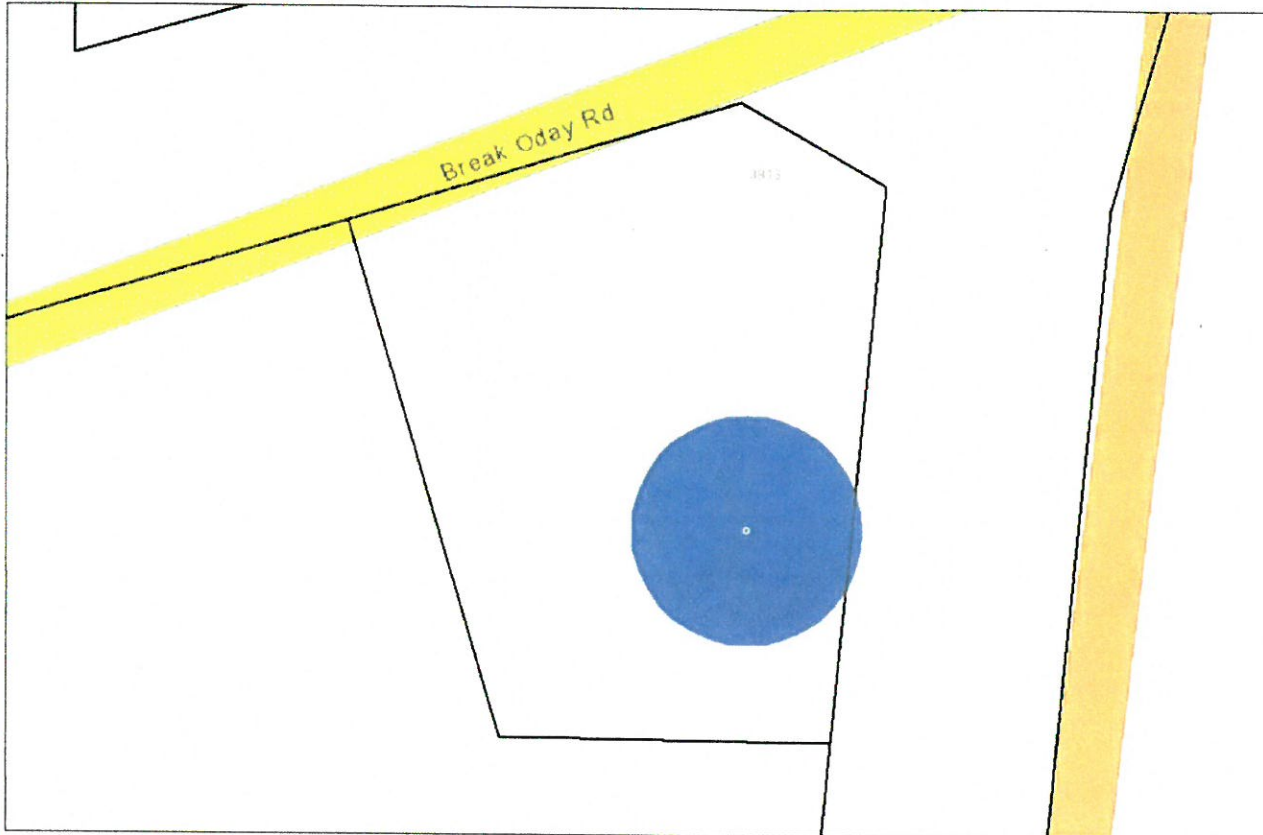
Legend

-  Marked native vegetation
-  Property boundary



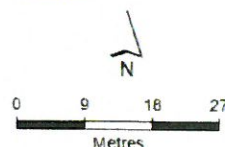
Biodiversity assessment report

Property view of marked native vegetation



Legend

- Marked native vegetation
- Property boundary



See Appendix 3 for biodiversity information maps

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Obtaining this publication does not guarantee that an application will meet the requirements of clauses 52.16 or 52.17 of the Victoria Planning Provisions or that a permit to remove native vegetation will be granted.

Notwithstanding anything else contained in this publication, you must ensure that you comply with all relevant laws, legislation, awards or orders and that you obtain and comply with all permits, approvals and the like that affect, are applicable or are necessary to undertake any action to remove, lop or destroy or otherwise deal with any native vegetation or that apply to matters within the scope of clauses 52.16 or 52.17 of the Victoria Planning Provisions.

www.delwp.vic.gov.au



Biodiversity assessment report

Appendix 1 - Risk-based pathway details

Risk-based pathway	Low
Total extent	1 tree
Scattered trees	1 tree
Location risk	A

Why is the risk-based pathway low?

The following table explains how the risk-based pathway is determined:

Extent	Location A	Location B	Location C
< 15 scattered trees	Low	Moderate	High
≥ 15 scattered trees	Moderate	High	High

The marked native vegetation is located entirely within Location A and has a total extent of less than 15 scattered trees.

At this location, native vegetation removal of this size is not expected to have a significant impact on the habitat of any rare or threatened species. As a result, an application for the removal of this native vegetation must meet the requirements of, and will be assessed in, the low risk-based pathway.

For further information on location risk please see *Native vegetation location risk map factsheet*. For information on the determination of the risk-based pathway see *Permitted clearing of native vegetation – Biodiversity assessment guidelines*.

Have you received a planning permit to remove native vegetation in the last five years?

If you have undertaken any permitted clearing on your property within the last five years, the extent of this past clearing must be included in the total extent of your current permit application. The risk-based pathway for your application requirements and assessment pathway is determined using the combined extent of permitted clearing within the last five years and proposed clearing.

If the risk-based pathway determined from this combined extent is low, contact DELWP to confirm offset requirements.

Biodiversity assessment report

Appendix 2 - Offset requirements details

If a permit is granted to remove the marked native vegetation the permit condition will include the requirement to obtain a native vegetation offset. This offset must meet the following requirements:

Offset type	General offset
Offset amount (general biodiversity equivalence units)	0.002
Offset attributes	
Vicinity	Goulburn Broken Catchment Management Authority (CMA)
Minimum strategic biodiversity score	0.080
Strategic biodiversity score of marked native vegetation	0.100

Native vegetation to be removed

Total extent (hectares) for calculating habitat hectares	0.071	<p>This is the total area of the marked native vegetation in hectares.</p> <p>The total extent of native vegetation is an input to calculating the habitat hectares of a site and in calculating the general biodiversity equivalence score. Where the marked native vegetation includes scattered trees, each tree is converted to hectares using a standard area calculation of 0.071 hectares per tree.</p>
Condition score*	0.200	<p>This is the weighted average condition score of the marked native vegetation. This condition score has been calculated using the <i>Native vegetation condition map</i>.</p> <p>The condition score of native vegetation is a site-based measure of how close the native vegetation is to its mature natural state, as represented by a benchmark reflecting pre-settlement circumstances. The <i>Native vegetation condition map</i> is a modelled layer based on survey data combined with a benchmark model and a range of other environmental data.</p>
Habitat hectares	0.014	<p>Habitat hectares is a site-based measure that combines extent and condition of native vegetation. The habitat hectares of native vegetation is equal to the current condition of the vegetation (condition score) multiplied by the extent of native vegetation.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Habitat hectares = total extent x condition</p> </div>
Strategic biodiversity score	0.100	<p>This is the weighted average strategic biodiversity score of the marked native vegetation. This strategic biodiversity score has been calculated using the <i>Strategic biodiversity map</i>.</p> <p>The strategic biodiversity score of native vegetation is a measure of the native vegetation's importance for Victoria's biodiversity, relative to other locations across the landscape. The <i>Strategic biodiversity map</i> is a modelled layer that prioritises locations on the basis of rarity and level of depletion of the types of vegetation, species habitats, and condition and connectivity of native vegetation.</p>

Biodiversity assessment report

General biodiversity equivalence score	0.001	<p>The general biodiversity equivalence score quantifies the relative overall contribution that the native vegetation to be removed (the marked native vegetation) makes to Victoria's biodiversity. It is calculated as follows:</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>General biodiversity equivalence score = habitat hectares × strategic biodiversity score</p> </div>
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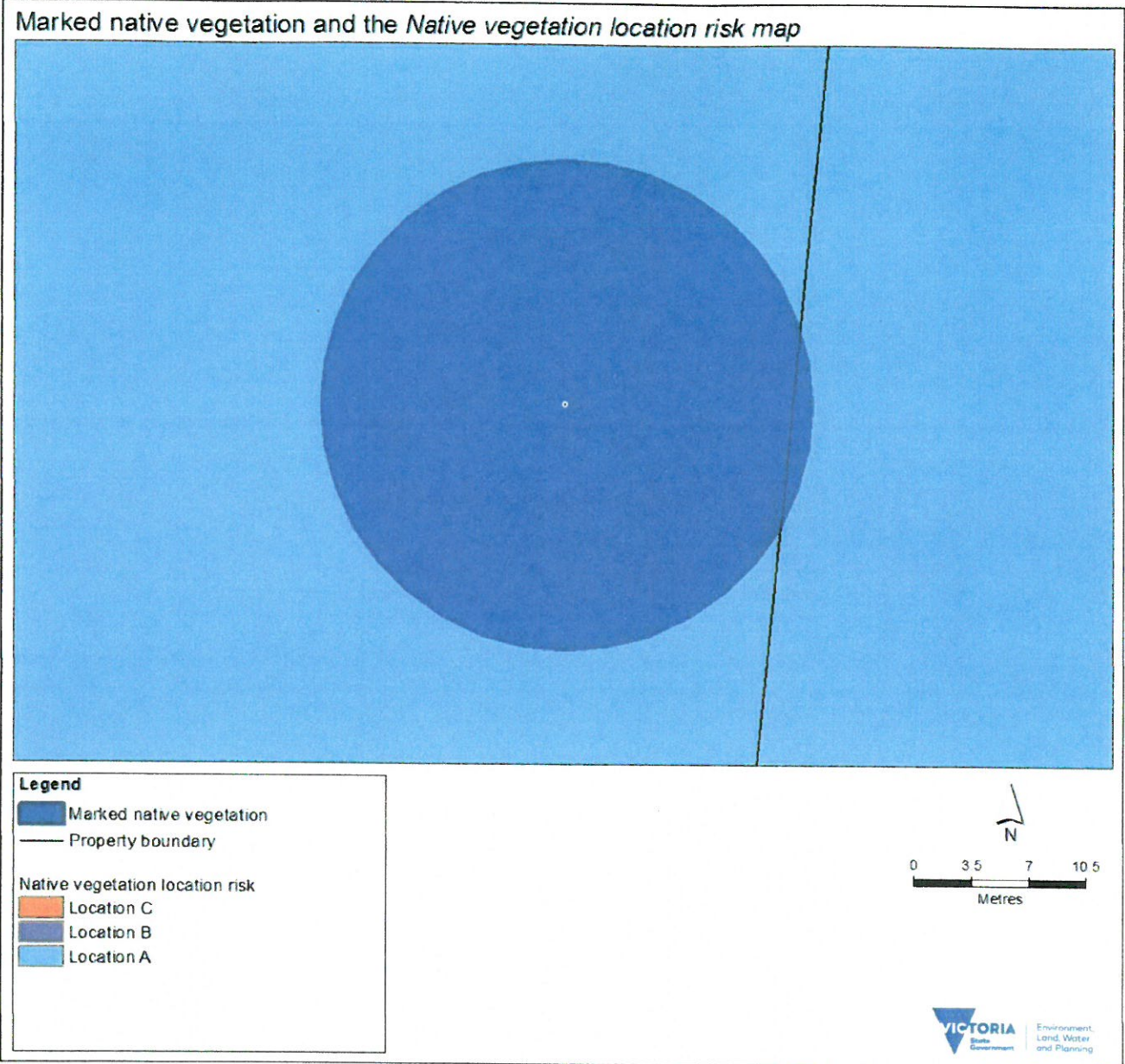
* Offset requirements for partial clearing: If your proposal is to remove parts of the native vegetation in a remnant patch (for example only understorey plants) the condition score must be adjusted. This will require manual editing of the *condition score*, and an update to the following calculations that the biodiversity assessment tool has provided: *habitat hectares*, *general biodiversity equivalence score* and *offset amount*.

Offset requirements

Offset type	General offset	<p>A general offset is required when a proposal to remove native vegetation is not deemed, by application of the specific-general offset test, to have a significant impact on habitat for any rare or threatened species. All proposals in the low risk-based pathway will require a general offset.</p>
Risk factor for general offsets	1.5	<p>There is a risk that the gain from undertaking the offset will not adequately compensate for the loss from the removal of native vegetation. If this were to occur, despite obtaining an offset, the overall impact from removing native vegetation would result in a loss in the contribution that native vegetation makes to Victoria's biodiversity.</p> <p>To address the risk of offsets failing, an offset risk factor is applied to the calculated loss to biodiversity value from removing native vegetation.</p>
Offset amount (general biodiversity equivalence units)	0.002	<p>This is calculated by multiplying the general biodiversity equivalence score of the native vegetation to be removed by the risk factor for general offsets. This number is expressed in general biodiversity equivalence units and is the amount of offset that is required to be provided should the application be approved. This offset requirement will be a condition to the permit for the removal of native vegetation.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Risk adjusted general biodiversity equivalence score = general biodiversity equivalence score_{clearing} × 1.5</p> </div>
Minimum strategic biodiversity score	0.080	<p>The strategic biodiversity score of the offset site must be at least 80 per cent of the strategic biodiversity score of the native vegetation to be removed. This is to ensure offsets are located in areas with a strategic value that is comparable to, or better than, the native vegetation to be removed.</p>
Vicinity	Goulburn Broken CMA	<p>The offset site must be located within the same Catchment Management Authority boundary as the native vegetation to be removed.</p>

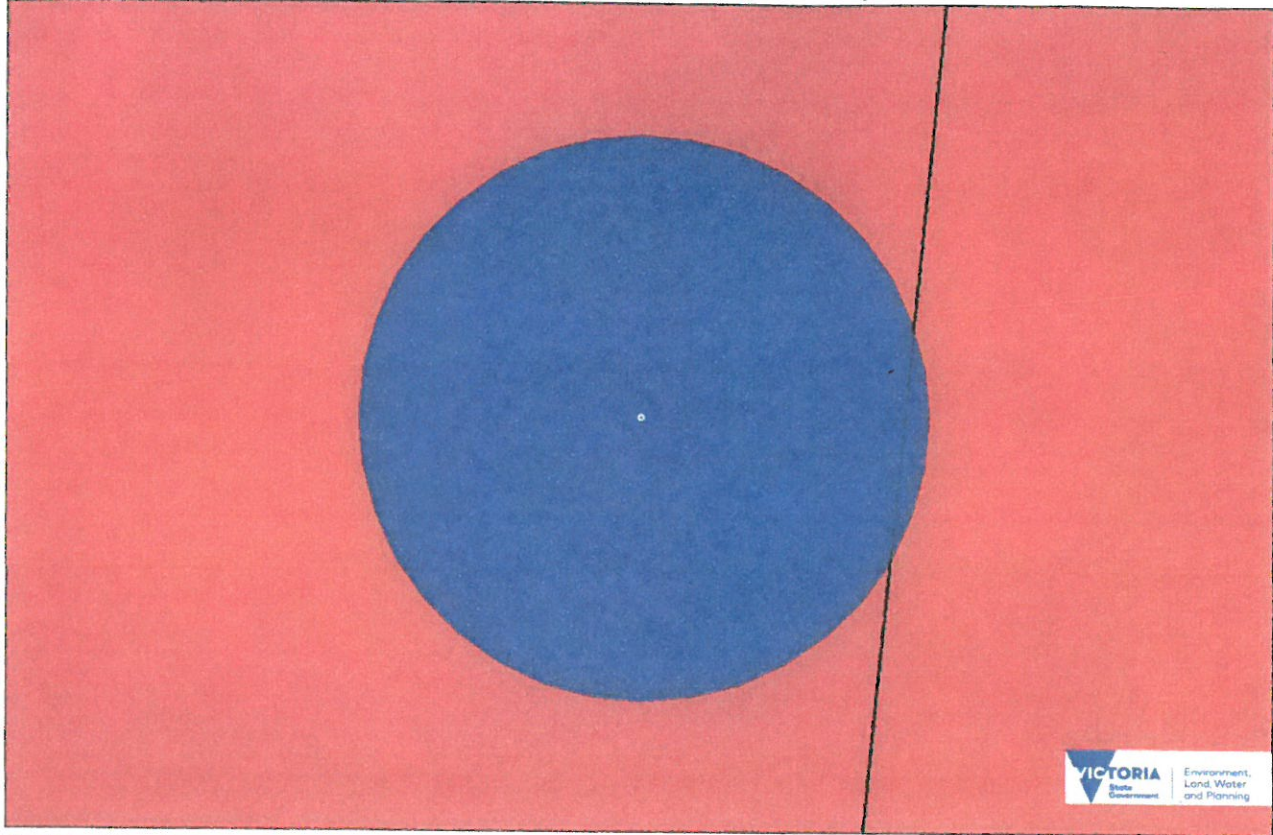
Biodiversity assessment report

Appendix 3 - Biodiversity information maps



Biodiversity assessment report

Marked native vegetation and the *Native vegetation condition map*



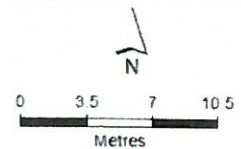
Legend

- Marked native vegetation
- Property boundary

Native vegetation condition *

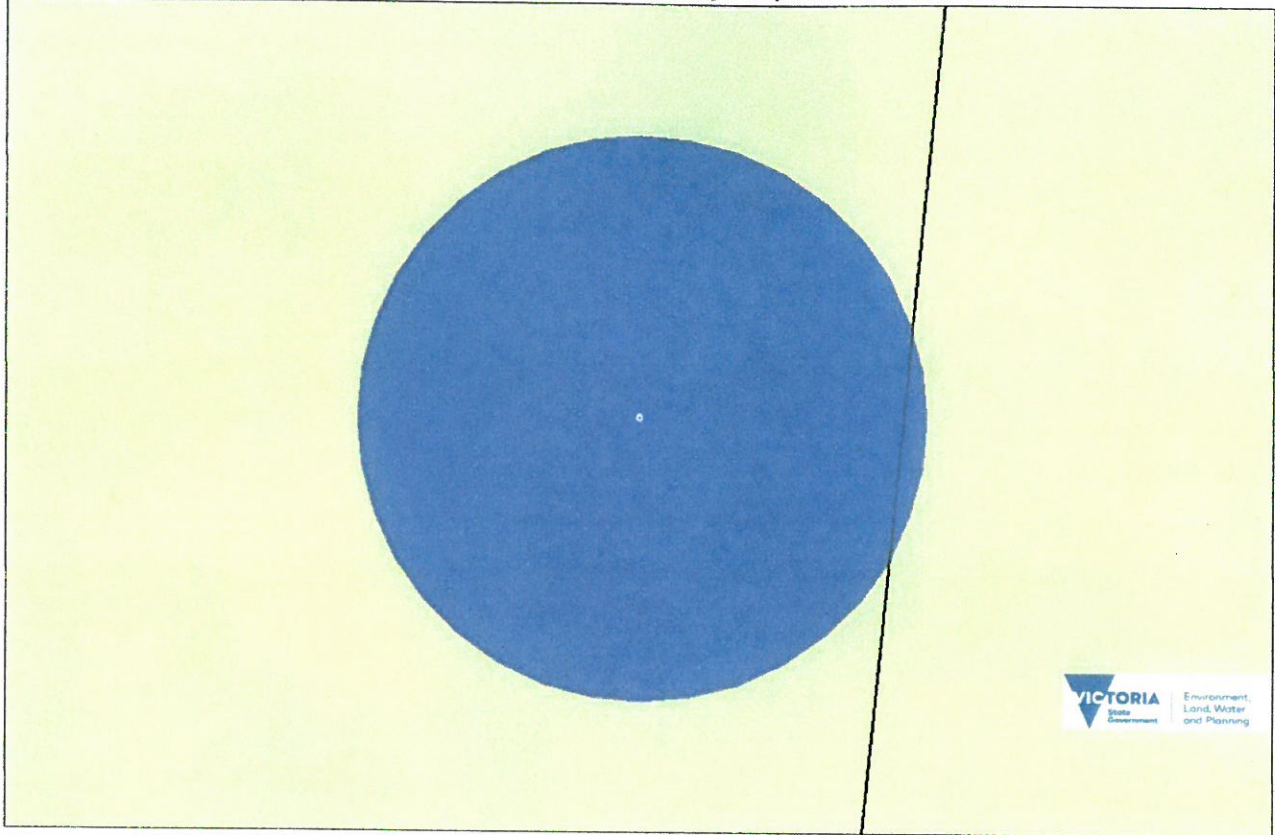
- 0.81 - 1.00
- 0.61 - 0.80
- 0.41 - 0.60
- 0.21 - 0.40
- 0.00 - 0.20

* These classes are for display purposes only



Biodiversity assessment report

Marked native vegetation and the *Strategic biodiversity map*



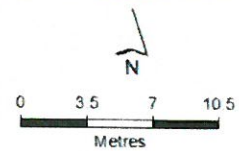
Legend

- Marked native vegetation
- Property boundary

Strategic biodiversity score*

- 0.81 - 1.00
- 0.61 - 0.80
- 0.41 - 0.60
- 0.21 - 0.40
- 0.00 - 0.20

* These classes are for display purposes only





3813 Melba Highway, Glenburn

Traffic Assessment Report

Client: Mr David Moon

Prepared by

Evan Boloutis
Director

EB Traffic Solutions Pty Ltd
B.Eng (Civil), MEng Sc (Traffic), MBA

evan@ebtraffic.com.au
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0408 395 729

26 September 2017

1. INTRODUCTION

1.1 Purpose of this report

This report sets out an assessment of the parking implications of the proposed development, with specific consideration of the following:

- the existing conditions and a description of the proposal;
- an assessment of the development's car parking requirements;
- the ability for a 12.5 m truck to enter the site, circulate and exit in a forward manner;
- an assessment of the proposal's loading dock requirements; and
- an assessment of the traffic impact of the proposal.

1.2 Referenced documents

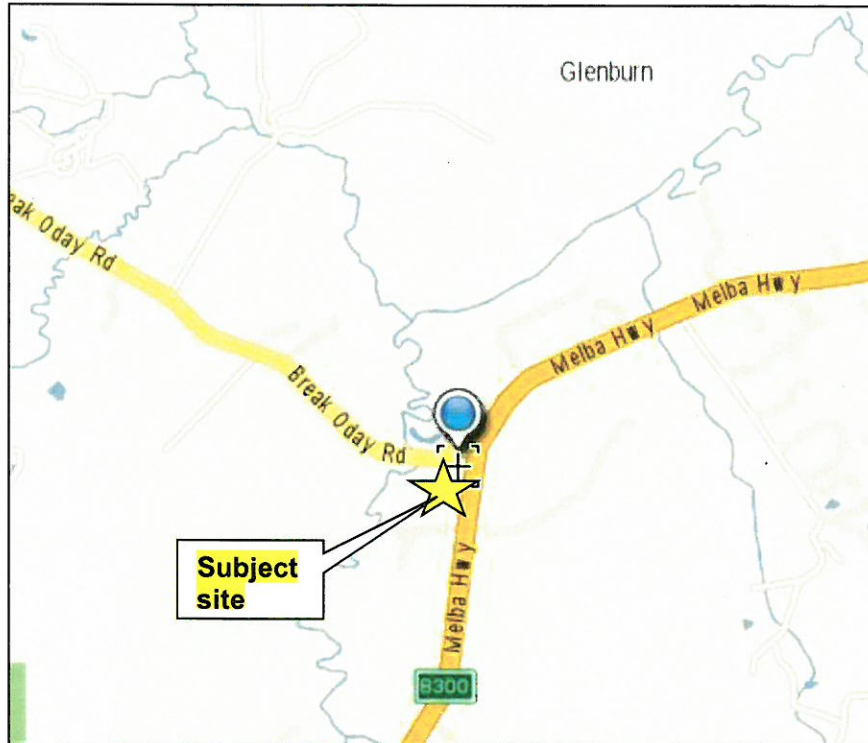
This report has been based upon a number of sources. These include:

- Site observations and measurements;
- Discussions between the applicant and officers from Council and VicRoads;
- Building Code of Australia, Melways maps, nearmap and Google maps;
- VicRoads' web site for traffic volume data and Crashstat's data;
- Discussions with and information provided by the applicant;
- AutoTURN computer software for a car (B85) and truck (12.5 m);
- RTA: Guidelines for Traffic Generating Development, 2002;
- Letter from VicRoads (Ms Julie Green) to Murrindindi Shire Council regarding planning application 2016/134 (VR ref: 19215/16), dated 3 October 2016;
- Australian Standard for off-street car parking, AS 2890.1:2004, Australian Standard, Parking facilities: Off-street parking for people with disabilities, AS 2890.6:2009;
- Plan of survey prepared by BT Surveys Pty Ltd, Project 17116, date of survey 27 January 2017; and
- Layout plans prepared by Bagnoli Architects, Dwgs TP01–TP04, Rev B, rec'd 1.9.17.

2. EXISTING CONDITIONS

2.1 Location and Land use

The existing site is located on the south-west corner of Melba Highway Road and Break O day Road. The location of the subject site is shown in **Figure 2.1**.

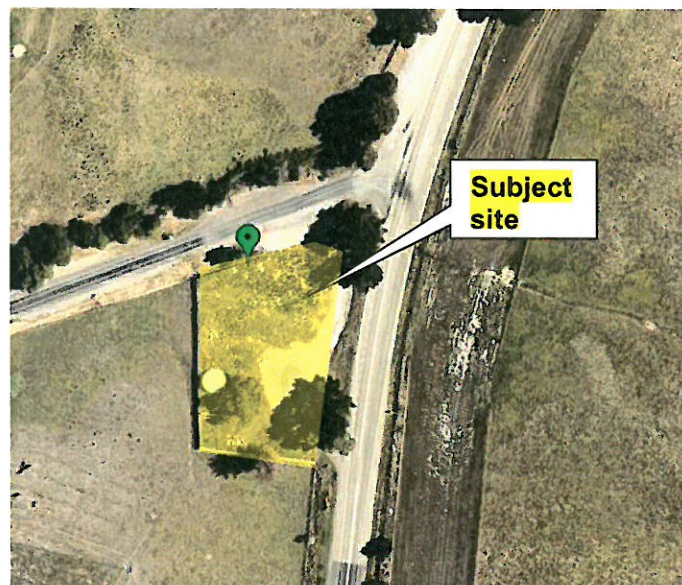


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Figure 2.1: Location of the subject site

The site is comprised of a vacant parcel of land. The site formerly accommodated the Glenburn Hotel which burnt down during the bushfires of 2009. The surrounding land uses are rural in nature.

The nature of the subject site and surrounding land uses are shown in **Figure 2.2**.



Source: nearmap

Figure 2.2: Nature of the subject site and immediately surrounding land uses

2.2 Road Network

Melba Highway is a declared arterial road and contains an undivided cross section with a traffic lane in each direction and sealed shoulders along the roadway. An 80 km/hr speed limit applies along the roadway.

Photos showing the cross section of the Melba Highway looking to the north and south are shown in **Figures 2.3** and **2.4**, respectively.



Figure 2.3: Melba Highway looking north



Figure 2.4: Melba Highway looking south

Break O Day Road is a local road and contains an undivided cross section with a traffic lane in each direction. Gravel shoulders are typically provided along the edge of the carriageway. An 80 km/hr speed limit applies along the roadway. A Give Way sign and associated line marking is located on Break O Day Road at the Melba Highway.

Photos showing the cross section of Break O Day Road looking to the west and east are shown in **Figures 2.5** and **2.6** respectively.



Figure 2.5: Break O Day Rd looking west

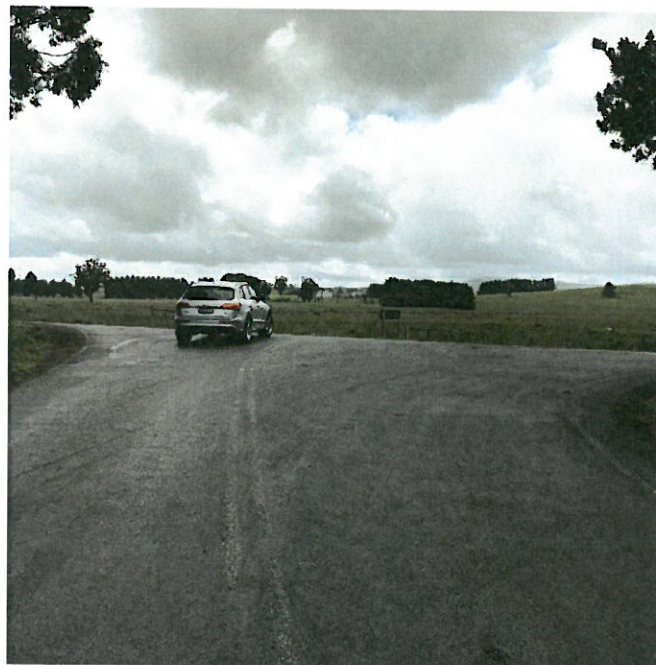


Figure 2.6: Break O Day Rd looking east (towards Melba Highway)

2.3 Traffic volumes

Reference to the VicRoads' web site indicates that Melba Highway (near Castella) carries around 3,500 vehicles per day (AADT) and a peak hour volume of around 800 vehicles per hour during the respective commuter peak hours.

2.4 Accident History

A search through the State Accidents records (Crashstats' database) indicates that, for the previous 5 year period between 1 July 2011 and 30 June 2016, there were two casualty accidents recorded at the intersection of Melba Highway and Break O Day Road.

These accidents involved a through vehicle colliding with a right turning vehicle (5.30 pm on 1 November 2015) and two vehicles involved in a head-on collision (5 pm on 17 January 2016).

Notwithstanding the two accidents recorded at the adjacent intersection, site observations indicate that the pavement markings are faint and are difficult to sight during the daytime periods.

3. THE PROPOSAL

It is proposed to construct a tavern with seating for around 100 people. A preliminary layout plan provided by the applicant indicate that the tavern will be located at the southern end of the site with the car park located at the site's northern end and an access provided via a crossover on Break O Day Road approximately 40 m west of Melba Highway.

The proposed operating hours are Fridays between 11 am and 11 pm and on weekends between 7 am and 11 pm. The tavern will be closed Mondays to Thursdays.

The tavern will accommodate a maximum of 100 patrons at any one time and have a car park with 40 spaces. A loading dock area will be provided which will accommodate delivery and refuse trucks up to 12.5 m in length.

The car park layout for the proposed tavern is shown in **Attachment A**.

4. CAR PARKING CONSIDERATIONS

4.1 Statutory Car Parking Requirements

The statutory requirements for car parking are set out in Clause 52.06 of the Murrindindi Planning Scheme, with parking rates stipulated in the table to Clause 52.06-5.

Reference to Clause 52.06-5 of the Murrindindi Planning Scheme indicates that the car parking requirement (Column A) for the proposed use (tavern) is 0.4 spaces to each patron permitted.

Based upon a capacity of 100 patrons at any one time, the proposed tavern has a statutory parking requirement of 40 spaces, inclusive of a disabled bay. The proposed on-site provision of 40 spaces satisfies the development's statutory parking requirements of 40 spaces.

Further, reference to the Building Code of Australia indicates that the proposal is required to provide one disabled parking space, which has been satisfied.

4.2 Car Park Layout

The perpendicular parking spaces provided for general visitors in the car park have been provided at a width of 2.6 m and a length of 4.9 m with a minimum aisle width of 6.4 m. The parallel parking spaces have been provided at a width of 2.3 m and a length of 6.3.

In addition, two staff spaces have been provided along the east side of the building at a width of 3.2 m and a length of 4.9 m with an adjacent aisle width of 4.8 m which complies with Clause 52.06 of the Murrindindi Planning Scheme.

In addition, a disabled parking bay has been provided in close proximity to the main entrance. The disabled bay has been provided at a width of 3.2 m and an adjacent aisle width of 4.8 m. Adjacent to the disabled bay there is a paved area which allows a disabled motorist to safely enter and exit the vehicle. On the basis of the above, it is considered that the disabled bay and adjacent paved area satisfies the intent of the requirements stipulated in the Australian Standard, Parking facilities: Off-street parking for people with disabilities, AS 2890.6:2009.

The swept paths of vehicles entering and exiting the on-site car spaces have been assessed with the use of the AutoTURN computer software for a B85 motor car. The swept path analysis shown in **Attachment B**, indicates that motorists are able to safely enter the on-site spaces, manoeuvre on-site to then exit from the site in a forward manner to Break O' Day Road consistent with the requirements of the Murrindindi Planning Scheme.

5. TRAFFIC IMPACT

5.1 Anticipated traffic generation

The 'RTA: Guidelines for Traffic Generating Development, 2002', specifies that traffic generation rates for licensed clubs are 0.5 trips per space (or 10 trips per 100 sqm) during the Friday evening peak hour.

Application of the above rates to the 100 seat tavern results in a traffic generation of up to 20 vehicle movements during the evening peak hour.

5.2 Directional Distribution

Discussions with the applicant, who operated the previous Glenburn Hotel, indicate that the main distribution of patrons will arrive/depart to and from the south (60 %) with 30 % to/from the north and 10 % to/from the west via Break O Day Road, and assuming that 80 % of the traffic movements in the peak hour are in the peak direction.

On the basis of the above directional distribution, it is anticipated that the following traffic movements will occur during the 'arrival' and 'departure' peak hours:

	No. of Vehicle Movements	
	IN	OUT
Arrival peak hour	18	2
Departure peak hour	2	18

Assignment of the anticipated traffic volumes to the respective movements at the intersection of Melba Highway and Break O Day Road indicates that, during the arrival peak hour, there will be five vehicles turning right and 11 vehicles turning left from the Melba Highway into Break O Day Road and similarly, during the departure peak hour, there will be five vehicles turning left and 11 vehicles turning right from Break O Day Road into the Melba Highway.

5.3 Traffic Impact

On the basis of the above, the traffic movements anticipated to occur at the development access and on the surrounding road network during the peak arrival and departure peak hours are considered minimal and able to be easily accommodated without any adverse impact to the operation of the adjacent network.

6. OTHER

6.1 Refuse

Bins will be used to store waste and would be serviced by a private contractor in accordance with the requirements of the Waste Management Plan for the proposed development. The refuse would be collected on days when the tavern is closed, that is, between Mondays and Thursdays.

6.2 Deliveries

Information provided by the applicant indicates that deliveries to the proposed development will be typically undertaken by the manager in a passenger sized vehicle and by delivery vehicles in the on-site loading area along the east side of the building.

The deliveries would be arranged to occur on days when the tavern would be closed to the public, that is, between Mondays and Thursdays.

The ability for delivery vehicles to service the site have been assessed with the use of the AutoTURN computer program for a 12.5 m heavy rigid vehicle.

The results of the assessment, which is shown in **Attachment C**, indicates that a 12.5 m truck is able to safely turn left into the site, manoeuvre around the car parking area to reverse back to the loading area, to then be able to exit from the site in a forward manner.

6.3 Loading Zone Requirements

An assessment of the adequacy of the loading facilities was undertaken using Clause 52.07 of the Murrindindi Planning Scheme.

Reference to Clause 52.07 of the Murrindindi Planning Scheme indicates that for a proposed floor area up to 2,600 sqm, the development is required to provide a loading dock facility with an area of 26.4 sqm with the corresponding dimensions of 7.6 m long x 3.6 m wide. The headroom clearance is required to be 4 m.

Reference to the layout plan indicates that an area is located adjacent to the staff parking bays/disabled parking bay which is suitable for use as a loading bay area, when the tavern is closed to the public.

7. CONCLUSIONS

Having regard to the above, it is considered that:

- the proposed development has as statutory parking requirement of 40 spaces which is satisfied by the proposed on-site car parking provision of 40 spaces;
- a 12.5 m truck is able to safely turn left into the site, manoeuvre around the car parking area to reverse back to the loading bay area, to then be able to exit from the site in a forward manner; and
- the traffic movements anticipated to occur at the development access and on the surrounding road network during the peak arrival and departure peak hours are considered minimal and able to be easily accommodated without any adverse impact to the operation of the adjacent network.



Evan Boloutis
Director
EB Traffic Solutions Pty Ltd

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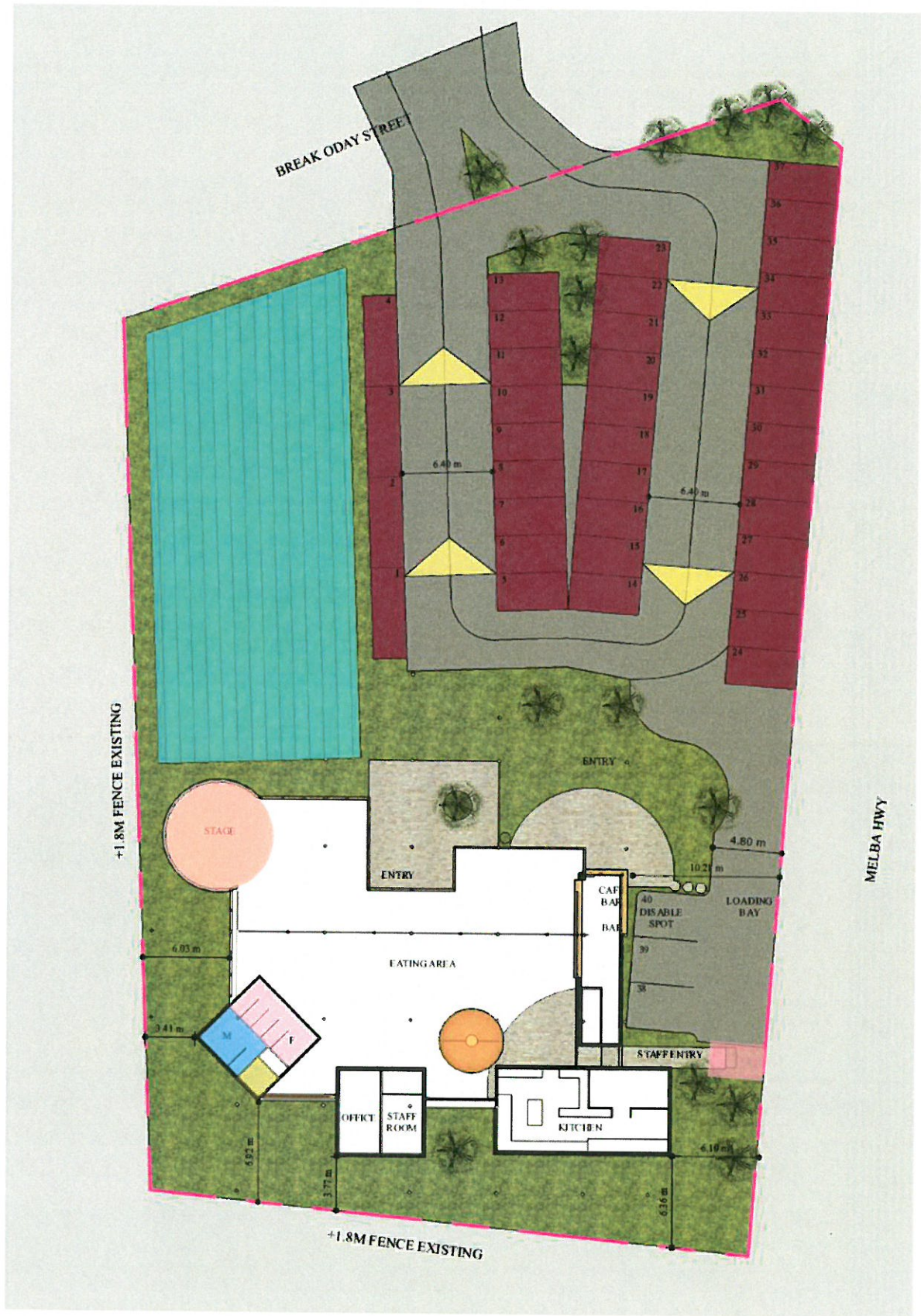
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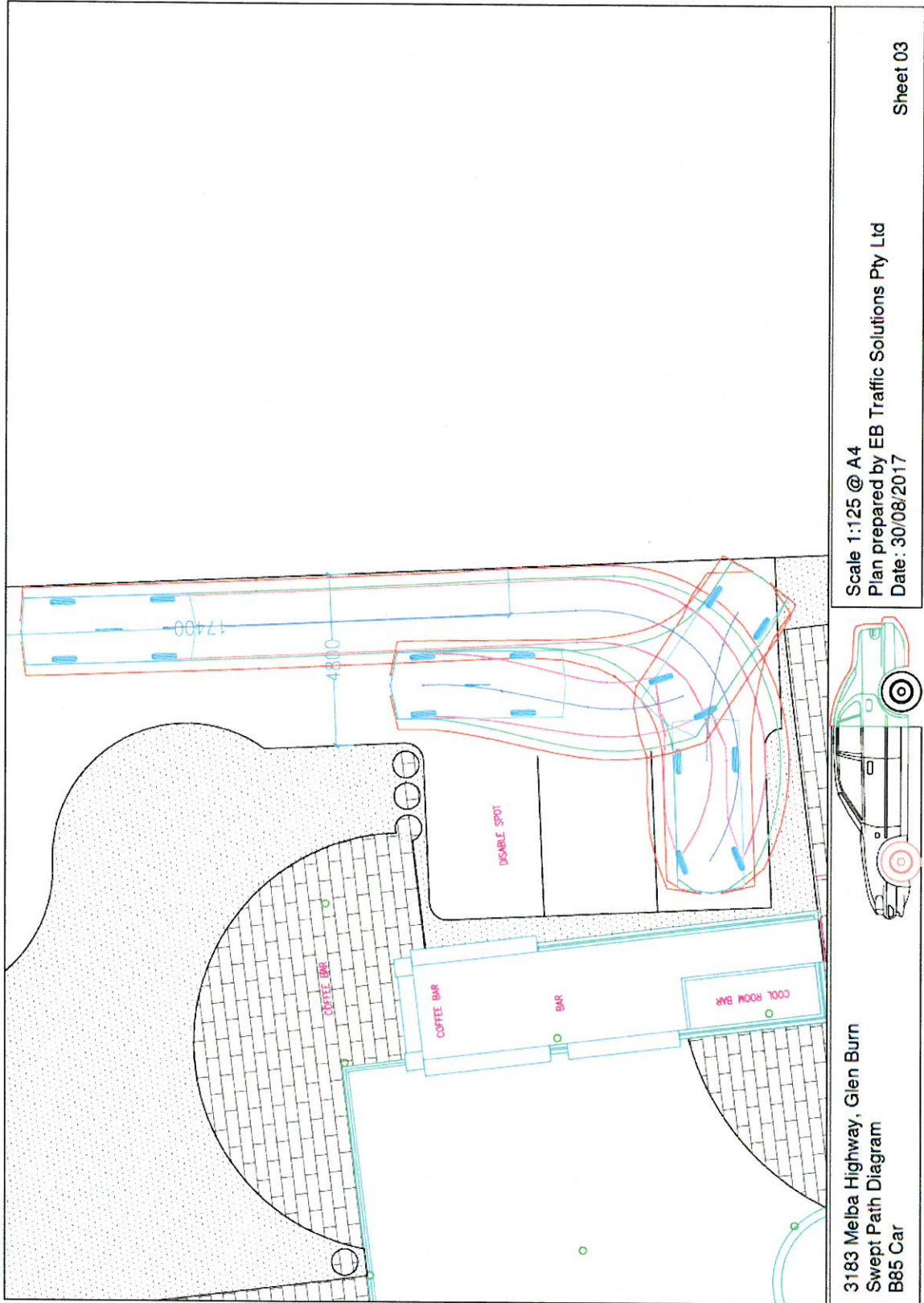


ATTACHMENT A
PROPOSED LAYOUT PLAN





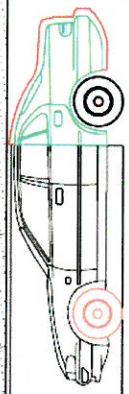
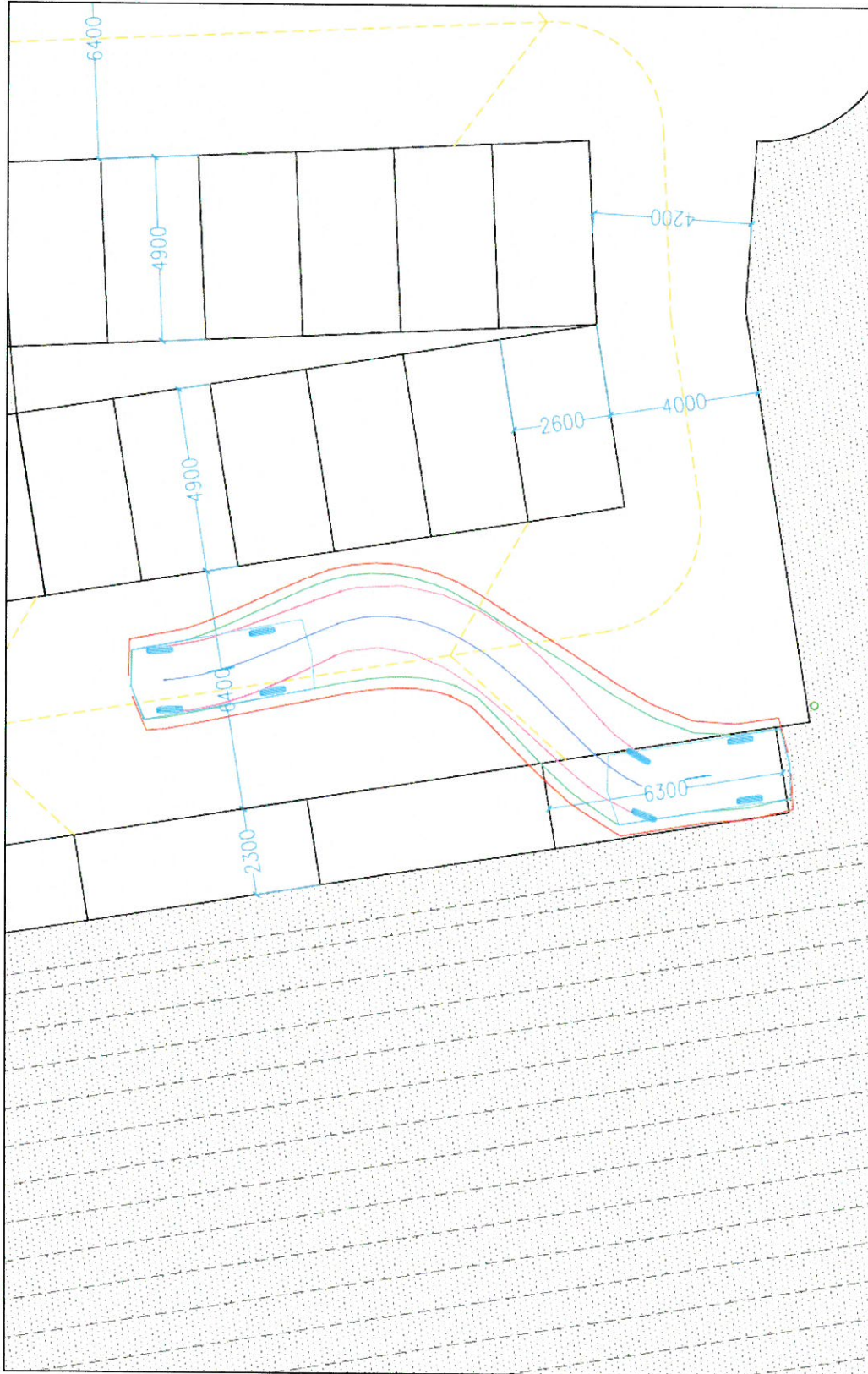
ATTACHMENT B
SWEPT PATH ANALYSIS: (B85 CAR)



Scale 1:125 @ A4
Plan prepared by EB Traffic Solutions Pty Ltd
Date: 30/08/2017

Sheet 03

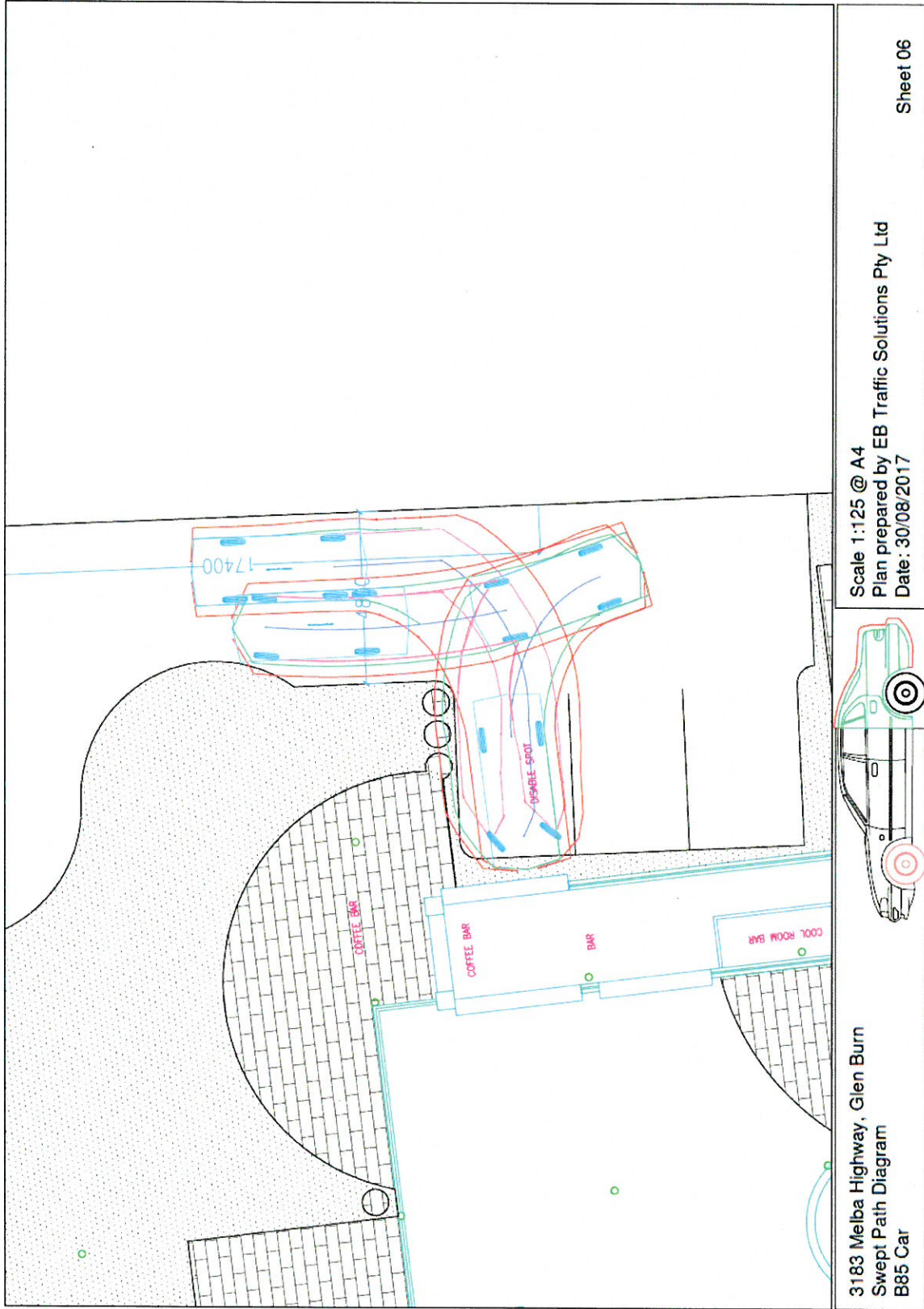




3183 Melba Highway, Glen Burn
Swept Path Diagram
B85 Car

Scale 1:125 @ A4
Plan prepared by EB Traffic Solutions Pty Ltd
Date: 30/08/2017

Sheet 05



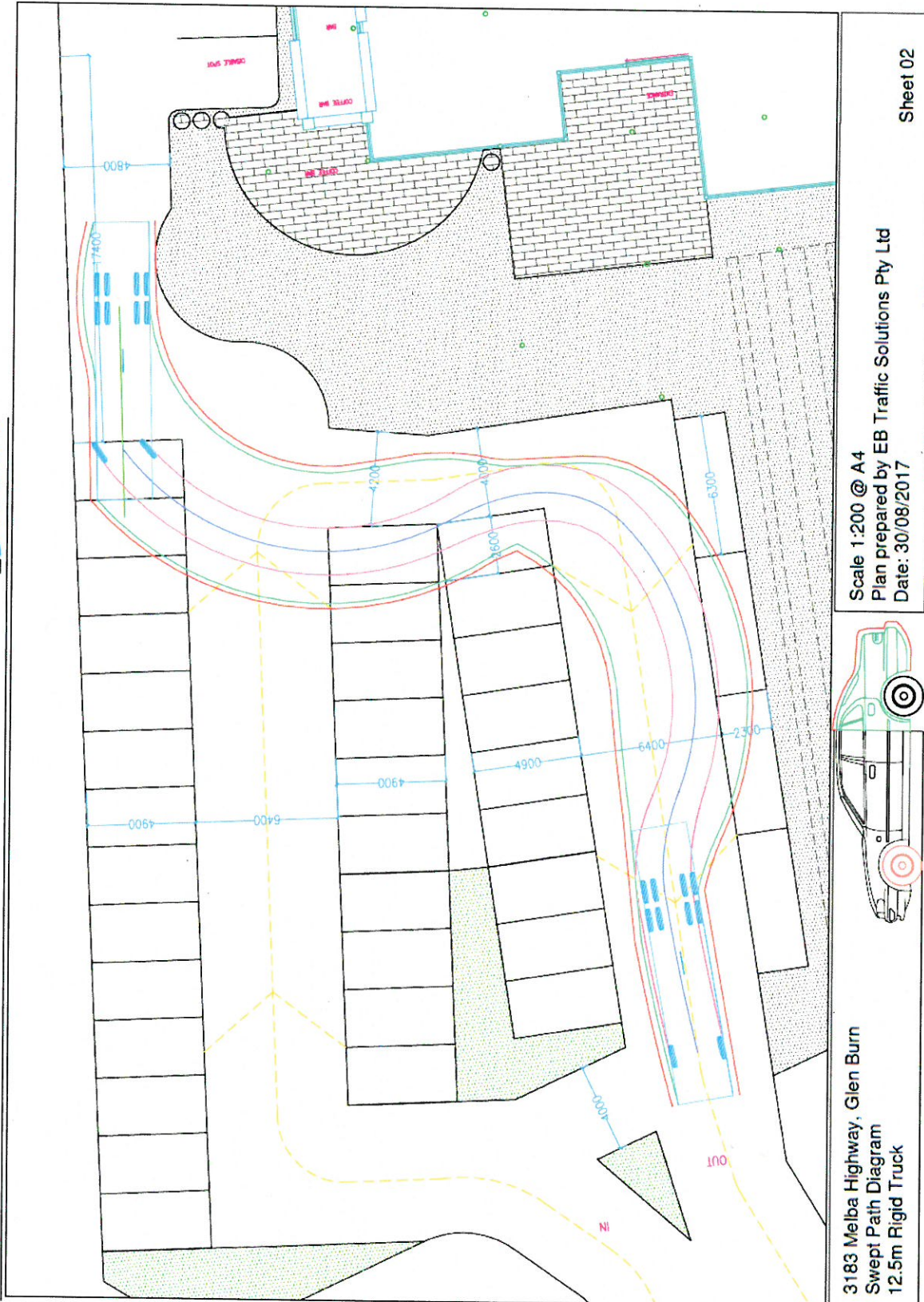
ATTACHMENT C
SWEPT PATH ANALYSIS: (12.5 m TRUCK)



3183 Melba Highway, Glen Burn
Swept Path Diagram
12.5m Rigid Truck

Scale 1:200 @ A4
Plan prepared by EB Traffic Solutions Pty Ltd
Date: 30/08/2017

Sheet 01

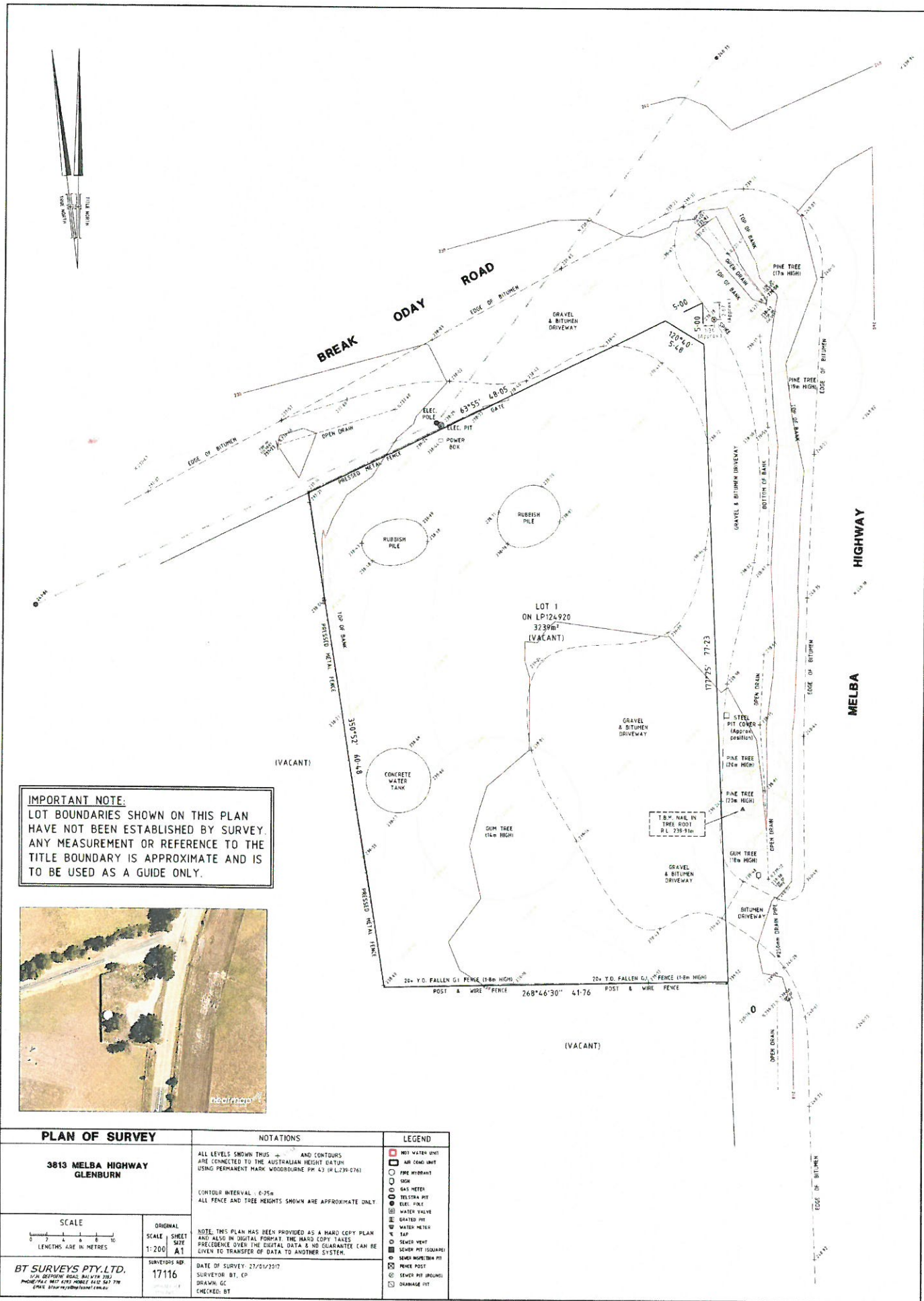


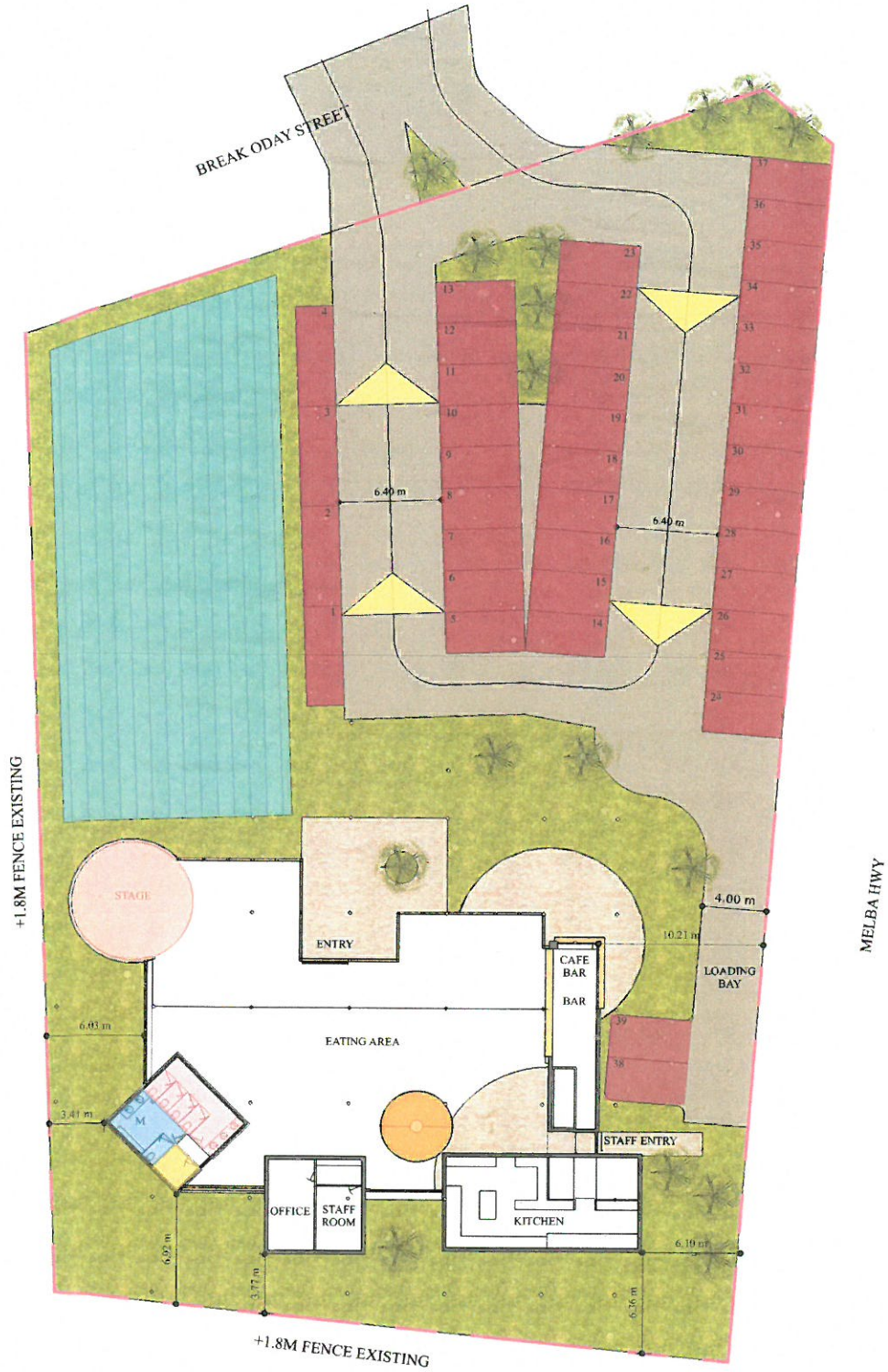
Scale 1:200 @ A4
Plan prepared by EB Traffic Solutions Pty Ltd
Date: 30/08/2017



3183 Melba Highway, Glen Burn
Swept Path Diagram
12.5m Rigid Truck

Sheet 02





- EXISTING WATER TANK TO BE INCORPORATED INTO NEW STRUCTURE
- PIZZA OVEN
- MALE TOILETS
- TOTAL PARKING BAYS 39
1 DISABLED SPOT
- DISABLE TOILET
- 450M2 IRRIGATION AREA
- FEMALE TOILETS

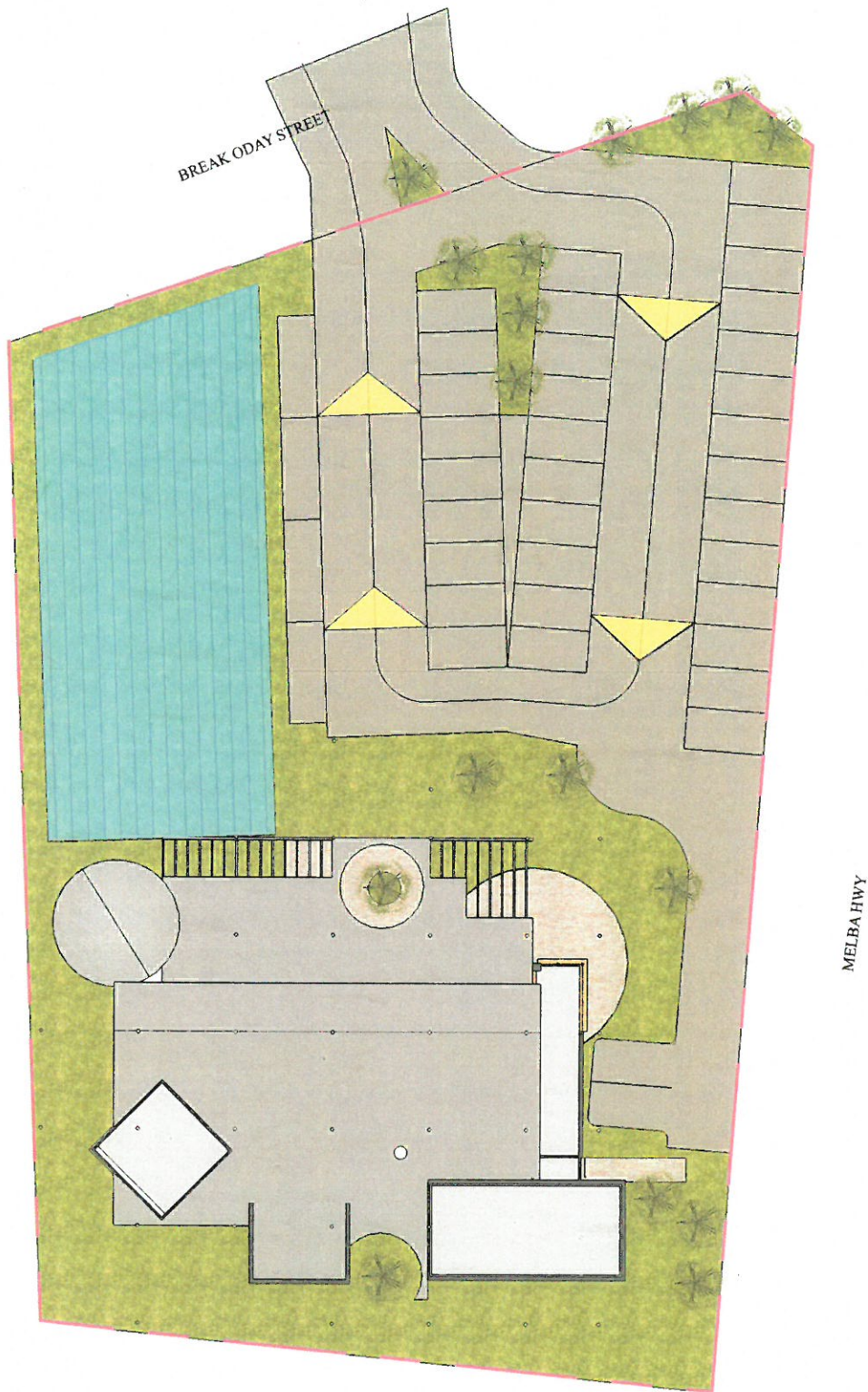
Bagnoli

BAGNOLI ARCHITECTS

3813 MELBA HWY GLENBURN

GROUND FLOOR PLAN
 1:200@A1
 REV A

TP01



BACNOLI
ARCHITECTS

3813 MELBA HWY GLENBURN

ROOF PLAN
1:200@A1
REV A

TP02



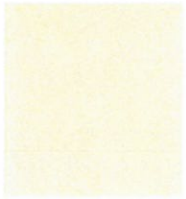
LIME WASHED SECONDS BRICKS



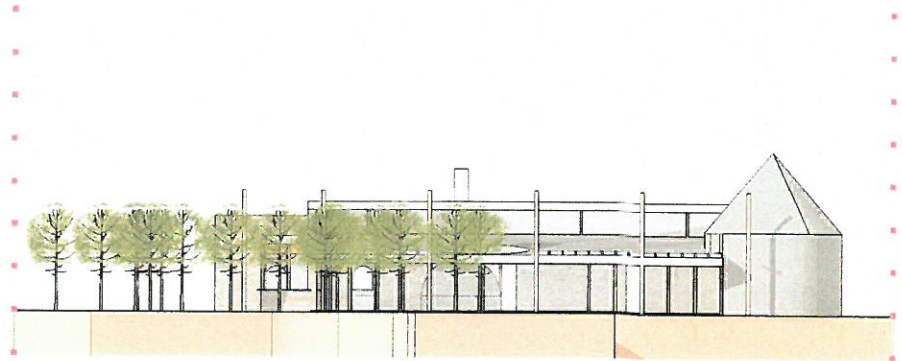
CRUSHED ROCK DRIVEWAY PARKING AREA



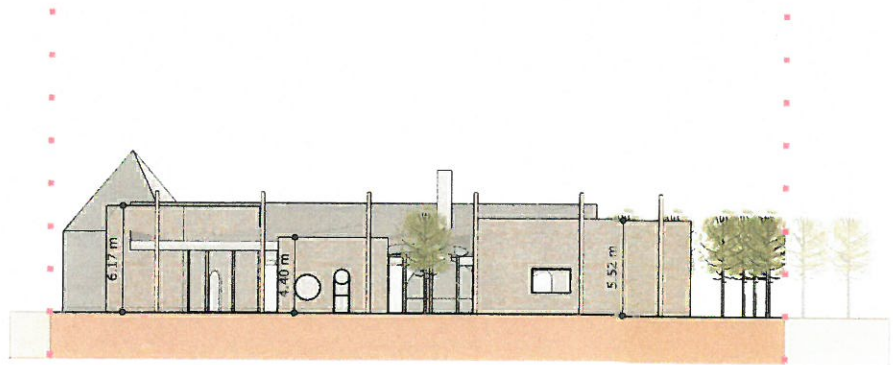
-TIMBER WINDOW FRAMES
-TIMBER ENTRANCE DOORS
-TIMBER EXTERNAL COLUMNS



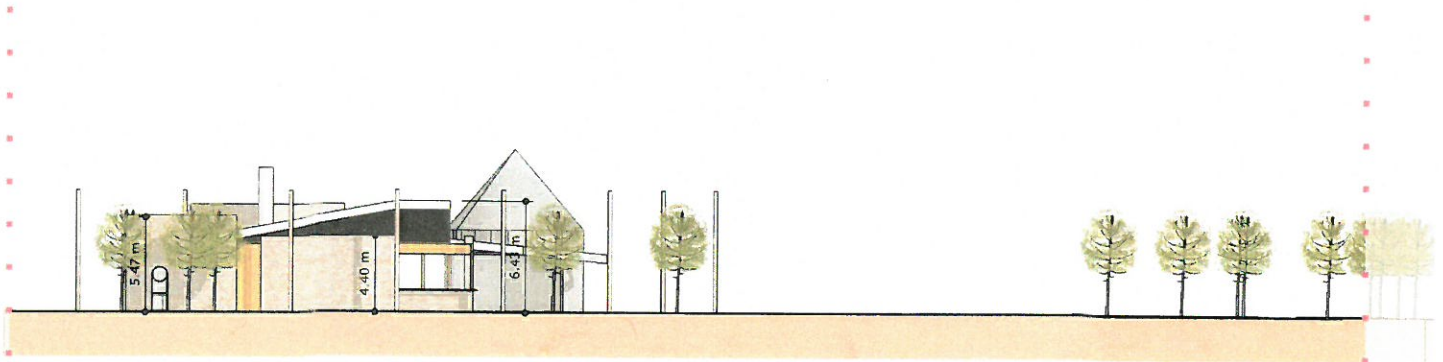
COLORBOND ROOFING



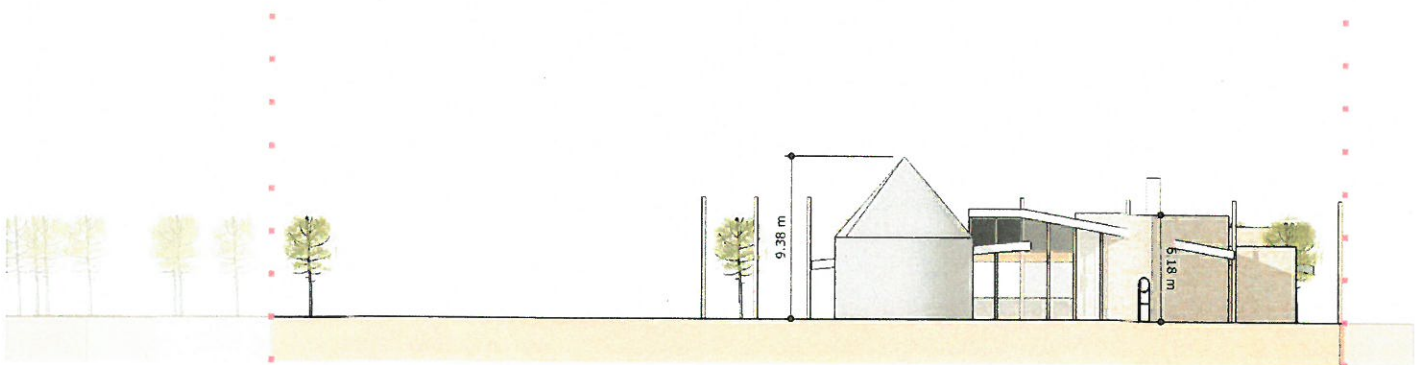
NORTH ELEVATION



SOUTH ELEVATION



EAST ELEVATION



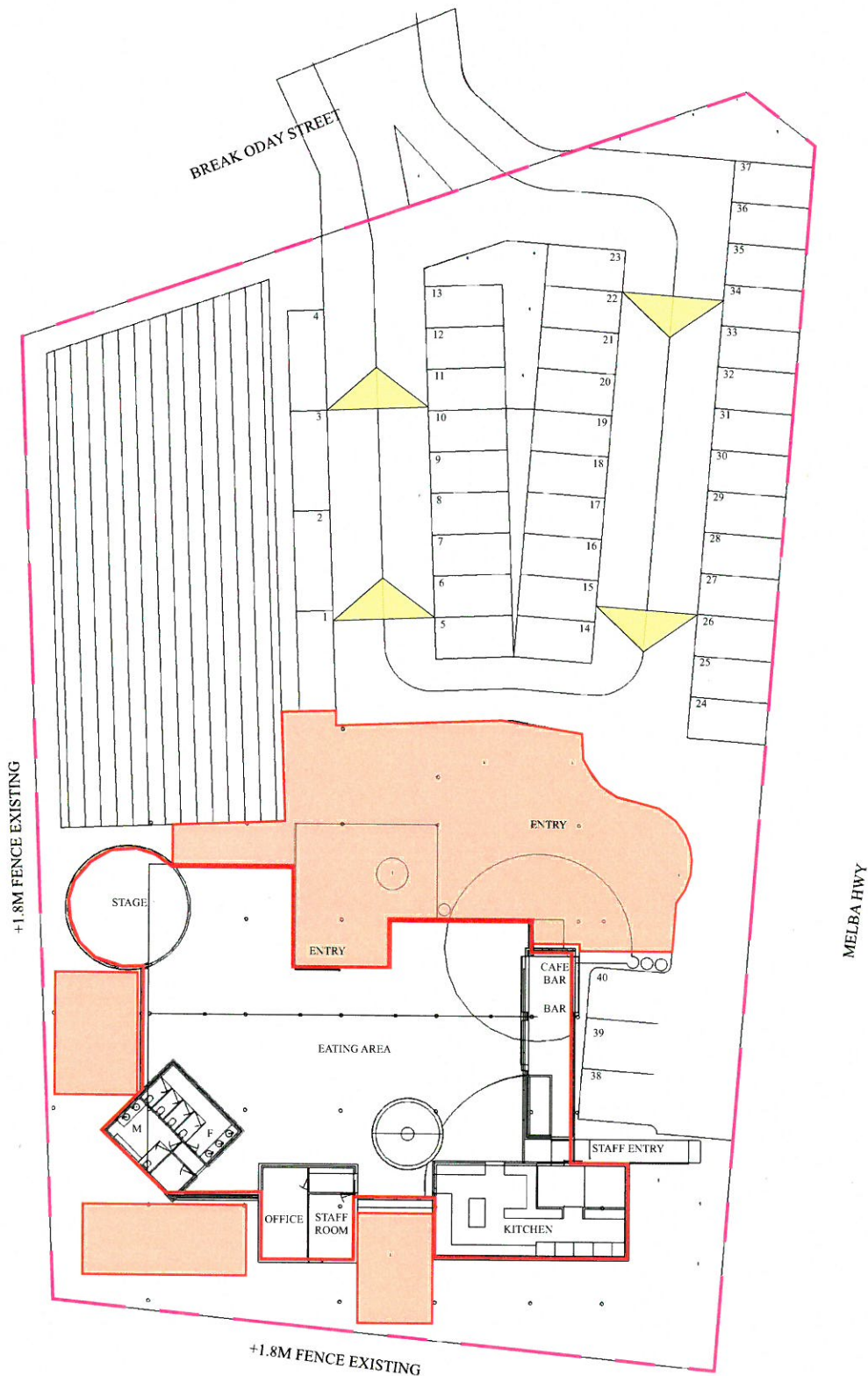
WEST ELEVATION

BAGNOLI ARCHITECTS

3813 MELBA HWY GLENBURN

ELEVATION
1:200@A1
REV A

TP03



- REDLINE
INTERNAL AREA: 578M2
- REDLINE
EXTERNAL AREA: 7500M2

Bagnoli

BAGNOLI ARCHITECTS

3813 MELBA HWY GLENBURN

REDLINE PLAN
 1:200@A1
 REV B

TP04